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Fair and Unfair Discrimination in Royalties for Standard-Essential Patents Encumbered by a FRAND or RAND Commitment

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Once committed to a standard-setting organization (SSO), a standard-essential patent (SEP) is typically subject to its owner's contractual commitment to the SSO to offer to license the SEP on terms that are reasonable and nondiscriminatory (RAND) to all implementers of the standard.[1] Through the 2000s and earlier 2010s, most scholarship directed toward defining a RAND royalty focused more on the question of reasonableness than on the question of nondiscrimination. The same is true of fair, reasonable, and nondiscriminatory (FRAND) royalties for SEPs, whose slightly different moniker turns out, as we shall see in the following pages, to have greater significance than is commonly understood. This article provides a legal and economic analysis of the meaning of discrimination as defined in the FRAND or RAND commitments of the most prominent SSOs, such as the European Telecommunications Standards Institute (ETSI), the Institute of Electrical and Electronics Engineers (IEEE), and the Joint Electron Device Engineering Council (JEDEC).[2]

I distinguish between (1) normative arguments that scholars and expert economic witnesses have made about what they think "nondiscrimination" *should* mean, and (2) positive principles rooted in contract law or drawn from

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[1] *See* J. Gregory Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 J. COMPETITION L. & ECON. 931 (2013).

[2] Unless otherwise noted, my analysis in this article focuses exclusively on nondiscrimination as a private contractual provision of an SSO's FRAND or RAND commitment.

other fields of law in which statutes, courts, or regulators have defined what unlawful discrimination actually *is*. I argue that a positive jurisprudence on nondiscrimination exists in the United States, with common principles spanning fields as disparate as equal protection, civil rights law, tax law, antitrust law, and public utility regulation. After recognizing and using that positive jurisprudence on nondiscrimination, courts will find that the remaining questions of first impression in RAND or FRAND disputes can be enlightened by (admittedly normative) economic analysis. However, this residual role for normative economic analysis of law will be much more focused than what one commonly has observed to date in the often extravagant arguments of scholars and expert economic witnesses opining on what the FRAND or RAND commitment supposedly dictates for royalties for SEPs.

In Part I of this article, I examine Mr. Justice Colin Birss' April 2017 decision in *Unwired Planet International Ltd. v. Huawei Technologies Co.*[3] as it concerns the SEP holder's obligation arising from ETSI's FRAND commitment to offer to license its SEPs to implementers on nondiscriminatory terms and conditions. Justice Birss rejected the argument that an implementer is entitled, by virtue of ETSI's FRAND commitment, to the very same royalty rate that the SEP holder had offered to a similarly situated licensee. He found that the nondiscrimination requirement of a FRAND commitment simply requires the court to determine the FRAND rate by relying on royalties determined in comparable licenses.[4] He added that, if ETSI's FRAND commitment gives the implementer a right to request the very same rate as its competitor, it does so only when there is evidence that the difference in royalties would distort competition between the two licensees.[5]

In Part II, I analyze the SSO's requirement that an SEP holder offer to license its SEPs on nondiscriminatory terms to any willing third party seeking to implement the standard. Although most SSOs prohibit the SEP holder from engaging in discriminatory licensing practices, they differ in how they express that requirement. For example, SSOs such as JEDEC and the IEEE require the SEP holder to offer to license its SEPs on terms that are free of any unfair discrimination.[6] In particular, the RAND commitment's language prohibiting *unfair* discrimination indicates by negative implication

[3] [2017] EWHC (Pat) 711 (Eng.).

[4] *Id.* [503] ("I conclude that the true interpretation of the ETSI FRAND undertaking from the point of view of non-discrimination is that a benchmark FRAND rate should be derived which is applicable to all licensees seeking the same kind of licence. That is what I have called general non-discrimination.").

[5] *Id.*

[6] Joint Electron Device Engineering Council [JEDEC], JEDEC Manual of Organization and Procedure § 8.2.5, at 27 (July 2015) [hereinafter JEDEC Manual], https://www.jedec.org/sites/default/files/JM21R.pdf; The Institute of Electrical and Electronics Engineers [IEEE], IEEE-SA Standards Board Bylaws § 6.2, at 17 (Dec. 2016) [hereinafter IEEE-SASB Bylaws], http://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf.

that there exists such a thing as *fair* discrimination.[7] Conversely, pursuant to ETSI's FRAND commitment, the SEP holder agrees to offer to license its SEPs on "fair, reasonable, and non-discriminatory" terms.[8] ETSI's commitment does not qualify the prohibition against discrimination, although it does requires license terms that are fair. In addition, some SSOs prohibit discriminatory licensing practices but omit any reference to fairness in their licensing requirement. For example, the Telecommunications Industry Association (TIA) requires the SEP holder to clarify whether it is willing to offer to license its SEPs on terms and conditions that are "reasonable and non-discriminatory."[9] Similarly, the International Telecommunication Union (ITU) requires the SEP holder to declare whether it "is willing to negotiate licenses with other parties on a non-discriminatory basis on reasonable terms and conditions."[10] I explain that, even when the FRAND or RAND requirement ostensibly imposes an unqualified prohibition against discrimination, it typically does not require the SEP holder to license its SEPs on identical terms to all implementers.

In Part III, I examine the various interpretations of the nondiscrimination requirement that commentators have proposed in the academic literature on the licensing of SEPs. There is no agreement on the correct interpretation of the nondiscrimination requirement. Some commentators argue that the nondiscrimination requirement imposes on the SEP holder a duty to license all implementers—including its competitors. Other commentators, myself included, say that the nondiscrimination requirement imposes an obligation to license similarly situated licensees on similar terms. In addition, some commentators argue that the nondiscrimination requirement limits the permissible difference in royalties only when the SEP holder is vertically integrated and could use discriminatory licensing terms to distort competition in the downstream market. It bears emphasis that most of these proposed interpretations are normative recommendations for what the nondiscrimination requirement should be understood to mean. They are not

[7] Jorge Contreras has also recently observed that "many FRAND commitments do not impose unmitigated non-discrimination obligations." Jorge L. Contreras, *Global Markets, Competition, and FRAND Royalties: The Many Implications of* Unwired Planet v. Huawei, 17 Antitrust Source, Aug. 2017, at 1, 6.

[8] European Telecommunications Standards Institute [ETSI], ETSI Rules of Procedure, Annex 6: ETSI Intellectual Property Rights Policy § 6.1, at 35–36 (Apr. 5, 2017) [hereinafter ETSI IPR Policy], http://www.etsi.org/images/files/ipr/etsi-ipr-policy.pdf. The Blu-Ray Disc Association also requires each of its members to "[a]gree[]. . . to grant . . . to any interested party . . . non-exclusive, non-transferable, world-wide licenses on fair, reasonable and non-discriminatory terms and conditions under any of the Essential Patents that the Member and its Affiliated Companies have the right to license." Blu-Ray Disc Association [BRDA], BRDA Bylaws cl. 16, at 24 (Mar. 28, 2016), http://blu-raydisc.com/Assets/Downloadablefile/BDA_Bylaws_v2.4.pdf.

[9] Telecommunications Industry Association [TIA], TIA Intellectual Property Rights Policy § 3.1.1, at 8 (Oct. 21, 2016) [hereinafter TIA IPR Policy], http://www.tiaonline.org/sites/default/files/pages/TIA_Standards_IPR_Policy_October_2016.pdf.

[10] *Common Patent Policy for ITU-T/ITU-R/ISO/IEC*, International Telecommunication Union (ITU), http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx.

positive interpretations of a specific contractual provision in any particular FRAND or RAND commitment.

In Part IV, I explain the meaninglessness of the clichéd contention by some economic scholars that the nondiscrimination component of the FRAND or RAND obligation imposes the duty on the SEP holder to create—and even to maintain—a "level playing field" among implementers. Neither intrinsic nor extrinsic evidence of a typical FRAND or RAND commitment supports the conclusion that the SEP holder has a duty to establish (or maintain) a "level playing field" among its licensees. Moreover, imposing on the SEP holder such a duty would harm, rather than serve, consumer interests. It would decrease competition among implementers and deprive consumers of the benefits of price discrimination. It could also undermine the SEP holder's ability to obtain fair compensation for its contribution to the standard, thus dulling its incentives to contribute its future technologies to the SSO in question or to industry standards more generally. Furthermore, to the extent that the "level playing field" interpretation of nondiscrimination would impose a duty on the SEP holder equivalent to those arising from a most-favored-customer (MFC) clause, that duty would be costly to implement in practice and in the long run might increase downstream prices for standard-compliant products. It is thus implausible that sophisticated business parties, counseled by the world's best law firms, intended the nondiscrimination requirement of a FRAND or RAND commitment to impose on the SEP holder a duty to reify an otherwise undefined cliché—to establish and maintain a "level playing field" among the SEP holder's licensees.

After saying what discrimination cannot plausibly mean, it remains to say what it does mean. Accordingly, in Part V, I examine by analogy the positive principles that U.S. courts apply in determining (in various areas of law) whether there has been a violation of a constitutional or statutory prohibition against discrimination or against unjust, unreasonable, and undue discrimination. A general principle deriving from the positive jurisprudence on nondiscrimination is that a finding of discrimination (or of unjust, unreasonable, and undue discrimination) requires evidence of differential treatment of similar comparators. Another positive principle is that the defendant may provide justifications for its differential treatment, not only in a case concerning a prohibition against unfair discrimination, but also in a case concerning an ostensibly unqualified prohibition against discrimination. If the defendant gives sufficient justification for the differential treatment, there is no finding of unlawful discrimination. In particular, the jurisprudence of price discrimination shows that both cost-related and non-cost-related factors might justify differential treatment of similar comparators. Given that courts have consistently applied those principles across multiple areas of the law, it would be counterintuitive, if not inexplicable, to disregard these same

positive principles when facing a question of first impression concerning the nondiscrimination requirement in the FRAND or RAND commitment for the licensing of SEPs.

In Part VI, I present a focused set of normative economic principles that can help a court fill in the gaps that remain after it has applied the positive jurisprudence on nondiscrimination to construe a given FRAND or RAND commitment. Specifically, I present the economic criteria that a court might consider to determine (1) whether the claimant is situated similarly to other implementers, (2) whether the SEP holder has treated the claimant differently, and (3) whether a valid justification exists for that differential treatment. There should be a finding of impermissible discrimination only when the SEP holder lacks a legitimate justification for the differential treatment of similarly situated implementers.

I. Nondiscrimination After *Unwired Planet*

In *Unwired Planet*, Mr. Justice Birss of the High Court of Justice of England and Wales considered, among other things, whether Unwired Planet's offers to license its portfolios of patents essential to ETSI's 3G and 4G standards to Huawei were FRAND.[11] To make that determination, Justice Birss considered expert testimony regarding the comparability of licenses that Unwired Planet previously had granted for the use of its SEPs. In particular, Unwired Planet had licensed the use of its SEPs to Samsung, Huawei's competitor in the market for mobile devices. The question before Justice Birss was whether differences between (1) Unwired Planet's multiple license offers to Huawei and (2) the license that Unwired Planet granted to Samsung violated the nondiscrimination clause of Unwired Planet's FRAND commitment to ETSI.

Justice Birss surveyed the economic literature and concluded that there is no consensus on a definition of the nondiscrimination requirement of the FRAND commitment.[12] Having identified three competing definitions of nondiscrimination, he analyzed each in turn. First, Justice Birss considered and rejected a strict definition under which "all licensees pay identical rates on identical terms."[13] He reasoned that such an approach would be "highly restrictive," and he concluded that "[i]f that is what the ETSI undertaking was supposed to mean it could readily have been written in that way."[14]

[11] *Unwired Planet* [2017] EWHC (Pat) 711 [17].

[12] *Id.* [497].

[13] *Id.*

[14] *Id.* As I have explained elsewhere, such an approach is likely to effect a discriminatory outcome. If the cost of providing a good varies from purchaser to purchaser, charging a uniform rate is price discrimination. An SEP holder's opportunity costs of licensing two different licensees might differ. If so, it is price discrimination for the SEP holder to charge the identical royalty rate to differently situated licensees. *See* Sidak, *The Meaning of FRAND Part I: Royalties*, *supra* note 1, at 996.

Second, Justice Birss considered the possibility that the nondiscrimination requirement requires only that "'all firms which use the standard be able to obtain a license'" and imposes no additional obligations with respect to royalties or other terms.[15] He rejected that interpretation as rendering the nondiscrimination requirement redundant, reasoning that "the ETSI FRAND undertaking already obliges licensors to offer licences to everyone."[16]

The third definition that Justice Birss considered is that the SEP holder "should treat similarly situated licensees similarly."[17] Huawei and Unwired Planet presented alternative versions of this "similarly situated" interpretation of the nondiscrimination clause.[18] The parties in *Unwired Planet* had also agreed that "nondiscrimination" has the same basic meaning in the FRAND context as in European competition law.[19] Article 102 of the Treaty on the Functioning of the European Union (TFEU) prohibits a dominant company from, among other things, "applying dissimilar conditions to equivalent transactions with . . . trading parties, thereby placing them at a competitive disadvantage."[20] However, Huawei and Unwired Planet disagreed about an SEP holder's precise obligations. Justice Birss' analysis thus focused on whether the nondiscrimination clause prohibited (1) *all* differences in rates for similarly situated firms, as Huawei had proposed, or (2) only those differences that are "capable of distorting competition," as Unwired Planet had proposed.[21]

Justice Birss rejected Huawei's interpretation of the nondiscrimination requirement. He reasoned that Article 102 TFEU prohibits a dominant company only from imposing "dissimilar conditions to equivalent transactions" that are "capable of distorting competition" and are not objectively justified.[22] Justice Birss said that "the various elements of the competition law applicable [to] discriminatory pricing operate as a whole to achieve a fair balance."[23] In response to Huawei's proposed blanket prohibition against any difference in rates charged to Samsung and Huawei, Justice Birss said that "[s]plitting off some parts [of the discriminatory pricing framework] without

[15] *Unwired Planet* [2017] EWHC (Pat) 711 [496] (quoting Dennis W. Carlton & Allan L. Shampine, *An Economic Interpretation of FRAND*, 9 J. Competition L. & Econ. 531, 546 (2013)).

[16] *Id.* [498].

[17] *Id.* [485].

[18] *Id.*

[19] *Id.* [487].

[20] Consolidated Version of the Treaty on the Functioning of the European Union art. 102(c), May 9, 2008, 2008 O.J. (C 115) 47 [hereinafter TFEU].

[21] *Unwired Planet* [2017] EWHC (Pat) 711 [485]. Specifically, Huawei argued that it should obtain from Unwired Planet the very same rate that Unwired Planet granted Samsung. *Id.* [481]. Unwired Planet opposed Huawei's contention, arguing that Samsung and Huawei were not similarly situated, and that, even if they were, the nondiscrimination requirement would prohibit only "conduct which is capable of distorting competition." *Id.* [485].

[22] *Id.* [486] (first quoting TFEU, *supra* note 20, art. 102(c)).

[23] *Id.* [501].

the others is unbalanced and risks unfairness."[24] He reasoned that, if the nondiscrimination requirement of ETSI's FRAND commitment does give the licensee "the right to demand the very same rate as has been granted to another licensee . . . then that [nondiscrimination] obligation only applies if the difference would distort competition between the two licensees."[25] Justice Birss said that Huawei, by its own admission, had not attempted to make such a showing.[26]

However, Justice Birss also found that no right to "the very same rate" existed in ETSI's FRAND commitment in the first place.[27] In other words, he said that a licensee did not have a right to demand a certain rate on the basis that a similarly situated licensee had executed a license with the SEP holder at that rate.[28] Instead, he tied the nondiscrimination requirement to the establishment of a benchmark "fair and reasonable" rate for access to an SEP holder's patented technology.[29] Specifically, he said that "the true interpretation of the ETSI FRAND undertaking from the point of view of non-discrimination is that a benchmark FRAND rate should be derived which is applicable to all licensees seeking the same kind of licence."[30] In other words, Justice Birss reasoned that the derived benchmark rate purporting to measure the value of the SEP holder's technology—not the lowest rate actually granted to another implementer—is the relevant comparator for determining whether a license or offer is discriminatory.[31]

Huawei appealed, challenging among other things Justice Birss' finding on nondiscrimination.[32] Huawei argued that the court erred in concluding that to show that Unwired Planet's licensing practice was discriminatory Huawei would need to show that the difference in royalties would "lead to a distortion of competition."[33] Hence, the Court of Appeal will need to determine whether the nondiscrimination requirement of a FRAND commitment confers on an implementer the right to receive the same rate that other similarly situated implementers have obtained, regardless of the effects that the difference in the royalty amount would have on competition.

In sum, Justice Birss' analysis provides helpful insights for any court seeking to interpret the nondiscrimination requirement of a FRAND or RAND commitment, particularly because other courts have largely ignored

[24] *Id.*
[25] *Id.* [503].
[26] *Id.* [504]. Justice Birss' reasoning reminds us that it is necessary to distinguish a contractual provision requiring nondiscrimination in SEP licensing from an antitrust statute or doctrine prohibiting nondiscrimination. I elaborate on this point in Part III.E.
[27] *Id.* [504].
[28] *Id.* [503].
[29] *Id.*
[30] *Id.*
[31] *Id.*
[32] Unwired Planet Int'l Ltd v. Huawei Techs. Co. [2017] EWHC (Pat) 1304 (Eng.).
[33] *Id.* [64].

the nondiscrimination requirement's existence and consequently have offered little guidance as to its meaning. In the absence of a clear definition of nondiscrimination, courts interpreting and applying the nondiscrimination requirement of a FRAND or RAND commitment will likely consider the questions that Justice Birss examined in *Unwired Planet*, as well as new questions of first impression.

II. Nondiscrimination in a FRAND Commitment and in a RAND Commitment

Courts and scholars have typically found no meaningful distinction between a FRAND obligation and a RAND obligation. For example, Judge Richard Posner, sitting by designation as the trial judge in *Apple, Inc. v. Motorola, Inc.* in the Northern District of Illinois, has said that, in the context of FRAND, "the word 'fair' adds nothing to 'reasonable' and 'nondiscriminatory.'"[34] Similarly, Judge Marsha Berzon, writing for the Ninth Circuit in *Microsoft Corp. v. Motorola, Inc.*, found that FRAND was "legally equivalent" to RAND.[35] My previous writings have followed this convention of making no legal or economic distinction between FRAND and RAND royalties, though I have never excluded the possibility that someone might eventually make a compelling argument for why "fair" is not a throwaway word in a contract.[36] I analyze here the differences between a FRAND commitment and a RAND commitment, particularly with respect to the requirement to license SEPs on nondiscriminatory terms.

A. The Nondiscrimination Requirements of ETSI, the IEEE, and JEDEC

The traditional distinction between FRAND and RAND lies in whether the SSO in question requires the SEP holder to offer licenses on "fair" terms in addition to the shared requirements of reasonable and nondiscriminatory terms. However, that distinction is too simplistic. It overlooks differences in the wording of the nondiscrimination requirement of typical FRAND and RAND commitments, and it fails to acknowledge that both types of commitments might contain variations on the word "fair."

Consider ETSI's IPR policy, which requires the SEP holder to commit to offer to license its SEPs on FRAND terms. The policy provides that, when ETSI becomes aware of the existence of a patented technology essential to practice an ETSI standard, it shall request that the holder of that technology confirm that it is "prepared to grant irrevocable licences on *fair, reasonable and*

[34] 869 F. Supp. 2d 901, 912 (N.D. Ill. 2012), *rev'd in part on other grounds*, 757 F.3d 1286 (Fed. Cir. 2014).
[35] 696 F.3d 872, 877 n.2 (9th Cir. 2012).
[36] *See, e.g.*, Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 968 n.109.

non-discriminatory ('FRAND') terms and conditions" to those that manufacture, sell, or repair equipment that complies with ETSI's standards.[37]

In contrast, SSOs with RAND obligations typically impose a differently worded requirement. For example, the IEEE requires the SEP holder to declare that it "will make available a license for Essential Patent Claims . . . to an unrestricted number of Applicants on a worldwide basis without compensation or under Reasonable Rates, with other reasonable terms and conditions that are demonstrably free of *unfair discrimination*."[38] Similarly, an SEP holder's RAND commitment to JEDEC requires the SEP holder to agree that "[a] license will be offered to applicants desiring to utilize the license for the purpose of implementing the JEDEC Standard under reasonable terms and conditions that are demonstrably free of any *unfair discrimination*."[39] Thus, the FRAND and RAND commitments of the IEEE, ETSI, and JEDEC all include each of these three adjectives or their antonyms: "fair," "reasonable," and "nondiscriminatory."

Nonetheless, the word "fair" is used differently in a FRAND commitment than in a RAND commitment. It modifies different nouns and therefore creates textually different requirements. The IEEE and JEDEC explicitly and unambiguously use the adjective "fair" in relation to the nondiscrimination requirement. They state that SEP holders must offer license terms that are free of unfair discrimination. Such wording implies by negative implication that there exist terms that impose some *fair* discrimination that comports with those SSOs' IPR policies. In contrast, ETSI's IPR policy uses the adjective "fair," together with the adjectives "reasonable and nondiscriminatory," to modify the words "terms and conditions." The word "fair" does not exclusively qualify the word "discrimination." Therefore, the practical legal distinction between a FRAND commitment and a RAND commitment is a question of how—rather than whether—an SSO's IPR policy incorporates fairness.[40]

B. Unfair Discrimination

Given the precise wording of the RAND commitments of leading SSOs, the question that naturally follows is whether there is a difference between

[37] ETSI IPR Policy, *supra* note 8, § 6.1, at 35–36 (emphasis added).

[38] IEEE, Letter of Assurance for Essential Patent Claims §§ D.1.a–b, at 1–2 (Dec. 2015) (emphasis added) [hereinafter IEEE Letter of Assurance], https://development.standards.ieee.org/myproject/Public//mytools/mob/loa.pdf. This wording did not change when the IEEE substantially changed its patent policy in 2015. *See* J. Gregory Sidak, *The Antitrust Division's Devaluation of Standard-Essential Patents*, 104 GEO. L.J. ONLINE 48 (2015); J. Gregory Sidak, *Testing for Bias to Suppress Royalties for Standard-Essential Patents*, 1 CRITERION J. ON INNOVATION 301 (2016).

[39] JEDEC, License Assurance/Disclosure Form 2 (emphasis added) [hereinafter JEDEC License Assurance], http://www.jedec.org/sites/default/files/License_Assurance-Disclosure_Form_20150710.pdf.

[40] In contrast, the TIA's IPR policy requires terms that are "reasonable and non-discriminatory," but it contains no explicit element of fairness. TIA IPR Policy, *supra* note 9, § 3.1.1, at 8–9.

fair and unfair discrimination. Some economists and lawyers might say no, in the belief that the phrase "unfair discrimination" is the same as the word "discrimination" devoid of any adjective modifying it. Perhaps for those economists and lawyers, the noun "discrimination" already comes freighted with bad intent, such that describing it with the adjective "unfair" seems superfluous. However, that reasoning fails both as a matter of legal interpretation of contractual language, as well as an economic argument.

1. Legal Meaning

The argument that, despite containing the word "unfair," a RAND commitment prohibits any kind of discrimination fails as a legal matter because the law strives to give independent meaning to each word in a legal document.[41] A general principle of contract law in the United States is that "an interpretation which gives a reasonable, lawful, and effective meaning to all the terms is preferred to an interpretation which leaves a part unreasonable, unlawful, or of no effect."[42]

Outside the context of SEPs, U.S. courts routinely analyze the difference between fair and unfair discrimination in interpreting a statutory prohibition against unfair, undue, or unreasonable discrimination. For example, bankruptcy courts regularly interpret section 1129(b)(1) of the Bankruptcy Code—which requires that a reorganization plan not "discriminate unfairly" against an impaired class that has not accepted the plan[43]—to "prohibit[] only unfair discrimination, not all discrimination."[44] Similarly, courts distinguish fair from unfair discrimination when interpreting insurance law. Most states' insurance laws prohibit "'unfair discrimination between persons in the same class.'"[45] Courts have found that this prohibition against unfair discrimination permits not only different treatment of individuals that belong to

[41] *See, e.g.*, Restatement (Second) of Contracts § 203 (Am. Law Inst. 1981); *see also* Warner Commc'ns Inc. v. Chris-Craft Indus., Inc., 583 A.2d 962, 971 (Del. Ch. 1989) ("An interpretation that gives an effect to each term of an agreement, instrument or statute is to be preferred to an interpretation that accounts for some terms as redundant."); Reda v. Eastman Kodak Co., 649 N.Y.S.2d 555, 557 (App. Div. 1996) ("Effect and meaning must be given to every term of the contract.").

[42] Restatement (Second) of Contracts § 203 (Am. Law Inst. 1981).

[43] 11 U.S.C. § 1129(b)(1).

[44] *In re* Aztec Co., 107 B.R. 585, 588–89 (Bankr. M.D. Tenn. 1989); *see also In re* TCI 2 Holdings, LLC, 428 B.R. 117, 157 (Bankr. D.N.J. 2010) ("Generally, a plan will not be found to have unfairly discriminated if: (a) the discrimination is supported by a reasonable basis, (b) the discrimination is necessary for reorganization, (c) the discrimination is proposed in good faith, and (d) the degree of the discrimination is directly related to the basis or rationale for the discrimination."); *In re* Barney & Carey Co., 170 B.R. 17, 25–26 (Bankr. D. Mass. 1994).

[45] Arizona Gov'g Comm. for Tax Deferred Annuity & Deferred Comp. Plans v. Norris, 463 U.S. 1073, 1100 n.6 (1983) (quoting Herman R. Bailey, Theodore M. Hutchinson & Gregg R. Narber, *The Regulatory Challenge to Life Insurance Classification*, 25 Drake L. Rev. 779, 783 (1976)).

different classes, but also fair discrimination between individuals within the same class.[46]

When one applies by analogy the principles of fair and unfair discrimination from bankruptcy law and insurance law to the licensing of SEPs, it becomes evident that, if discrimination requires proof of the licensor's unfairness before such discrimination can constitute a breach of the RAND obligation, the licensor has a safe harbor of "fair discrimination." Put differently, the contractual prohibition against unfair discrimination implicitly permits the SEP holder to engage in some form of discrimination that is not unfair—which is to say fair discrimination.

2. Economic Meaning

The argument that any discrimination is unfair also fails as a matter of economic reasoning. Economists and mathematicians such as Hal Varian,[47] Ken Binmore,[48]and the late William Baumol[49] have developed precise theoretical definitions of transactions (discussed more generally in terms of economic allocations of resources) that are unfair.[50] Varian, Binmore, and Baumol have derived mathematical conditions for fair allocations, after having defined their respective understandings of fairness precisely. Nevertheless, with the possible exception of Baumol, I cannot name a single economist writing or testifying on the fairness of FRAND or RAND royalties for SEPs who has rooted his analysis of discrimination in a rigorous economic definition of fairness. In other words, economists in FRAND or RAND disputes who contend that fair discrimination is impossible because discrimination is inherently unfair do so without any rigorous economic definition of fairness, such as those offered by Varian, Binmore, and Baumol.

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[46] *See, e.g.*, Perez v. First Am. Title Ins. Co., 2009 WL 2486003, at *5 (D. Ariz. Aug. 12, 2009) (noting that interpreting unfair discrimination to occur every time a distinction is drawn between people within the same class would "effectively eliminate[] the word 'unfair'").

[47] Hal R. Varian, *Equity, Envy, and Efficiency*, 9 J. Econ. Theory 63, 63 (1974) ("If, in a given allocation, agent *i* prefers the bundle of agent *j* to his own, we will say *i envies j*. If there are no envious agents at allocation *x*, we will say *x* is equitable. If *x* is both [P]areto efficient and equitable, we will say *x* is fair." (emphasis in original)).

[48] Ken Binmore, Natural Justice 15 (Oxford Univ. Press 2005) ("[T]he common deep structure of human fairness norms is captured in a stylized form by an idea that John Rawls called the device of the *original position* in his celebrated *Theory of Justice*." (emphasis in original)); *id.* at 168–78 (modeling the Rawlsian original position).

[49] William J. Baumol, Superfairness: Applications and Theory 19 (MIT Press 1986) ("A distribution is strictly superfair if each participant receives a bundle that is strictly preferred by that individual to the bundle received by anyone else, that is, if his holdings could be reduced (in the case of divisibility) without giving rise to envy."); *id.* at 20–37 (describing the mathematical properties of superfairness).

[50] One possible interpretation of "fair"—which Mark Lemley and I have each independently suggested in the context of licensing SEPs—is *ex ante* fairness behind a Rawlsian veil of ignorance. *See* Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 983; Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 Calif. L. Rev. 1889, 1946 (2002).

C. Unqualified Prohibitions Against Discrimination

A second question that naturally follows from the analysis of how an SSO's patent policy incorporates fairness is whether the nondiscrimination requirement of a FRAND commitment differs from the nondiscrimination requirement of a RAND commitment. The answer to this question is clearly case-specific because the interpretation of the rights and obligations arising from such a contract depends on the precise wording of the contract and the applicable law governing the contract's interpretation.[51] For example, ETSI's FRAND commitment—governed by French law[52]—requires that an SEP holder be "prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory . . . terms and conditions" for its declared-essential patents to all willing implementers.[53] Thus, in contrast to JEDEC's and the IEEE's RAND commitments (both governed by New York law[54]), ETSI's FRAND commitment does not distinguish between fair and unfair discrimination. The salient question arising from this insight is: does the language of ETSI's FRAND commitment suggest that the SEP holder may not engage in *any* form of discrimination, including fair discrimination, among willing implementers?

1. Is "Nondiscriminatory" an Ambiguous Term?

Jorge Contreras briefly interprets the nondiscrimination requirement of ETSI's FRAND commitment in his analysis of Justice Birss' decision in *Unwired Planet*.[55] Contreras argues that, "if an [SSO's] participants commit not to discriminate in granting licenses, then, other than de minimis differences in royalty rates, discrimination ought not to be allowed."[56] He says that many SSOs "do not impose unmitigated non-discrimination obligations," and thus they allow "*some* flexibility . . . to licensors to vary the terms of their licenses, even among similarly situated licensees."[57] However, he argues, ETSI's FRAND commitment "does *not* allow such flexibility in its non-discrimination covenant," because the "requirement of non-discrimination is not mitigated by fairness or materiality."[58] Under Contreras' interpretation, the nondiscrimination requirement of ETSI's FRAND commitment would

[51] *See* J. Gregory Sidak, *A FRAND Contract's Intended Third-Party Beneficiary*, 1 Criterion J. on Innovation 1001, 1014–15 (2016).
[52] ETSI IPR Policy, *supra* note 8, § 12, at 40.
[53] *Id.* § 6.1, at 35–36.
[54] JEDEC Manual, *supra* note 6, § 8.2.10, at 29; IEEE-SASB Bylaws, *supra* note 6, § 3, at 3.
[55] Contreras, *The Many Implications of* Unwired Planet v. Huawei, *supra* note 7.
[56] *Id.* at 6.
[57] *Id.* (emphasis in original).
[58] *Id.* (emphasis in original).

preclude the SEP holder from engaging in any form of discrimination when licensing its SEPs to similarly situated implementers.

Contreras' argument rests on the important implicit assumption that "nondiscrimination" is unambiguous. That is, he assumes that the word's meaning is so obvious as to preclude any difference in licensing terms for the same SEPs that is not too trivial or too minor to merit consideration. However, in other areas of law one finds alternative, reasonable interpretations of "nondiscrimination." For example, the Supreme Court of the United States has defined discrimination under federal tax law as differential treatment of similarly situated parties that lacks a valid justification.[59] Under that interpretation, nondiscrimination prohibits only differential treatment among similarly situated implementers that is unjustified. Although this particular tax decision under American law obviously does not control the interpretation of ETSI's FRAND commitment, it demonstrates that the common word "discrimination" might become a term of art having different meanings in different areas of law.

Consequently, to assess the validity of Contreras' argument, one needs to identify the precise meaning of "nondiscrimination" in the context of ETSI's FRAND contract. According to European legal scholars Jan Smits and Caroline Calomme, French law, which governs ETSI's FRAND commitment, states that clear and unambiguous contractual terms are not subject to different interpretations.[60] However, when a contractual term is subject to different reasonable interpretations—that is, when it is ambiguous–French law requires that that term be interpreted "according to the common intention of the parties."[61]

2. *Extrinsic Evidence of the Meaning of "Nondiscriminatory" in ETSI's FRAND Commitment*

The FRAND commitment that an SEP holder submits to ETSI does not define "nondiscriminatory." Section 6 of ETSI's IPR policy, which incorporates the FRAND commitment, also does not provide guidance on the type of licensing behavior that the nondiscrimination requirement prohibits. Hence,

[59] Alabama Dep't of Revenue v. CSX Transp., 135 S. Ct. 1136, 1141 (2015) ("[A] tax discriminates . . . when it treats 'groups [that] are similarly situated' differently without sufficient 'justification for the difference in treatment.'" (second alteration in original) (quoting CSX Transp., Inc. v. Alabama Dep't of Revenue, 562 U.S. 277, 287 (2011))); *see also id.* at 1144 (Thomas, J., dissenting) ("[T]he meaning of 'discriminates' is ambiguous at first glance.").

[60] Jan Smits & Caroline Calomme, *The Reform of the French Law of Obligations:* Les Jeux Sont Faits, 23 Masstricht J. Eur. & Competition L. 1040, 1047–48 (2016). Similarly, in the United States, if a contractual term is susceptible of only one reasonable interpretation, an American court will apply that interpretation. *See, e.g.*, Bohler-Uddeholm Am., Inc. v. Ellwood Grp., 247 F.3d 79, 92–96 (3d Cir. 2001) (applying Pennsylvania law); Weddington Prods., Inc. v. Flick, 71 Cal. Rptr. 2d 265, 277 (Ct. App. 1998); Embry v. Hargadine-McKittrick Dry Goods Co., 105 S.W. 777, 779 (Mo. App. 1907).

[61] Smits & Calomme, *supra* note 60, at 1047.

the intrinsic evidence of ETSI's FRAND contract with the SEP holder does not indicate whether the nondiscrimination requirement permits any difference (beyond *de minimis* differences) across licensing terms for a given SEP portfolio.

However, historical documentation of the development of ETSI's current IPR policy discredits the proposition that ETSI and the SEP holder intended the nondiscrimination requirement to preclude any difference across licensing terms for a given SEP portfolio. Roger Brooks and Damien Geradin examined that documentation and found that, in 1994, when ETSI was developing its IPR policy, the Special Committee responsible for the policy's development rejected the interpretation that "nondiscriminatory" implied identical licensing terms for all users of the standard.[62] The Special Committee's report emphasized that "[l]icensing terms and conditions should allow normal business practices for ETSI members."[63]

In addition, the ETSI Guidelines for Antitrust Compliance refer to discriminatory and unfair conditions when discussing Article 102 of the TFEU,[64] which prohibits "[t]he imposition of discriminatory and unfair conditions by the dominant company."[65] To the extent that the guidelines provide extrinsic evidence of the meaning that the parties attributed to the nondiscrimination requirement of ETSI's FRAND commitment when they executed the contract, the types of discrimination that ETSI's FRAND commitment prohibits are substantially equivalent to the prohibition against discrimination contained in Article 102.[66] As Justice Birss explained in *Unwired Planet*, Article 102 prohibits only discrimination that "result[s] in an actual or potential distortion of competition" and that lacks "objective justification."[67] Under that interpretation, the nondiscrimination requirement of ETSI's FRAND commitment again does not forbid all forms of discrimination; rather, it forbids only acts of discrimination that would actually or potentially distort competition.

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[62] Roger G. Brooks & Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 Int'l J. IT Standards & Standardization Res. 1, 16 (2011) (citing ETSI/GA 20(94)2 (SC Final Report), ANNEX XII).

[63] ETSI/GA 20(94)2 (SC Final Report), ANNEX XII.

[64] ETSI, ETSI Rules of Procedure, ETSI Guidelines for Antitrust Compliance § C, at 78 (Jan. 27, 2011), https://portal.etsi.org/directives/37_directives_apr_2017.pdf.

[65] *Id.* § B.3.3.e, at 78 (paraphrasing the practices prohibited by Article 102 TFEU, *supra* note 20).

[66] Gunnar Niels, Helen Jenkins, and James Kavanagh propose a similar interpretation of ETSI's nondiscrimination requirement. Gunnar Niels, Helen Jenkins & James Kavanagh, Economics for Competition Lawyers (Oxford Univ. Press 2d ed. 2016). They say that nondiscrimination within the FRAND commitment "is usually interpreted in the same manner as the general criteria for anti-competitive price discrimination under the abuse of dominance rules." *Id.* ¶ 8.51. Both Unwired Planet and Huawei adopted a similar position in *Unwired Planet*, in which Niels testified as an expert witness for Unwired Planet. Justice Birss observed that "[b]oth sides approached this issue [of nondiscrimination] on the basis that concepts such as similarly situated parties, equivalent/comparable transactions, and objective justification, were the same under the non-discrimination limb of FRAND as they are in competition law." Unwired Planet Int'l Ltd v. Huawei Techs. Co. [2017] EWHC (Pat) 711 [487] (Eng.).

[67] *Unwired Planet* [2017] EWHC (Pat) 711 [486].

3. Unqualified Prohibitions Against Discrimination in Other SSOs

Internal documents of other SSOs support a similar conclusion regarding the obligations arising from an unqualified nondiscrimination requirement. For example, TIA's RAND commitment requires the SEP holder to offer to license its SEPs "under terms and conditions that are reasonable and non-discriminatory" to all applicants practicing the standard.[68] Even though TIA's nondiscrimination requirement is not qualified by fairness, the SSO's internal documents make clear that "[t]he term 'non-discriminatory' does not mean or imply that licensing terms must be the same for all applicants."[69] According to those documents, "the process of license negotiation and the components of consideration between parties can vary substantially yet be fair."[70] Such evidence further controverts the assumption that an unqualified nondiscrimination provision in a FRAND or RAND commitment implies that the SEP holder cannot engage in any form of discrimination among its licensees. Therefore, even when the SSO's licensing commitment does not qualify the nondiscrimination requirement with some variant of the word "fair," there is no reason to assume that such a requirement prohibits any differences in the terms offered to similarly situated implementers.

III. Proposed Interpretations of "Nondiscrimination"

Lawyers and economists who have endeavored to interpret the nondiscrimination requirement have typically neglected the differences between the nondiscrimination requirement of a FRAND commitment and that of a RAND commitment. It is nonetheless worth analyzing their suggested interpretations and identifying the major differences among them. As Justice Birss noted in *Unwired Planet*, no agreement exists in the scholarly literature on the correct interpretation of the nondiscrimination requirement. It also bears emphasis that most commentators (in their roles as either scholars or expert witnesses) have presented normative recommendations of what they believe the nondiscrimination requirement of a FRAND or RAND commitment ought to mean, as opposed to a positive analysis of the actual meaning of a given nondiscrimination requirement in a given contract. Thus, the proposed interpretations by these commentators will have limited value for any court interpreting an SEP holder's contractual obligation in a specific dispute.

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[68] TIA IPR Policy, *supra* note 9, § 3.1.1, at 8.

[69] TIA, Guidelines to the Telecommunications Industry Association Intellectual Property Rights Policy § 5, at 4 (May 1, 2014) [hereinafter TIA IPR Guidelines], http://www.tiaonline.org/sites/default/files/pages/IPRPGL-2014May01_0.pdf.

[70] *Id.*

A. Interpretation 1: Nondiscrimination as a Duty to License

One possible interpretation of the nondiscrimination requirement of a FRAND or RAND commitment is that it contractually forbids the SEP holder to refuse access to its essential technology to one implementer while licensing that technology to another implementer.

By statute, a patent holder has no duty to refrain from discrimination. In the United States, for example, the patent holder "has the exclusive right to manufacture, use, and sell [its] invention."[71] A patent holder may issue as many or as few licenses as it wishes—or it may refuse to license its patents entirely.[72] In contrast, by committing to an SSO to offer to license its SEPs to willing implementers of the standard on nondiscriminatory terms, the SEP holder contractually agrees to constrain its statutory right to exclude some (or all) users of the patented technology, including the SEP holder's right to refuse to license its competitors. This first interpretation of the nondiscrimination requirement of a FRAND or RAND commitment—what might be called the "no-refusal" interpretation—thus posits that licensing on a nondiscriminatory basis means offering licenses to all implementers, rather than only to a subset of implementers that the SEP holder prefers.

Some facts support this first interpretation. In 2002, for example, JEDEC's president, John Kelly, publicly supported the "no-refusal" interpretation when, in an overview of JEDEC's patent policy submitted to the Federal Trade Commission (FTC) in its *Rambus* case, he said that "[n]ondiscriminatory, in essence, means 'open to all comers.'"[73] Nondiscriminatory license terms, he said, "do not discriminate against any prospective licensee on the basis of corporate identity, history, demographics, etc."[74] The TIA Guidelines offer a similar interpretation of the nondiscrimination requirement: "[a]n example of conduct that would constitute discrimination is a willingness to license all applicants except for competitors of the licensor."[75] Similarly, the section on "The Meaning of 'Non-discriminatory'" in the ITU's *Understanding Patents, Competition & Standardization in an Interconnected World* examines (but provides no answer as to) "whether a SEP holder's obligation to license on 'non-discriminatory' terms permits the SEP holder to discriminate against certain classes of licensees"—for example, by refusing to license upstream implementers of industry standards (such as chip manufacturers)

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[71] Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 135 (1969) (citing Bement v. Nat'l Harrow Co., 186 U.S. 70, 88–89 (1902)).

[72] *Id.* at 135–36 (citing Waterman v. Mackenzie, 138 U.S. 252, 255 (1891)).

[73] John J. Kelly, An Overview of the JEDEC Patent Policy, FTC Dkt. No. 9302, at 4 (Mar. 26, 2002) [hereinafter Kelly Declaration], http://www.rambus.org/legal/ftc/Evidence/CX0449.PDF.

[74] *Id.*

[75] TIA IPR Guidelines, *supra* note 69, § 5, at 4.

and instead licensing only end-users.[76] That evidence suggests that the nondiscrimination requirement refers to the SEP holder's ability to freely choose its licensees, rather than to its ability to set the terms and conditions of the license.[77]

Some economists and lawyers who have studied the meaning of nondiscrimination in the FRAND or RAND commitment (not confined to JEDEC's, TIA's, or ITU's RAND commitment in particular) have reached a similar conclusion. For example, Mario Mariniello contends in a 2011 article that a FRAND commitment "waives the patent holder's right to refuse to license its IP rights to anybody seeking such a license."[78] He says that a FRAND royalty will naturally vary among licensees, "depending on each player's bargaining power or business features."[79] Although Mariniello does not explicitly analyze the nondiscrimination requirement, one can infer that he supports a "no-refusal" interpretation of nondiscrimination insofar as he does not propose any limitations on variation among the FRAND royalties that different licensees pay for the same SEPs.

In sum, according to the "no-refusal" interpretation, the nondiscrimination requirement of a FRAND or RAND commitment prohibits the SEP holder from excluding individual implementers from the use of its SEPs, but the requirement does not limit the terms and conditions that the SEP holder may offer to different licensees. Under that interpretation, only the reasonableness requirement of a RAND commitment, and the fairness and reasonableness requirements of a FRAND commitment, constrain the license's royalty rate and terms.

B. Interpretation 2: Nondiscrimination as a Prohibition Against Price Discrimination Between Downstream Competitors

Daniel Swanson and William Baumol offer a second interpretation of the nondiscrimination requirement that focuses on *price* discrimination—that is, on the difference in the royalty payments for licensing a given portfolio of SEPs—that would enable a vertically integrated SEP holder to create or

[76] International Telecommunication Union [ITU], Understanding Patents, Competition & Standardization in an Interconnected World § 11.2, at 68 (2014), https://www.itu.int/en/ITU-T/Documents/Manual_Patents_Final_E.pdf.

[77] In *FTC v. Qualcomm Inc.*, the FTC has alleged that Qualcomm violated its FRAND commitments by refusing to license Qualcomm's SEPs to competing upstream manufacturers of processor chips. FTC v. Qualcomm Inc., No. 17-cv-00220-LHK, 2017 WL 2774406, at *21 (N.D. Cal. June 26, 2017) ("FTC alleges that . . . Qualcomm has violated its FRAND commitments [to ETSI, TIA, and ATIS] by refusing to license its modem chips competitors."). Thus, Judge Lucy Koh, who is presiding over the case, might need to determine whether the FRAND commitment's nondiscrimination requirement prohibits the SEP holder from refusing to license its SEPs to certain levels of the supply chain for a given standard-compliant product.

[78] Mario Mariniello, *Fair, Reasonable and Non-Discriminatory (FRAND) Terms*, 7 J. Competition L. & Econ. 523, 525 (2011).

[79] *Id.* at 532.

enhance its market power in the downstream market.[80] Swanson and Baumol argue that the nondiscrimination requirement generally should not be interpreted as precluding the SEP holder from charging different royalties to similarly situated implementers.[81] They believe that the only exception to that rule should arise when the SEP holder is vertically integrated.[82]

They reason that although "price discrimination often benefits many consumers and sometimes even all of them, . . . *potentially* valid reasons exist for concern about discrimination in license fees" when the SEP holder is vertically integrated.[83] For a vertically integrated SEP holder, they argue, charging different prices to different licensees might permit the SEP holder to "create or enhance [its] market power in downstream markets for standard-compliant products and services."[84] They argue that the risk of an SEP holder's anticompetitive conduct "is (or should be taken to be) the principal justification for the RAND nondiscrimination requirement."[85] They consequently suggest that the nondiscrimination requirement should be interpreted as preventing a vertically integrated SEP holder from engaging in discriminatory licensing practices that could have anticompetitive effects in the downstream market.

Nonetheless, Swanson and Baumol emphasize that, in antitrust law, "[c]olorable claims of antitrust violations involving discriminatory pricing" need to show "plausible allegations of adverse effects on competition."[86] They argue that a similarly cautious approach should guide the interpretation of the nondiscrimination requirement of the FRAND or RAND commitment. They suggest that one way to determine whether the royalty is discriminatory is to assess whether the royalty "substantially departs" from the license fee based on the efficient component pricing rule (ECPR) level.[87] In their view, any fee that substantially departs from the ECPR should be

[80] Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 Antitrust L.J. 1, 27 (2005).

[81] *See id.* at 26–27.

[82] *See id.*

[83] *Id.* at 25–26 (emphasis in original).

[84] *See id.* at 26.

[85] *Id.* at 27.

[86] *Id.* (emphasis omitted). Daniel Crane similarly contends that the nondiscrimination requirement should apply only when the SEP holder is vertically integrated and uses its SEPs to stifle downstream competition. Daniel A. Crane, *Patent Pools, RAND Commitments, and the Problematics of Price Discrimination*, *in* Working Within the Boundaries of Intellectual Property 375, 382–83 (Rochelle C. Dreyfuss, Diane L. Zimmerman & Harry First eds., Oxford Univ. Press 2010).

[87] Swanson & Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, *supra* note 80, at 29. Swanson and Baumol propose that nondiscriminatory royalties be calculated on the basis of the ECPR, which specifies that "the price that the IP-holder firm charges itself for the use of its own innovation input equals the price the firm charges customers for a final product using that IP, minus the incremental cost to the IP-holding firm of all other inputs, including capital, used to produce the final product." *Id.* at 30.

considered to violate the nondiscrimination requirement of a FRAND or RAND commitment.[88]

Swanson and Baumol add that courts should not necessarily apply the ECPR test in all cases. They emphasize that "courts quite appropriately resist assuming the supervisory role of a regulatory agency, and particularly so when it comes to issue of price setting."[89] However, they suggest that "in circumstances where it is alleged that differential pricing is anticompetitive in the downstream market, [the] ECPR can provide guidance in determining whether the fees at issue do or do not satisfy a RAND commitment."[90] They propose that, "[a]t a minimum, compliance with ECPR should constitute a 'safe harbor' that suffices to disprove an allegation of anticompetitive discrimination (even if noncompliance [with the ECPR] need not be taken as conclusive evidence of anticompetitive conduct)."[91] In other words, evidence of the SEP holder's failure to comply with the ECPR would be necessary but insufficient to prove an antitrust violation.

C. Interpretation 3: Nondiscrimination as a Duty to License Similarly Situated Licensees on Similar Terms

A third interpretation of the nondiscrimination requirement of a FRAND or RAND commitment would impose on the SEP holder the duty to license similarly situated licensees on similar terms. Several economists, including myself, have proposed that interpretation of nondiscrimination.[92] Like Swanson and Baumol, those economists focus on the difference in royalties charged for a given portfolio of SEPs. However, they contend that the nondiscrimination requirement should apply regardless of whether the SEP holder competes in the downstream market and regardless of whether discrimination would have an effect on market competition.

Dennis Carlton and Allan Shampine propose that, under a FRAND commitment, similarly situated firms should pay the same royalty rate.[93] They define firms as being similarly situated "if *ex ante* they expect to obtain

[88] *Id.* at 29.
[89] *Id.* at 30.
[90] *Id.*
[91] *Id.*
[92] *See, e.g.*, Richard J. Gilbert, *Deal or No Deal? Licensing Negotiations in Standard-Setting Organizations*, 77 ANTITRUST L.J. 855, 858 (2011) (interpreting the nondiscrimination requirement of a RAND commitment as "[p]reventing undue discrimination between similarly situated licensees"); Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents*, 28 BERKELEY TECH. L.J. 1135, 1141–42 n.17 (2013) (suggesting that the patent owner "is obliged to offer similar terms to similarly situated parties"); Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 996–97.
[93] Carlton & Shampine, *supra* note 15, at 546 ("'Non-discriminatory,' in the context of a SSO setting standards for competing firms, can be interpreted to mean that all implementers of the standard should be offered licenses to the technology, and all 'similarly situated' firms should pay the *same* royalty rate." (emphasis added)).

the same incremental value from the patented technology compared with the next best alternative available to be incorporated into the standard."[94] They say that, because firms that operate in different industries would derive different incremental values from their use of the SEPs, those firms should pay different royalties.[95] They recognize that it might be difficult to implement their interpretation of the nondiscrimination requirement in practice, particularly if the "incremental value to profits that [the patented] technology brings to the [licensee]" differs across licenses.[96] They consequently suggest that one possible way to address that problem is "to apply a uniform rate assessed against a common component incorporating the patent" across all licensees whose products incorporate that component.[97] Therefore, Carlton and Shampine envision no difference across royalties for similarly situated implementers.[98]

Richard Gilbert proposes a looser version of this third interpretation of the nondiscrimination requirement, whereby the SEP holder must provide "uniform treatment for similarly situated licensees."[99] Although he does not define "similarly situated," Gilbert contends that similarly situated implementers should be able to "choose from the same schedule of royalty payments,"[100] which can include "fixed fees, fixed per-unit fees, fees that decline with the number of licensed units, different fees for different products, maximum caps, and exemptions for small numbers of licensed units."[101] Gilbert acknowledges that rates will differ across similarly situated implementers under his proposed interpretation of the nondiscrimination requirement, but he emphasizes that, as long as similarly situated implementers can choose among the same license options, the SEP holder's licensing practice should be considered nondiscriminatory.[102] However, Gilbert acknowledges that "[a] commitment to offer the same schedule of licensing terms to every potential licensee does not guarantee that no licensee has a competitive advantage."[103] For example, he contends that an "influential" implementer can "marginalize[] competition from other potential licensees."[104] But he

94 *Id.*
95 *See id.*
96 *Id.* at 547; *see also id.* at 547–48 ("[T]here are circumstances in which there are good reasons not to interpret FRAND in this way. For example, it may be difficult and costly to implement, particularly when rival firms have significant differences with respect to complementary goods. . . . [T]he value of a technology to a firm depends on the incremental value to profits that technology brings to the firm by improving the demand for its product, all else equal. Measuring that incremental value, especially when it could differ across firms because the product produced by the firms differs, could be a formidable task.").
97 *Id.* at 548.
98 *Id.*
99 Gilbert, *supra* note 92, at 872.
100 *Id.* at 873.
101 *Id.* at 875.
102 *Id.* at 876.
103 *Id.*
104 *Id.*

argues that the competitive effects of such practices should be analyzed under antitrust law and not as part of a contract-law analysis of the FRAND commitment.[105]

In *The Meaning of FRAND, Part I: Royalties*, I proposed a similarly broad interpretation of the nondiscrimination requirement.[106] Specifically, I argued that an SEP holder should be deemed to have satisfied the nondiscrimination requirement if it "offer[ed] terms to two similarly situated licensees that are not grossly disproportionate."[107] Under my proposed interpretation—similar to Gilbert's interpretation—the SEP holder would be required to "offer similarly situated licensees the same approximate royalty rate as a function of output."[108] Put differently, I argued that nondiscriminatory pricing of SEPs should mean that "each licensee is offered the same menu of licensing options," and not that each licensee pays the same royalty rate.[109] My interpretation would "permit nonlinear pricing of SEPs, including two-part tariffs and optional tariffs,"[110] and thus it would "maximize the surplus generated by the standard" without causing "inefficiencies in the product market."[111] Nonetheless, I acknowledged that the SEP holder and the SSO are free to define "nondiscrimination" however they like in a FRAND or RAND contract.[112]

In sum, although proponents of the third interpretation of the nondiscrimination requirement of a FRAND or RAND commitment believe that similarly situated licensees must be offered similar terms, there is no agreement as to how to implement that requirement in practice.

D. Positive Versus Normative Interpretation of the Nondiscrimination Requirement

An analysis of the decisions that U.S. courts have rendered in FRAND or RAND litigation shows that, as of August 2017, the nondiscrimination requirement has played a relatively minor role in SEP disputes. Few courts have analyzed the meaning of the nondiscrimination requirement, and those

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105 *Id.*

106 Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 996–1000. At the time that I wrote *The Meaning of FRAND, Part I: Royalties* in 2013, most of the attention on RAND or FRAND royalty rates focused on the meaning of reasonableness. The interpretation of the nondiscrimination requirement that I offered in that article reflects both the nascent state of the intellectual debate on the subject at the time and the developing state of the law at the time. *See id.* at 1000 ("Nondiscrimination is a less controversial element of FRAND pricing, but its precise meaning is still subject to conflicting opinions."). Thus, the discussion in *this* article amplifies and clarifies my previous interpretation based on new developments in the literature and the case law on FRAND or RAND issues and my own further research on the positive principles of nondiscrimination jurisprudence.

107 *Id.* at 997.

108 *Id.*

109 *Id.* at 999.

110 *Id.* at 998.

111 *Id.* at 999.

112 *Id.* at 996.

that have done so did so only in passing. Courts have examined whether the nondiscrimination requirement prohibits the SEP holder (1) from engaging in selective licensing (for example, by refusing to license its SEPs at the component level),[113] (2) from distinguishing between implementers that are the SEP holder's competitor and those that are not,[114] or (3) from offering different royalties to its licensees.[115] However, the opinions of these courts have not provided definitive answers to any of these questions.

Given the limited guidance that courts in FRAND or RAND cases have provided on the precise meaning of nondiscrimination, one could resort to the definitions of discrimination used elsewhere in the law and in the economic literature. It bears emphasis, however, that most commentators who propose to define the nondiscrimination requirement of a FRAND or RAND commitment present normative rather than positive arguments. That is, they do not purport to interpret the contractual provisions of a specific FRAND or RAND commitment or the text of a particular SSO's IP policy. Instead, they make normative arguments about what they believe the nondiscrimination requirement of a FRAND or RAND commitment *ought* to mean to advance some preferred criterion of social welfare.[116] Table I summarizes how various economists and lawyers who have written about FRAND or RAND royalties have suggested either positive or normative interpretations of nondiscrimination.

[113] *See, e.g.*, Ericsson Inc. v. D-Link Sys., Inc., No. 6:10-cv-00473, 2013 WL 4046225, at *23 (E.D. Tex. Aug. 6, 2013).

[114] *See, e.g.*, Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1230–31 (Fed. Cir. 2014); Microsoft Corp. v. Motorola, Inc., No. C10–1823JLR, 2013 WL 2111217, at *18 (W.D. Wash. Apr. 25, 2013).

[115] *See, e.g.*, Apple, Inc. v. Motorola Mobility, Inc., No. 11-cv-178-bbc, 2011 WL 7324582, at *11 (W.D. Wis. June 7, 2011); *In re* Innovatio IP Ventures, LLC Patent Litig., No. 11 C 9308, 2013 WL 5593609, at *38 (N.D. Ill. Oct. 3, 2013); SK hynix Inc. v. Rambus Inc., No. C-00-20905 RMW, 2013 WL 1915865, at *20 (N.D. Cal. May 8, 2013).

[116] *See, e.g.*, Janusz Ordover & Allan Shampine, *Implementing the FRAND Commitment*, 14 Antitrust Source, Oct. 2014, at 1, 3 ("We now provide *suggestions* on how FRAND should be implemented from a practical perspective to address the antitrust concerns created through the collective action of SSOs." (emphasis added)); Allan Shampine, *Applying the Non-Discrimination Requirement of FRAND When Rates Change*, 16 Antitrust Source, Aug. 2016, at 1, 4 ("[T]here is a strong *economic case* that rates should not change over time, or at least should not rise, particularly in the presence of *ex ante* licenses that can be used as benchmarks." (first emphasis added)); *id.* at 5 ("A reasonable approach *from a public policy perspective*, therefore, would be never to allow rates for FRAND-encumbered patents to rise." (emphasis added)); Swanson & Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, *supra* note 80, at 6 ("Part III *proposes* a formula for royalties that are 'nondiscriminatory.'" (emphasis added)).

Table 1. Proposed Positive or Normative Interpretations of Nondiscrimination

Author(s)	Proposed Interpretation	Normative or Positive?
Roger G. Brooks & Damien Geradin	"[T]he 'non-discriminatory' component of FRAND is more than merely an affirmation of national competition law," because national competition law may allow for "outright discrimination . . . in favour of exclusive or preferred distributors." However, at least for ETSI, "'ND' clearly means less than a Most Favoured Licensee clause, with an MFL clause having been explicitly repealed, and comment at the time of adoption of the present policy signalling an intention to leave members wide flexibility in agreeing to particular terms with particular licensees depending on the commercial circumstances."[117]	Positive[118]
Dennis W. Carlton & Allan L. Shampine	"'Non-discriminatory,' in the context of a SSO setting standards for competing firms, can be interpreted to mean that all implementers of the standard should be offered licenses to the technology, and all 'similarly situated' firms should pay the same royalty rate."[119]	Normative[120]
Jorge Contreras	"'[N]on-discrimination' . . . (a) allows differential pricing between different distribution channels or categories of licensees, but not among licensees within the same channel or category, and (b) prohibits the refusal of a license on such terms to any willing applicant requesting one."[121]	Positive[122]
Maurits Dolmans	"FRAND declarations are intended to avoid a tilting of the playing field in market for products implementing the standard."[123]	Normative[124]

117 Brooks & Geradin, *supra* note 62, at 16.

118 *Id.* at 14–16 (citing ETSI documents).

119 Carlton & Shampine, *supra* note 15, at 546.

120 *Id.* at 531 ("Although the interpretation of FRAND is ultimately a legal question, economic analysis can provide insight into which interpretations are likely to produce results consistent with the economic concerns underlying FRAND.").

121 Jorge L. Contreras, *A Brief History of FRAND: Analyzing Current Debates in Standard Setting and Antitrust Through a Historical Lens*, 80 ANTITRUST L.J. 39, 80 (2015) [hereinafter Contreras, *A Brief History of FRAND*].

122 *Id.* at 74–80. To arrive at his proposed interpretation of the nondiscrimination requirement, Contreras relies on various court decisions concerning compulsory licensing: Hartford-Empire Co. v. United States, 323 U.S. 386, 414 (1945); Hartford-Empire Co. v. United States, 324 U.S. 570, 574 (1945); American Sec. Co. v. Shatterproof Glass Corp., 154 F. Supp. 890, 897 (D. Del. 1957); Rudenberg v. Clark, 81 F. Supp. 42, 45 (D. Mass. 1948); United States v. Gen. Elec. Co., 115 F. Supp. 835, 844 (D.N.J. 1953); Xerox Corp., 86 F.T.C. 364, 374, 379 (1975); Note, *Compulsory Patent Licensing by Antitrust Decree*, 56 YALE L.J. 77, 93, 121, 123–24 (1946) (containing excerpts of the Final Judgment decree entered on October 31, 1945 by the Northern District Court of Ohio in *Hartford-Empire Co. v. United States*).

123 Maurits Dolmans, *Standards, IP, and Competition: How to Avoid False FRANDs*, *in* 11 INTELLECTUAL PROPERTY LAW AND POLICY 792, 805 (Hugh C. Hansen ed., Bloomsbury 2010).

124 To support this proposition, Dolmans cites the article by Swanson and Baumol, rather than an actual RAND contract. *Id.* at 805 n.38 (citing Swanson & Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, *supra* note 80).

Joseph Farrell, John Hayes, Carl Shapiro, & Theresa Sullivan	"When network effects are important, a technology supplier may be able, even ex ante, to use divide-and-conquer negotiation strategies to extract more than the technology's true value. . . . For instance, if there are three potential users, and network effects make it impossible for one to be viable without compatibility with the other two, a patent holder can offer two attractive licenses and one confiscatory one. But divide-and-conquer strategies are much less effective if the patent holder cannot discriminate. Thus, non-discrimination provisions could help protect against divide-and-conquer overcharges."[125]	Normative[126]
Richard J. Gilbert	Similarly situated licensees should be able to "choose from the same schedule of royalty payments."[127]	Normative[128]
John Kelly	"Non-discriminatory terms do not discriminate against any prospective licensee on the basis of corporate identity, history, demographics, etc. Non-discriminatory, in essence, means 'open to all comers.'"[129]	Positive[130]
Anne Layne-Farrar	"[I]t is clear that price discrimination is not always or necessarily harmful," as it "can improve efficiency, grow markets, and even enhance consumer welfare." Consequently, "any inquiry into the nature of IP licensing differentials among licensees within a standard-setting body should focus on anticompetitive *effects* that such differentials may engender under the circumstances at hand."[131]	Normative[132]
Mark A. Lemley	Most SSOs "require that licenses be granted on nondiscriminatory terms, preventing an IP owner from closing the standard to particular competitors."[133]	Positive[134]

[125] Joseph Farrell, John Hayes, Carl Shapiro & Theresa Sullivan, *Standard Setting, Patents, and Hold-Up*, 74 Antitrust L.J. 603, 639 (2007) (citing Ilya Segal, *Coordination and Discrimination in Contacting with Externalities: Divide and Conquer?*, 113 J. Econ. Theory 147 (2003)).

[126] *Id.* at 637 ("We start from the principle that FRAND rules *should* be interpreted as a mechanism by which SSO participants address the problem of patent hold-up when *ex ante* negotiation was absent or inconclusive, and by which they make efficient timing of negotiation possible without inviting hold-up." (emphasis added)).

[127] Gilbert, *supra* note 92, at 873.

[128] *Id.* at 859 ("My *proposal* calls for a shift of emphasis from the 'fair and reasonable' prong of FRAND, which is often inherently ambiguous, to the 'non-discrimination' prong, which if clearly defined can provide meaningful protection against *ex post* holdup if bilateral negotiations between rights holders and industry members occur before firms and consumers make investments that are specific to a standard." (emphasis added)).

[129] Kelly Declaration, *supra* note 73, at 4.

[130] John Kelly was, and as of 2017 still is, the president of JEDEC, and was addressing JEDEC's patent policy.

[131] Anne Layne-Farrar, *Nondiscriminatory Pricing: Is Standard Setting Different?*, 6 J. Competition L. & Econ. 811, 832 (2010) (emphasis in original).

[132] *Id.* at 834 (noting that courts should determine whether "discriminatory patent licensing has the potential to harm consumers or negatively affect social efficiency").

[133] Lemley, *supra* note 50, at 1901 n.42.

[134] Lemley presents this argument as the intended purpose of the nondiscrimination requirement, and not as his own interpretation. *Id.*

Mario Mariniello	"[T]he FRAND commitment waives the patent holder's right to refuse to license its IP rights to anybody seeking such a license,"[135] and FRAND "impl[ies] different royalties depending on each player's bargaining power or business features."[136]	Normative[137]
Janusz Ordover	Nondiscrimination requires that "the standard essential patent owner can never charge more for a license to its portfolio than the most preferential rate that it has granted to an existing licensee."[138]	Normative[139]
Janusz Ordover & Allan Shampine	"[A] nondiscriminatory royalty should offer the same terms to all similarly situated licensees, thus ensuring a level playing field for competition in products implementing the standard."[140]	Normative[141]
J. Gregory Sidak	"[A]s long as the SEP holder offers terms to two similarly situated licensees that are not grossly disproportionate, the SEP holder should be deemed to have satisfied the 'nondiscriminatory' component of the FRAND commitment."[142]	Normative[143]
Allan Shampine	"A simple and effective solution to enforcing non-discrimination is to require that terms and conditions, once determined in initial negotiations, be binding on future negotiations."[144]	Normative[145]
Daniel G. Swanson & William J. Baumol	"Any license fee that substantially departs from the [efficient component pricing rule] . . . level can be deemed to violate the RAND requirement of nondiscrimination."[146]	Normative[147]

135 Mariniello, *supra* note 78, at 525.

136 *Id.* at 532.

137 Mariniello opines on what he believes the FRAND commitment means, and not what he believes the FRAND commitment should mean. *See, e.g.*, *id.* ("*I take the view* that FRAND is the outcome of a bilateral hypothetical negotiation between the licensor and the licensee, which would take place ex-ante (when competition amongst technologies may still be present), conditional on the information which is available ex-post. Thus, FRAND naturally varies amongst players." (emphasis added)).

138 Transcript of Proceeding at 74:22–75:1, TCL Commc'ns Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. SACV-14-00341-JVS (S.D. Cal. Feb. 15, 2017) (Trial Testimony of Janusz Ordover) [hereinafter Ordover Trial Testimony]. This passage, and all other passages from the trial transcript in *TCL v. Ericsson*, are excerpted from the publicly available, redacted version of the trial transcript.

139 *Id.* at 76:1–3 ("I am trying to bring the learning of economics and define what I think [nondiscrimination] should be in the context of this negotiation.").

140 Ordover & Shampine, *supra* note 116, at 1–2.

141 *Id.* at 3 ("We now provide *suggestions* on how FRAND should be implemented from a practical perspective to address the antitrust concerns created through the collective action of SSOs." (emphasis added)).

142 Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 997.

143 *Id.* at 998 ("To consider why the SSO would define 'nondiscriminatory' to require that all licensees face the same nonlinear pricing schedule and *not* the same per-unit or same *ad valorem* running royalty, I examine how the selection of a nonlinear tariff affects the surplus generated by the standard." (emphasis in original)).

144 Shampine, *supra* note 116, at 2.

145 *Id.* at 4 ("[T]here is a strong economic case that rates should not change over time, or at least should not rise, particularly in the presence of *ex ante* licenses that can be used as benchmarks. Such a *policy* provides protection to both licensees and licensors." (emphasis added)); *see also id.* at 5 ("A reasonable approach *from a public policy perspective*, therefore, would be never to allow rates for FRAND-encumbered patents to rise." (emphasis added)).

146 Swanson & Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, *supra* note 80, at 29 (emphasis omitted).

147 *Id.* at 6 ("Part III *proposes* a formula for royalties that are 'nondiscriminatory.'" (emphasis added)); *see also id.* at 57 ("Only rules that deal effectively with both [the reasonable and nondiscriminatory] issues yield results that are unequivocally defensible as *appropriate public policy*." (emphasis added)).

Normative definitions of nondiscrimination might be intellectually interesting, but they will typically lack evidentiary relevance for resolving contractual disputes.[148]

E. Does a Breach of the Nondiscrimination Requirement of a FRAND or RAND Commitment Constitute an Antitrust Violation?

U.S. courts have analyzed allegations of an SEP holder's discriminatory licensing practices through different legal regimes. In some cases, the courts have examined whether the SEP holder's challenged conduct breached a contractual obligation contained in a FRAND or RAND commitment.[149] In others, they have analyzed whether a discriminatory licensing practice violates antitrust law.[150] Although an SEP holder's licensing practice might constitute both a breach of contractual obligations and an antitrust violation, there are important distinctions between the two causes of action. A contractual prohibition against discrimination might differ in scope from a prohibition against discrimination arising under antitrust law. In addition, establishing a breach of contract will typically require the claimant to present different evidence and will give rise to different remedies than will an antitrust action against the SEP holder. It is thus appropriate to differentiate between (1) an SEP holder's discriminatory practice that violates a contractual provision of its FRAND or RAND commitment, and (2) an SEP holder's discriminatory practice that violates antitrust law.

1. Breach of Contract Versus Anticompetitive Discrimination

There are at least three differences between a contractual prohibition against discrimination and a statutory prohibition against discrimination contained in antitrust law.

First, the two types of prohibitions might differ in scope. In a contract, the parties are free to agree on any definition of the term "nondiscrimination." The term "discrimination" (or "nondiscrimination") might have different meanings, and consequently might impose different obligations in different contracts. In contrast, the prohibition against discrimination contained in antitrust law is defined by statute—specifically, in the Robinson-Patman

[148] *Cf.* Universal Health Servs., Inc. v. Renaissance Women's Grp., P.A., 121 S.W.3d 742, 747–48 (Tex. 2003) ("Generally, a court looks only to the written agreement to determine the obligations of contracting parties. In rare circumstances, however, a court may imply a covenant in order to reflect the parties' real intentions. . . . [A] covenant will not be implied [in a contract] simply to make a contract fair, wise, or just." (internal citations omitted) (citing Sun Oil Co. v. Madely, 626 S.W.2d 726, 728 (Tex. 1981); Dancigar Oil & Ref. Co. of Tex. V. Powell, 154 S.W.2d 632, 635 (Tex. 1941))).

[149] *See, e.g.*, Realtek Semiconductor Corp. v. LSI Corp., No. C-12-03451 RMW, 2012 WL 4845628, at *2–4 (N.D. Cal. Oct. 10, 2012); Apple, Inc. v. Motorola Mobility, Inc., No. 11-cv-178-bbc, 2011 WL 7324582, at *11 (W.D. Wis. June 7, 2011).

[150] *See, e.g.*, Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 318 (3d Cir. 2007).

Act[151] in U.S. law and in Article 102 of the TFEU in EU law.[152] Court decisions construe the precise meaning of those antitrust prohibitions. It is possible for the parties to a contract to agree that the term "discrimination" shall have the same meaning in their contract as it does in antitrust law. However, in the absence of evidence to support that conclusion, one cannot assume that a contractual prohibition against discrimination is identical in scope to the prohibition against discrimination in the relevant antitrust law.

Second, the evidence that a claimant would need to present to establish a breach of contract differs from the evidence necessary to establish a violation of an antitrust statute. In a breach-of-contract case, the claimant will typically need to provide evidence of (1) a valid contract to which the claimant is a party (or, in some cases, the intended third-party beneficiary), (2) evidence of a contractual duty arising under the contract, and (3) evidence that the defendant breached that duty.[153] In contrast, there is no need to show the existence of a contract to establish discriminatory conduct that violates antitrust law. Antitrust provisions apply regardless of whether the defendant has agreed to obey them. However, to bring an antitrust action in a U.S. court, the claimant would need to prove that (1) the challenged conduct constitutes an antitrust offense, and (2) the claimant has antitrust standing.[154] Indeed, a claimant that has standing to bring a breach-of-contract claim will not necessarily have standing to bring an antitrust claim, and vice versa.[155]

Third, the claimant would be entitled to different remedies for a breach of contract than for an antitrust violation. In a breach-of-contract case, the claimant would typically seek equitable remedies of restitution or specific performance or the legal remedy of expectation damages.[156] In contrast, in an

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[151] Robinson-Patman Act, Pub. L. No. 114–38, 49 Stat. 1526 (1936) (codified as amended at 15 U.S.C. §§ 13–13b, 21a).

[152] TFEU, *supra* note 20, art. 102(c).

[153] *See, e.g.*, Brown v. Sessoms, 774 F.3d 1016, 1024 (D.C. Cir. 2014) (applying District of Columbia law).

[154] *See, e.g.*, Associated Gen. Contractors of Cal., Inc. v. Cal. State Council of Carpenters, 459 U.S. 519, 535 (1983); Gelboim v. Bank of Am. Corp., 823 F.3d 759, 770 (2d Cir. 2016). For a detailed analysis of the evidence that a claimant needs to present to show that a discriminatory practice violates the nondiscrimination provision of the Robinson-Patman Act, see Part V.E.

[155] *See, e.g.*, Hairston v. Pac. 10 Conf., 101 F.3d 1315, 1317–18 (9th Cir. 1996) (finding (1) no error in the district court's conclusion that, had the plaintiffs demonstrated a direct antitrust injury, they could pursue an antitrust claim; but (2) that plaintiffs could not bring a claim of breach of contract, because they were not the intended third-party beneficiaries of the contract); Blue Shield of Va. v. McCready, 457 U.S. 465, 486 (1982) ("Standing alone, a refusal by an insurer to reimburse its insured does not constitute a violation of the Sherman Act. At most, such an action on the part of an insurer may amount to a breach of a contract."); Fields Prods., Inc. v. United Airlines Corp., 318 F. Supp. 87, 88 (S.D.N.Y. 1969) ("This may be a breach of contract, but it is not a violation of the antitrust laws."); *see also* Sky Angel U.S., LLC v. Nat'l Cable Satellite Corp., 947 F. Supp. 2d 88, 107 (D.C.C. 2013); Schoenkopf v. Brown & Williamson Tobacco Corp., 637 F.2d 205, 211 (3d Cir. 1980).

[156] *See, e.g.*, Fifth Third Bank v. United States, 518 F.3d 1368, 1374 (Fed. Cir. 2008) ("Expectancy damages are intended to make a non-breaching party whole by providing the benefits expected to be received had the breach not occurred."); PMS Construction Co. v. DeKalb Cty., 257 S.E.2d 285, 287 (Ga. 1979) ("Restitution, damages and specific performance are the three remedies for breach of contract." (citing 5 Arthur L. Corbin, Corbin on Contracts §§ 1102–21 (West 6th ed. 1951))).

antitrust case, the plaintiff would seek treble damages for the antitrust injury that it suffered due to the defendant's anticompetitive conduct.[157] Therefore, there might be a considerable difference between the remedies that the claimant might obtain when challenging particular conduct under the two different bodies of law.[158]

2. Implications for SEPs

The differences between a breach of contract and an antitrust violation have important implications for the interpretation of the nondiscrimination requirement of a FRAND or RAND commitment. A contractual prohibition against discrimination contained in a FRAND or RAND commitment might differ from a prohibition against discrimination contained in antitrust law. In addition, the claimant would need to provide different evidence to show that the SEP holder's discriminatory practice violates a contractual obligation than it would need to prove that the SEP holder's practice amounts to an antitrust violation. Of course, evidence that the SEP holder's conduct violates a contractual prohibition against discrimination contained in its FRAND or RAND commitment does not necessarily support the conclusion that the conduct amounts to an antitrust offense. Thus, it would be incorrect to assume that a breach of the FRAND or RAND contract automatically rises to the level of an antitrust offense.[159] Conversely, evidence that the SEP holder has engaged in anticompetitive discrimination will not necessarily support the conclusion that it has also violated a contractual duty under its FRAND or RAND commitment.

The D.C. Circuit made a similar observation in *Rambus Inc. v. Federal Trade Commission*, in which the FTC argued (among other things) that Rambus's concealment of its SEPs during the standardization process amounted to an antitrust offense because it permitted Rambus to avoid making a RAND commitment while still having its technology included in the standard.[160] The D.C. Circuit, in an opinion by Judge Stephen Williams, rejected the FTC's claim, reasoning that "[d]eceptive conduct—like any other kind [of conduct]—must have an anticompetitive effect . . . to form the basis

[157] For example, in *Microsoft Mobile, Inc. v. InterDigital, Inc.*, Microsoft alleged that InterDigital had "abused its monopoly power in pricing its SEPs in a manner that unfairly discriminate[d] against Microsoft and other newer, lower-volume entrants in the cellular device industry." Complaint ¶ 61, at 18–19, No. 1:15-cv-00723, 2015 WL 5116781 (D. Del. Aug. 20, 2015). For InterDigital's allegedly anticompetitive discrimination, Microsoft sought treble damages. *Id.* ¶ E, at 28.

[158] *Cf.* Repp v. F. E. L. Publ'ns, Ltd., 688 F.2d 441, 447 (7th Cir. 1982) (finding that the challenged licensing practices could constitute a breach of contract under California law, and, consequently, that the plaintiff could seek damages, but emphasizing that the "proper and fully adequate remedy is under contract and not federal antitrust law").

[159] *See* Maureen K. Ohlhausen, *The Elusive Role of Competition in the Standard-Setting Antitrust Debate*, 20 Stan. Tech. L. Rev. 93, 121–22 (2017).

[160] Rambus Inc. v. FTC, 522 F.3d 456, 461 (D.C. Cir. 2008) (Williams, J.).

of a monopolization claim."[161] The court added that, "[e]ven if deception raises the price secured by a seller, but does so without harming competition, it is beyond the antitrust laws' reach."[162] The D.C. Circuit also rejected the FTC's contention that "any conduct that permits a monopolist to avoid constraints on the exercise of [monopoly] power must be anticompetitive."[163] For the same reason, evidence that the SEP holder breached a contractual prohibition against discrimination cannot by itself constitute an antitrust violation.[164] An SEP holder's discriminatory licensing practice will rise to an antitrust offense only if it harms the competitive process.

The difference between a breach of contract and an antitrust offense is also important for the purpose of examining the proposed interpretation of the nondiscrimination requirement of a FRAND or RAND commitment. If a one is interpreting the prohibition against nondiscrimination in the context of an antitrust violation, then the "normative" definitions of discrimination might be relevant to a rule-of-reason analysis that a court would undertake. However, the court in that scenario is not construing a contractual term. Rather, it is deciding whether a particular conduct—in this case, the breach of a contractual requirement of nondiscrimination—rises to the level of a violation of antitrust law. That question might be entirely irrelevant to determining whether the SEP holder has breached its contractual obligations defined in the FRAND or RAND commitment.

IV. The "Level Playing Field" Cliché

In yet another normative variation on the "similarly situated" interpretation of the nondiscrimination requirement, some economists contend that a FRAND or RAND contract obligates the SEP holder to charge royalties that ensure a "level playing field" among implementers that compete with each other in the downstream product market.[165] This choice of terminology is regrettable. The Oxford University Press has found that "a level playing field" is the fifth most frequent cliché in the *Oxford English Corpus*, which is "a database consisting of hundreds of millions of words of contemporary

[161] *Id.* at 464.
[162] *Id.*
[163] *Id.* at 466.
[164] *Cf.* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 314 (3d Cir. 2007) (finding that evidence of a breach of a FRAND commitment creates an actionable antitrust claim only when that breach caused harm to the competitive process); *see also id.* ("Deception in a consensus-driven private standard-setting environment harms the competitive process by obscuring the costs of including proprietary technology in a standard and increasing the likelihood that patent rights will confer monopoly power on the patent holder.").
[165] *See, e.g.*, Shampine, *supra* note 116, at 1, 7; Ordover & Shampine, *supra* note 116, at 1, 1–2. A highly respected antitrust practitioner in Europe shares this view. *See* Dolmans, *supra* note 123, at 805.

written English."[166] Economists propounding the "level playing field" interpretation of the nondiscrimination requirement thus predicate their argument on a cliché, rather than the rigorous tools of their discipline.

The "level playing field" argument is not plausible on either legal or economic grounds. It is absurd to suppose that sophisticated companies and the prominent law firms that represent them would resort to an ambiguous cliché to define an important contractual obligation. It is thus unsurprising that, as of this writing, no court has reported having found evidence showing that an SEP holder and its SSO intended the nondiscrimination requirement of their FRAND or RAND contract to obligate the SEP holder to provide (let alone maintain) a "level playing field" for its licensees.

A. The Ambiguous Definition of a "Level Playing Field"

Although the term "level playing field" appears in several articles that analyze the obligations of a RAND commitment, those articles do not uniformly define the obligations that an SEP holder would need to satisfy to comply with the nondiscrimination requirement. Moreover, the economists who invoke this phrase do not explain why sophisticated parties would write a contract containing a key provision whose meaning was rooted in an ambiguous cliché.

Economists who have advanced the "level playing field" interpretation suggest (either implicitly or explicitly) that the SEP holder should impose equal licensing costs on the competing implementers. For example, in *TCL Communications, Ltd. v. Telefonaktiebolaget LM Ericsson*, Janusz Ordover, testifying as TCL's expert on the economic meaning of FRAND,[167] argued that the nondiscrimination prong should "ensure that firms are placed on more or less an equal playing field" such that they "can differentiate themselves in other dimensions such as their own in-house innovation, service, and all that while having undistorted access to the core technologies."[168]

Some proponents of the "level playing field" interpretation have argued that the SEP holder not only must ensure that competing implementers face

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[166] *Compact Oxford Thesaurus for Students: Avoiding Clichés*, Oxford University Press, http://global.oup.com/booksites/content/0199216290/streamline/clichebuster/. The Oxford University Press offers the following advice, which diligent economists would be well advised to heed:

> Try to avoid using clichés in college assignments or job applications. They tend to annoy people and may create an impression of laziness or a lack of careful thought. They can even become a barrier to communication, as people may tune out when they hear a tired, overused phrase and so miss the very point that you're trying to make.

Id.

[167] Ordover Trial Testimony, *supra* note 138, at 37:20–23 ("That's what I was asked to do, to offer an economic interpretation of what the FRAND commitments mean, what the FRAND constraints are.").

[168] *Id.* at 140:7–11.

similar licensing costs, but also must *maintain* the "level playing field" over time. For example, Shampine argues that "existing licensees' rates should be adjusted to provide a level playing field amongst competitors, [such] that similarly situated firms should be paying similar rates *at any given point in time*."[169] In other words, Shampine would require an SEP holder to change the royalties that it charges its existing licensees if it offers a lower royalty to a new licensee. Thus, Shampine interprets the nondiscrimination requirement to be substantially equivalent to an MFC clause,[170] which, in the words of Richard Gilbert, assures "a customer . . . that its price will be no higher than the lowest price paid by another customer."[171]

Moreover, some economists even seem willing to compromise the SEP holder's right to reasonable compensation to ensure a "level playing field" among implementers. For example, Ordover testified in *TCL v. Ericsson* that the SEP holder "can never charge more for a license to its portfolio than the most preferential rate that it has granted to an existing licensee."[172] He said: "My definition of FRAND is that . . . the nondiscrimination requirement of the FRAND concept requires that the [SEP holder] offers [sic] . . . no worse than the best available contract or license to any particular licensee."[173] Ordover reasoned that, although FRAND is a range, "once the licenses are established with actual licensees, the owner of the IP is anchored at the best available rate in the marketplace in making subsequent offers."[174] This conclusion holds, in his view, regardless of whether the compensation that the SEP holder obtained from a previous implementer was unfair or unreasonable. Ordover acknowledged in his testimony, for example, that his definition of the nondiscrimination requirement implies that, if an SEP holder were to offer one implementer a license with a one-way royalty rate of zero, the SEP holder would be obligated to give free licenses to all other implementers.[175] That requirement holds, he said, even if the *ex ante* value of that SEP, which Ordover defines as reasonable compensation for the use of an SEP, is $1.[176] Invoking another cliché, Ordover argues that the *ex ante* value of the SEPs would be, at *that* point, "water under the bridge."[177]

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169 Shampine, *supra* note 116, at 6 (emphasis added).

170 *Id.* ("[I]f well-specified [MFC] clauses are in place, then [in the event that the SEP holder offers lower rates to future licensees,] the overall licensing scheme may be adjusted with little difficulty.").

171 Gilbert, *supra* note 92, at 880. I do not suggest that Gilbert endorses Shampine's interpretation of the nondiscrimination requirement. MFC clauses are also typically called most-favored-nation (MFN) clauses. *See, e.g.*, Jonathan B. Baker & Judith A. Chevalier, *The Competitive Consequences of Most-Favored-Nation Provisions*, 27 ANTITRUST, Spring 2013, at 20, 20.

172 Ordover Trial Testimony, *supra* note 138, at 74:22–75:1.

173 *Id.* at 75:15–19.

174 *Id.* at 50:17–20.

175 *Id.* at 122:12–19; *see also id.* at 84:21–85:3.

176 *Id.* at 84:21–25

177 *Id.* at 85:1.

Swanson and Baumol also refer to the SEP holder's duty to ensure a "level playing field."[178] However, they refer exclusively to cases in which the SEP holder is vertically integrated. They suggest that a vertically integrated SEP holder should not use discriminatory license terms to gain (or maintain) market power in the downstream market. They define a level playing field to be "conditions that allow the maximum difference between" the lowest prices that the SEP holder and its competitor may profitably charge in the downstream market "to be exactly equal to any differences in the firms' remaining incremental costs (other than the license fees)."[179] In other words, they contend that the playing field is level—and that anticompetitive foreclosure is prevented—when the SEP holder charges its competitors the same price for the use of its SEPs that it implicitly charges itself. Swanson and Baumol thus analogize the licensing of SEPs to an access-pricing problem,[180] as Baumol previously had proposed in regulated network industries through the use of the ECPR.[181] The Swanson-Baumol definition of the "level playing field" thus refers to an entirely different concept from the one proposed by the economists I have discussed in the preceding paragraphs.

In sum, proponents of the "level playing field" argument have presented different interpretations of the nondiscrimination requirement. Some commentators suggest that the SEP holder must impose equal licensing costs on similarly situated implementers. Others argue that, in addition, an SEP holder should maintain the equality of licensing costs among implementers even after the SEP holder has executed a license agreement with a given implementer, which implies that the nondiscrimination requirement imposes on the SEP holder an obligation that is tantamount to a most-favored-customer clause. Still other commentators have used the "level playing field" to describe only the efficient pricing of inputs sold to downstream competitors.

B. The "Level Playing Field" Cliché Finds No Support in the Legal Interpretation of the FRAND or RAND Commitment

The argument that the nondiscrimination requirement of a FRAND or RAND commitment imposes on the SEP holder a duty to ensure (and perhaps maintain) a "level playing field"—under any of the definitions of that

[178] Swanson & Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, *supra* note 80, at 33.

[179] *Id.*

[180] *Id.* at 26–27. Ordover and Shampine argue that "non-discrimination should keep SEP holders from using their acquired market power to impede rivals in downstream markets," but they do not confine their understanding of "the level playing field" to that particular situation. Ordover & Shampine, *supra* note 116, at 2 n.3.

[181] *See, e.g.*, William J. Baumol & J. Gregory Sidak, *The Pricing of Inputs Sold to Competitors*, 11 Yale J. on Reg. 171 (1994).

term that commentators have proposed or implied—finds no support in the *legal* interpretation of the commitment's contractual provisions.

1. The "Level Playing Field" Cliché Finds No Support in the Language of the FRAND or RAND Commitment

The language of a typical FRAND or RAND commitment makes no reference to a duty to impose on all implementers comparable costs or, more vaguely, to ensure a "level playing field" among competing implementers of the industry standard.[182] There is also no reference to a duty to revise the rates specified in existing licenses if another implementer subsequently obtains a particularly favorable rate. Thus, the language of a typical FRAND or RAND contract does not support the proposed interpretation that a nondiscriminatory license must impose on licensees equivalent licensing costs, such that the SEP holder "levels" the "playing field."

The absence of any reference to the SEP holder's duty to ensure that competing implementers face comparable costs, the absence of any reference to the SEP holder's duty to establish a level playing field, and the absence of any reference to the nondiscrimination requirement being substantially equivalent to an MFC clause is particularly relevant to FRAND or RAND contracts, which are executed between sophisticated business parties. When sophisticated commercial actors execute a contract, a U.S. court typically defers to the contract's specific language in interpreting the meaning of its provisions.[183] (One would not expect French law, or the laws of other civil law countries, to deviate from American law on this elementary question.) Consequently, a court construing a FRAND or RAND contract under American law would reason that, had the parties to the contract intended to obligate the SEP holder to impose the same licensing costs on competing implementers, the parties would have included that requirement in the contract. Similarly, a court would reason that, if the SEP holder and the SSO intended the nondiscrimination requirement to include an MFC clause in the SEP holder's license offers, the contract would have contained language specifically creating that requirement. The absence of such language in the FRAND or RAND contract and in the SSO's IPR policy is evidence that the

182 *Cf.* Unwired Planet Int'l Ltd v. Huawei Techs. Co. [2017] EWHC (Pat) 711 [497] (Eng.) (noting that, if ETSI had intended the FRAND commitment to require that "all licensees pay identical rates on identical terms," ETSI's FRAND commitment "could readily have been written in that way").

183 *See, e.g.*, Cypress Semiconductor Corp. v. SVTC Techs., LLC, No. 11C-10-103, 2012 WL 2989169, at *4 (Del. Super. Ct. June 29, 2012) ("Courts must be circumspect when considering a contract's language, especially when the contact [sic] is between sophisticated, commercial entities."); Ashwood Capital, Inc. v. OTG Mgt., Inc., 948 N.Y.S.2d 292, 297 (App. Div. 2012) ("According to well-established rules of contract interpretation," when interpreting "commercial contracts negotiated at arm's length by sophisticated, counseled businesspeople[,] . . . 'courts should be extremely reluctant to interpret an agreement as impliedly stating something which the parties have neglected to specifically include.'" (citations omitted) (quoting Vermont Teddy Bear Co. v. 538 Madison Realty Co., 807 N.E.2d 876, 879 (N.Y. 2004))).

parties did not intend the FRAND or RAND commitment so to obligate the SEP holder.

In practice, the provisions of a typical SSO's IPR policy contradict, rather than support, the assertion that the SEP holder has a duty to impose the same licensing costs on all implementers, such that the "playing field" is made "level." A typical SSO's IPR policy specifies that the SEP holder and the implementer will determine the license terms through a bilateral negotiation.[184] A successful bilateral negotiation, by definition, will result in royalties upon which the parties have mutually agreed and will, almost necessarily, differ across implementers. It is implausible to contend that, although an SSO requires the SEP holder and the implementer to negotiate the license terms in a bilateral negotiation, what the SSO really intends is to ensure that all implementers pay the same, or even similar, royalties. There is also no persuasive argument that a nondiscrimination requirement implicitly creates an MFC clause. For example, the ETSI Special Committee rejected the "most favored licensee" interpretation of the nondiscrimination component of the FRAND commitment.[185] Thus, one cannot plausibly argue that ETSI nonetheless considers its nondiscrimination requirement to be implicitly equivalent to an MFC clause.

In sum, the typical FRAND or RAND commitment contains no evidence to suggest that the nondiscrimination requirement requires the SEP holder to ensure or maintain a "level playing field" among competing implementers.

2. The "Level Playing Field" Cliché Contradicts Industry Practice

When a contractual term is ambiguous, a court might consider extrinsic evidence, such as industry practice, to determine which of the competing reasonable interpretations should prevail.[186] Thus, if a court finds the nondiscrimination requirement of a FRAND or RAND contract to be ambiguous, the court might consider industry practice in the licensing of SEPs as evidence of the SEP holder's and the SSO's intended meaning for that contractual provision. However, evidence from industry practice contradicts the assertion that the duty to charge a nondiscriminatory royalty imposes on

184 *See, e.g.*, JEDEC Manual, *supra* note 6, § 8.2.8, at 28 ("JEDEC makes no representation as to the reasonableness of any terms or conditions of the license agreements offered by such patent rights holders, and all negotiations regarding such terms and conditions must take place between the individual parties outside the context of JEDEC."); IEEE-SASB Bylaws, *supra* note 6, § 6.2, at 18 ("Nothing in this policy shall preclude a licensor and licensee from voluntarily negotiating any license under terms mutually agreeable to both parties.").

185 *See* Brooks & Geradin, *supra* note 62, at 67.

186 *See, e.g.*, Chesapeake Energy Corp. v. Bank of N.Y. Mellon Trust Co., 957 F. Supp. 2d 316, 331 (S.D.N.Y. 2013) ("Where the language of a contract is held ambiguous, the factfinder—here, the Court—may properly consider 'extrinsic evidence as to the parties' intent.'" (quoting JA Apparel Corp. v. Abboud, 568 F.3d 390, 397 (2d Cir. 2009)) (citing Collins v. Harrison-Bode, 303 F.3d 429, 433–34 (2d Cir. 2002))), *rev'd on other grounds*, 773 F.3d 110 (2d Cir. 2014).

the SEP holder the duty to ensure that the same or similar costs are borne by implementers that compete in the downstream market, so as to ensure in turn that the "playing field" among licensees is "level."

Although the royalties determined in license agreements are typically confidential, publicly available information shows that implementers that manufacture the same product, and thus compete in the same downstream market, do pay different royalties for a given SEP portfolio.[187] For example, Via Licensing publicly posts the following terms for its pool of LTE SEPs: (1) no fee for a licensee's first 100,000 units, (2) a per-unit royalty of $1 for a licensee's 100,001st unit sold to its 1,000,000th unit sold, (3) a per-unit royalty of $1.50 for a licensee's 1,000,001st unit sold to its 2,500,000th unit sold, and (4) a per-unit royalty of $2.10 for any units that a licensee sells past the 2,500,000 threshold. Via Licensing also offers a 50-percent discount "off the 100,001 to 1,000,000 volume tier annually" to a licensee that executes a license agreement within six months.[188]

Via Licensing's posted rates show that, in practice, implementers that sell the same product and thus compete in the same downstream market might face different costs for licensing the same portfolio of SEPs. Suppose implementer *A* sells 950,000 LTE devices and has executed a license with Via Licensing within six months (and is consequently eligible for Via Licensing's discount). Implementer *A* would pay an average per-unit royalty of $0.45 to practice Via Licensing's LTE SEPs.[189] Now consider implementer *B*, which failed to execute a license within the first six months and sells more than 2,500,000 LTE devices annually. Implementer *B* would pay an average per-unit royalty of at least $1.26.[190] Clearly, implementer *A* and implementer *B* do not face the same costs for practicing Via Licensing's LTE portfolio. It would also be implausible to say that the two implementers are in the same starting condition, given that implementer *B* pays an average per-unit royalty that is nearly three times higher than the royalty of its competitor. Perhaps that cost difference would even hamper implementer *B*'s ability to compete against implementer *A*. Despite those differences between the situations in which implementers *A* and *B* find themselves, Via Licensing's posted rates

187 Gilbert, *supra* note 92, at 872 ("Actual licensing programs by patent pools for patents that are subject to FRAND commitments include a wide range of fixed and variable royalty terms, often within the same licensing program.").

188 *LTE License Fees*, Via Licensing, http://www.via-corp.com/us/en/licensing/lte/licensefees.html.

189 For an analysis of the principles behind calculating the average per-unit royalty that an implementer pays to license the SEPs in a patent pool, see J. Gregory Sidak, *What Aggregate Royalty Do Manufacturers of Mobile Phones Pay to License Standard-Essential Patents?*, 1 Criterion J. on Innovation 701, 706–07 (2016).

190 Implementer *B* would pay an average per-unit royalty of $1.26 if it produced one more than 2,500,000 units. As the number of units that implementer *B* produces increases, implementer *B*'s average per-unit royalty will also increase.

are evidence of an industry practice to charge a different royalty to downstream competitors that sell the same product.[191]

Therefore, evidence from industry practice contradicts the assertion that a nondiscriminatory royalty must ensure that implementers that compete in the downstream market face the same or similar costs for practicing a given portfolio of SEPs.

C. The "Level Playing Field" Cliché Finds No Support in Economic Theory

The contention that the nondiscrimination requirement of a FRAND or RAND commitment imposes on the SEP holder a duty to ensure and maintain a "level playing field" among implementers, under any of the proposed interpretations, also finds no support in economic principles.

1. The Economic Definition of Price Discrimination

From an economic perspective, it would be incorrect to say that an SEP holder engages in price discrimination simply because it charges different royalties to (and consequently imposes different licensing costs on) implementers that compete in the same downstream market. It is accepted in economic theory that price discrimination does not immediately occur when a seller charges a different price for the same goods or services. Rather, even if a seller charges a different price to two different purchasers for the same good or service, there is no price discrimination if the seller's cost of selling to one purchaser differs from his cost of selling to the other.[192] Indeed, uniform pricing is price discrimination if the seller's cost of providing the good varies from purchaser to purchaser. As Nobel laureate George Stigler explained, "[i]f a college charges the same tuition for a large elementary class taught by an instructor, and a small advanced class taught by an expensive professor, it is clearly discriminating."[193]

The same basic principle applies in the context of SEPs. From an economic perspective, the SEP holder does not engage in price discrimination if it charges a different royalty to two implementers that impose on

[191] Sisvel, another pool that licenses patents essential for the LTE standard, similarly offers royalties that vary based on the number of units sold. However, the royalty for Sisvel's SEPs decreases with an increasing number of units sold. Like Via Licensing, Sisvel offers an early-bird discount of about 40 percent to licensees that execute a license within 270 days. Sisvel, Sisvel LTE Patent Pool Portfolio License Agreement § 4.02, at 10 [hereinafter Sisvel LTE License Agreement], http://www.sisvel.com/images/documents/LTE/Portfolio-License-Agreement.pdf.

[192] *See* George J. Stigler, The Theory of Price 209 (Macmillan Co. 3d ed. 1966) ("Price differences do not necessarily indicate discrimination."); Jean Tirole, The Theory of Industrial Organization 133–34 (MIT Press 1988) ("Hence, we will say that there is no price discrimination if differences in prices between consumers exactly reflect differences in the costs of serving these consumers."); *see also* Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 996.

[193] Stigler, *supra* note 192, at 209–10.

the SEP holder different costs of licensing, even if those licensees sell the same product and compete in the same product market. The SEP holder's costs of licensing a given portfolio of SEPs might differ, for example, if one implementer insists on obtaining an individual license for each jurisdiction in which it practices the SEPs, while another implementer agrees to a worldwide license.[194] Similarly, an SEP holder's costs of licensing might differ if one implementer's use of the portfolio is more difficult to monitor than another implementer's use of that portfolio.[195] In either of these scenarios, the SEP holder faces different costs for licensing the same portfolio to the two implementers. In such circumstances, charging a different royalty to the two implementers would not constitute price discrimination in the economic sense.

2. The Welfare Effects of Price Discrimination

There is also no reason to assume that prohibiting the SEP holder from engaging in price discrimination when licensing its portfolio of SEPs to competing implementers would benefit consumers. Equivalently, one cannot assume that price discrimination across licensees necessarily harms consumers. Price discrimination can increase consumer welfare. Any undergraduate microeconomics textbook teaches how price discrimination can expand output (and hence consumption) when the seller has a downward-sloping demand curve.[196] In particular, price discrimination might enable a firm to lower the price to consumers who would otherwise be priced out of the market if the firm were instead constrained to charge a higher uniform price.[197] If a firm's price discrimination brings enough new consumers to the market, it can increase consumer welfare "to the point where both the producer and

[194] *See, e.g.*, Unwired Planet Int'l Ltd v. Huawei Techs. Co. [2017] EWHC (Pat) 711 [597] (Eng.) ("It is clear that if the licence was to be only for one territory, such as the UK, then the rate should be higher than the benchmark rate [for a worldwide license]. That is because there are plainly significant efficiencies in global licensing.").

[195] *See* Layne-Farrar, *supra* note 131, at 831. Monitoring costs include costs spent to "ensure that licensees report sales properly for royalty payment calculations." *Id.* at 815. The monitoring costs might vary, for example, if implementer *A* chooses a lump-sum royalty and implementer *B* chooses a running royalty that varies based on the implementer's number of units sold. A license that identifies a lump-sum royalty payment requires no monitoring costs, given that the royalty payment is independent of the number of units sold. In contrast, monitoring costs are required to enforce a running royalty, because the SEP holder must verify the number of units that the implementer has sold.

[196] *See, e.g.*, N. Gregory Mankiw, Principles of Economics 316–17 (Cengage Learning 7th ed. 2015); Tyler Cowen & Alex Tabarrok, Modern Principles: Microeconomics 250–51 (Worth Publishers 2010); *see also* Richard A. Posner, Antitrust Law 82 (Univ. of Chicago Press 2d ed. 2001) ("[B]ecause the marginal cost of intellectual property tends to be lower than its average total cost . . . , price discrimination is an attractive strategy for increasing output while covering total costs.").

[197] *See, e.g.*, William J. Baumol & Alan S. Blinder, Microeconomics: Principles & Policy 231 (Cengage Learning 12th ed. 2012) ("[P]rice discrimination permits the firm to offer lower prices to certain customers, thereby attracting some business that it would not otherwise have."); *see also* William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous* Competitive *Price Discrimination: Identifying Defensible Criteria of Market Power*, 70 Antitrust L.J. 661, 672 (2003) (showing that, in certain circumstances, charging customers discriminatory prices enables a firm to maximize profit and expand output relative to charging a nondiscriminatory price).

consumers are better off."[198] Yet, proponents of the "level playing field" interpretation of the nondiscrimination requirement ignore the positive effects that price discrimination might have for consumers and insist instead that there should be no price discrimination among implementers that compete in the downstream market.

In addition, interpreting the nondiscrimination requirement to require the SEP holder to ensure and maintain a "level playing field" would reduce, rather than increase, competition among implementers. It is well established in economic theory that competing firms seek to minimize input costs to maximize profits.[199] Access to SEPs is one of the multiple inputs that an implementer must obtain to offer its products or services to customers. Implementers, of course, compete to obtain access to that input at the lowest possible cost. For example, an implementer might use its bargaining skill to obtain a low royalty. It also might enter into a license agreement with a lump-sum royalty and then try to outperform its predicted sales, so that it would pay a lower per-unit royalty than would its competitors.[200] However, the proponents of the "level playing field" interpretation of nondiscrimination suggest that implementers should not be able to compete with respect to SEPs, but should obtain access to a given portfolio of SEPs on the same terms and should face the same licensing costs. Put differently, they suggest, as Michael Katz critically says of the "level playing field" argument when it is invoked in the debate over network neutrality, that "competition must be limited to protect competition."[201] That proposition is clearly fallacious. Limiting the implementers' ability and incentives to compete in any given field, including competition to obtain access to SEPs on favorable terms, is likely to harm, rather than benefit, competition and consumer welfare.

3. The Effects of Price Discrimination on Standardization and Innovation

The proponents of the "level playing field" interpretation who are willing to compromise the SEP holder's entitlement to fair and reasonable compensation also ignore the effects that their preferred interpretation of nondiscrimination would have on the standardization process and innovation. As explained in Part IV.A, Janusz Ordover has testified that, if the SEP holder

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198 Robert S. Pindyck & Daniel L. Rubinfeld, Microeconomics 386 (Prentice Hall 6th ed. 2005).

199 *Id.* at 188, 226, 256; *see also* Baker & Chevalier, *supra* note 171, at 24 (noting that firms compete "aggressively" by "lowering their own costs").

200 To determine a lump-sum royalty, the licensing parties multiply the implementer's projected sales revenue or unit shipments for the duration of the license by a given per-unit royalty. *See* J. Gregory Sidak, *Converting Royalty Payment Structures for Patent Licenses*, 1 Criterion J. on Innovation 901, 906 (2016). As I show in Part VI.B, the effective per-unit royalty that an implementer pays under a lump-sum-royalty structure would decrease if the implementer sells more licensed products than originally expected by the parties at the time of their licensing negotiation.

201 Michael L. Katz, *Wither U.S. Net Neutrality Regulation?*, 50 Rev. Indus. Org. 441, 453 (2017).

has accepted a one-way royalty of zero for its SEPs from any of its licensees, then the nondiscrimination requirement requires that the SEP holder's upper bound on future licenses be zero, regardless of the reason why the SEP holder has accepted a one-way royalty of zero.[202] Ordover suggested that such a conclusion applies regardless of whether the zero-royalty payment would provide the SEP holder fair and reasonable compensation for its contribution to the standard.[203]

However, an SEP holder that cannot obtain fair and reasonable compensation for its contribution to the standard will have less of an incentive to contribute its valuable technologies to future industry standards. Such an example could also disincline other companies from participating in the standard or in other standards developed by the same SSO. In addition, the failure to provide the SEP holder with fair and reasonable compensation would decrease the SEP holder's incentives to continue investing in risky research and development.[204] In the long run, such an interpretation of the nondiscrimination requirement would decrease the quality of industry standards and would reduce innovation to the detriment of consumers. Therefore, it would be unwise as a matter of economic policy to interpret the nondiscrimination requirement in a way that undermines the SEP holder's right to obtain fair and reasonable compensation.

4. The Welfare Effects of an MFC Clause

For two reasons, one cannot assume that it would benefit consumers to treat the nondiscrimination requirement of a FRAND or RAND commitment as being equivalent to an MFC clause. First, such an interpretation of the nondiscrimination requirement would be burdensome and costly to implement in practice, given that it would require the SEP holder to revise its existing licenses whenever a new implementer pays a lower royalty for the licensed SEPs. Such an interpretation of the nondiscrimination clause would destroy the finality of license agreements.[205] A license agreement achieves nothing if the implementer may dispute the consideration that it has exchanged every time that it suspects that another implementer has paid less.

Second, economists have long recognized that an MFC clause can have both procompetitive and anticompetitive effects, depending on the

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[202] Ordover Trial Testimony, *supra* note 138, at 122:15–19.

[203] *Id.* at 84:21–85:12.

[204] *See* J. Gregory Sidak, *Irreparable Harm from Patent Infringement*, 2 Criterion J. on Innovation 1, 2–5 (2017).

[205] *Cf.* Foster v. Hallco Mfg. Co., 947 F.2d 469, 474–75 (Fed. Cir. 1991) (noting the public policy considerations of "preserving the finality of judgments as well as the strong public policy of encouraging settlements").

circumstances in which the MFC clause is adopted.[206] An MFC clause can elevate equilibrium prices.[207] Steven Salop and Fiona Scott Morton argue that MFC clauses can decrease the seller's financial incentives to offer low prices, "which often results in higher overall prices in the market."[208] They also argue that MFC clauses "can have exclusionary effects by raising the costs of rivals or entrants that attempt to compete by negotiating lower prices from suppliers of critical inputs, or by pioneering a different business model."[209] These outcomes might arise in the context of SEPs.[210] Interpreting the nondiscrimination requirement as being equivalent to an MFC clause might increase, not decrease, royalties for SEPs, which might increase prices for downstream products.

V. The Positive Jurisprudence of Nondiscrimination

In Part IV, I explained why the SEP holder does not have a duty to ensure or maintain a "level playing field" among implementers pursuant to the nondiscrimination requirement of its FRAND or RAND commitment. However, does the SEP holder breach its contractual obligations under the FRAND or RAND commitment when it charges different royalties to "similarly situated" implementers?

At the outset, it bears consideration that the construct of "similarly situated" implementers is not found anywhere in the language of the FRAND or RAND commitments of the SSOs that have figured most prominently in the policy debates and litigation over the determination of royalties for

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[206] *See* Baker & Chevalier, *supra* note 171, at 20–22 (explaining the potential procompetitive effects of MFC clauses); *id.* at 22–25 (explaining the potential anticompetitive effects of MFC clauses); Jerry A. Hausman & J. Gregory Sidak, *Google and the Proper Antitrust Scrutiny of Orphan Books*, 5 J. Competition L. & Econ. 411, 429 (2009) ("Economists recognize that, in different circumstances, MFN clauses can enhance efficiency or limit competition.").

[207] *See, e.g.*, Dennis W. Carlton & Jeffrey M. Perloff, Modern Industrial Organization 141 (Pearson 4th ed. 2005) ("[S]urprisingly, these [MFC] clauses could be associated with high cartel prices rather than the low ones they seem to guarantee."); Baker & Chevalier, *supra* note 171, at 22–25; Thomas E. Cooper, *Most-Favored-Customer Pricing and Tacit Collusion*, 17 RAND J. Econ. 377 (1986); Aaron S. Edlin, *Do Guaranteed-Low-Price Policies Guarantee High Prices, and Can Antitrust Rise to the Challenge?*, 111 Harv. L. Rev. 528, 531 (1997) ("Under the cover of a matching offer, a firm can price-discriminate by charging high posted prices to poorly informed buyers, while still enticing savvy shoppers with the low prices promised by the matching offer."); Gilbert, *supra* note 92, at 880; *see also* J. Gregory Sidak & Daniel F. Spulber, *Givings, Takings and the Fallacy of Forward-Looking Costs*, 72 N.Y.U. L. Rev. 1068, 1121 (1997) (noting that, in the context of pipelines after the Natural Gas Policy Act of 1978, "'most-favored-nation clauses' in many contracts caused prices to soar").

[208] Steven C. Salop & Fiona Scott Morton, *Developing an Administrable MFN Enforcement Policy*, 27 Antitrust, Spring 2013, at 15, 15.

[209] *Id.*

[210] *See* Gilbert, *supra* note 92, at 880–81; *see also* J. Gregory Sidak, *Patent Holdup and Oligopsonistic Collusion in Standard-Setting Organizations*, 5 J. Competition L. & Econ. 123, 157 (2009) (noting that, under an MFC clause, "a loss of revenue will accrue from all prior licensing agreements if the licensor issues a new lower-priced license to the marginal consumer").

SEPs. Justice Birss implicitly recognized that fact in *Unwired Planet* when he said that the construct of "similarly situated parties . . . [was not] mentioned expressly in the ETSI FRAND undertaking."[211] Instead, the construct seems to derive from the U.S. jurisprudence concerning *constitutional* or *statutory* prohibitions against discrimination, where courts have typically relied on a "similarly situated" framework.[212] The constitutional or statutory provisions that form the basis for discrimination claims typically do not contain the phrase "similarly situated."[213] Instead, the term derives from the judicial interpretation of constitutional or statutory prohibitions.[214] It bears emphasis, however, that evidence of a dissimilar treatment of similarly situated comparators is typically insufficient to find a violation of a constitutional or statutory prohibition against discrimination. A court will typically also examine whether there is a justification for the dissimilar treatment.

Of course, cases in which courts examine a violation of a constitutional or statutory prohibition against discrimination often arise in circumstances that differ significantly from cases concerning SEPs. Cases of alleged government discrimination necessarily involve state action. Often, the state has an absolute monopoly over the activity in question that is being administered in an allegedly discriminatory manner. When a case involves a federal law that imposes a duty of nondiscrimination on an employer, for example, the nondiscrimination obligation arises from public law, not from a private contractual provision. A contractual prohibition against unfair discrimination contained in a FRAND or RAND commitment might differ significantly from those contained in public law and consequently might not support the application of the same analytical framework.

Nonetheless, unlike many of the interpretations of the nondiscrimination requirement that I analyzed in Part III, which rest on normative principles of economics, the constitutional and statutory interpretations of nondiscrimination analyzed below rest on positive principles of law. Furthermore, the

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[211] Unwired Planet Int'l Ltd v. Huawei Techs. Co. [2017] EWHC (Pat) 711 [487] (Eng.). Although the parties in Unwired Planet agreed that similarly situated licensees should pay a similar royalty, Justice Birss rejected that interpretation. *Id.* [806]. He found that, although Huawei was similarly situated to Samsung, it was not entitled to receive the same royalty rate that Samsung had paid for access to Unwired Planet's SEPs. *Id.* [488], [521].

[212] *See, e.g.*, Department of Revenue v. Davis, 553 U.S. 328, 342 (2008) ("[T]here is no forbidden discrimination because Kentucky, as a public entity, does not have to treat itself as being 'substantially similar' to other bond issuers in the market.").

[213] *See, e.g.*, Civil Rights Act of 1964, Pub. L. No. 88-352, 78 Stat. 241 (codified as amended at 42 U.S.C. § 2000e).

[214] General Motors Corp. v. Tracy, 519 U.S. 278, 298 (1997) ("[A]ny notion of discrimination assumes a comparison of substantially similar entities." (footnote omitted)), *quoted in* United Haulers Ass'n v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 342 (2007); *see also* City of Cleburne v. Cleburne Living Ctr., 473 U.S. 432, 439 (1985) ("The Equal Protection Clause of the Fourteenth Amendment commands that no State shall 'deny to any person within its jurisdiction the equal protection of the laws,' which is essentially a direction that all persons similarly situated should be treated alike." (quoting Plyler v. Doe, 457 U.S. 202, 216 (1982))).

positive principles that one can derive from nondiscrimination jurisprudence are remarkably consistent across different areas of law. It would be counterintuitive for any American court to ignore such principles in interpreting a FRAND or RAND commitment's nondiscrimination requirement.

A. A Synopsis of Positive Principles in the Jurisprudence of Nondiscrimination

Three main positive principles emerge from the jurisprudence on the statutory prohibitions against discrimination and against unjust, undue, and unreasonable discrimination that are particularly informative for interpreting the nondiscrimination requirement of a FRAND or RAND commitment.

First, a finding of discrimination under any constitutional or statutory prohibitions requires evidence of differential treatment of similar comparators. For example, under federal employment and tax law, as well as under the Federal Power Act,[215] a necessary (but not sufficient) condition for a finding of discrimination is evidence of a differential treatment of employees, entities, or customers that are "similarly situated." In the context of the Robinson-Patman Act, the inquiry focuses on the difference in prices for goods or services that are "of like grade and quality."[216] Likewise, showing discrimination under the Communications Act[217] requires establishing that the challenged differential treatment concerns services that are "like." Hence, there will be a finding of discrimination (as well as a finding of unjust, undue, or unreasonable discrimination) only when the challenged difference in treatment concerns similarly situated comparators.

Second, the defendant may provide justifications for the differential treatment. Indeed, the defendant has an explicit right to present justifications for a difference in treatment where the statute prohibits only discrimination that is unfair, undue, or unreasonable, as in the Communications Act and the Federal Power Act. In those cases, the defendant has the right to explain why the discrimination is just, reasonable, or appropriate, and consequently does not violate the statutory prohibition. Moreover, even when the language of a statute contains an unqualified prohibition against discrimination—such as in employment law[218] and under the Robinson-Patman Act—courts in actual practice consider differential treatment to be discriminatory only if it lacks a valid justification. Therefore, differential treatment of similarly situated comparators does not suffice, on its own, to establish discrimination, let alone unfair, undue, or unreasonable discrimination.

Third, when the statute limits the permissible differences in prices that a firm may charge to its customers when offering similar goods or services,

[215] 16 U.S.C. § 824d(b).
[216] 15 U.S.C. § 13(a).
[217] 47 U.S.C. § 202(a).
[218] *See, e.g.*, 42 U.S.C. § 2000e-2(a)(1).

both cost-related and non-cost-related factors might justify a given price differential. In interpreting the Robinson-Patman Act, the Communications Act, and the Federal Power Act, courts have recognized that a difference in the costs of providing a service to one customer relative to another can justify a price differential. Courts have also accepted non-cost justifications, such as the need to meet competition, to renegotiate complex contracts, or to obtain benefits from a particular customer that other customers cannot offer. Therefore, both cost-related and non-cost-related arguments can provide valid justifications for differences in prices.

When one applies these three principles to interpret the nondiscrimination requirement of a typical FRAND or RAND commitment, it is evident that whether the SEP holder has treated similarly situated implementers differently is a necessary, but not sufficient, condition to prove that the SEP holder has violated the nondiscrimination requirement. The court should also examine whether the SEP holder had a valid justification for the differential treatment. Both cost-related and non-cost related explanations might justify the different treatment of similarly situated implementers. Only when there is no valid justification for the differential treatment should the SEP holder's conduct be considered discriminatory.

B. The Equal Protection Clause

Courts examine the government's allegedly discriminatory practices under the Equal Protection Clause of the Fourteenth Amendment to the U.S. Constitution, which in relevant part prohibits a state from "deny[ing] any person within its jurisdiction the equal protection of the laws."[219] The Supreme Court has said that the clause is "essentially a direction that all persons similarly situated should be treated alike."[220] Judge Richard Posner, in restating that positive principle of law, has said that "[t]he requirement that law treat equals equally is another way of saying that the law must have a rational structure, for to treat differently things that are the same is irrational."[221] Although the Equal Protection Clause applies to states and local governments, the Supreme Court said in 1954 that the Due Process Clause

[219] U.S. Const. amend. XIV, § 1.

[220] City of Cleburne v. Cleburne Living Ctr., 473 U.S. 432, 439 (1985); *see also* F.S. Royster Guano Co. v. Virginia, 253 U.S. 412, 415 (1920) (stating that, under the Equal Protection Clause, "classification [in legislation] must be reasonable, not arbitrary, and must rest upon some ground of difference having a fair and substantial relation to the object of the legislation, so that all persons similarly circumstanced shall be treated alike"). John Rawls incorporated this positive principle of law into his normative theory of justice. *See* John Rawls, A Theory of Justice 208–09 (Harvard Univ. Press rev. ed. 1999) (1971).

[221] Richard A. Posner, Economic Analysis of Law § 8.7, at 318 (Aspen 9th ed. 2014).

of the Fifth Amendment also imposes equal protection requirements on the federal government.[222]

In an equal protection claim, the plaintiff typically alleges that a challenged law discriminates against a specific class of individuals.[223] The American equal protection doctrine is too vast to survey here, and its relevance, by analogy, to interpreting the nondiscrimination requirement of a FRAND or RAND commitment is probably too attenuated to assist a court seeking positive principles of nondiscrimination. However, even a fleeting review of equal protection doctrine yields three powerful insights.

First, classification is inescapable. John Hart Ely trenchantly made this point about equal protection and classification in *Democracy and Distrust*:

> Obviously, all unequal treatment by the state cannot be forbidden. Legislation characteristically classifies, distributing certain benefits to, or requiring behavior of, some but not others. What's more, such classification typically proceeds on the basis of generalizations that are known to be imperfect. We all order our lives on the basis of such generalizations: without them life would be impossible. Thus a storekeeper may not accept checks drawn on out-of-town banks, even though he or she knows most of them are good, just as an airline may not hire overweight pilots, though it knows most of them will never suffer heart attacks. . . . Thus unless all legislation that classifies, which is to say virtually all legislation, is to fall, the baseline equal protection requirement must be close to [what] the Court in fact has developed, the so-called "rational basis" test. The meaning of these words is not as clear as we sometimes pretend, but the meaning of the test that is important at the moment is that counterexamples, even a large number of counterexamples, do not void a classification so long as a reasonable person could find sufficient correlation between the evil combatted and the trait used as the basis of classification.[224]

[222] Bolling v. Sharpe, 347 U.S. 497, 499 (1954) ("The Fifth Amendment . . . does not contain an equal protection clause as does the Fourteenth Amendment which applies only to the states. But the concepts of equal protection and due process, both stemming from our American ideal of fairness, are not mutually exclusive. The 'equal protection of the laws' is a more explicit safeguard of prohibited unfairness than 'due process of law,' and, therefore, we do not imply that the two are always interchangeable phrases.").

[223] *See, e.g.*, Loving v. Virginia, 388 U.S. 1, 10 (1967) ("[T]he Equal Protection Clause requires the consideration of whether the classifications drawn by any statute constitute an arbitrary and invidious discrimination. The clear and central purpose of the Fourteenth Amendment was to eliminate all official state sources of invidious racial discrimination in the States."). Importantly, the Fourteenth Amendment prohibits only state actors (and not private actors) from discriminating.

[224] John Hart Ely, Democracy and Distrust: A Theory of Judicial Review 30–31 (Harvard Univ. Press 1980). In the 1990s, Ely and I sparred over the meaning of the Constitution's war powers. *Compare* J. Gregory Sidak, *To Declare War*, 41 Duke L.J. 27 (1991), *with* John Hart Ely, War and Responsibility: Constitutional Lessons of Vietnam and Its Aftermath 25–26, 161–63 (Princeton Univ. Press 1995). The experience deepened my respect for his scholarship.

Thus, in the realm of economic regulation, the Equal Protection Clause routinely permits unequal treatment.[225]

Second, it is easy but often superfluous to characterize a complaint as stating a deprivation of equal protection. Again, Ely succinctly explains:

> [A]ny case, indeed any challenge, can be put in an equal protection framework by competent counsel. If you wish to challenge the fact that you're not getting good X (or are getting deprivation Y) it is extremely probable that you will be able to identify someone who *is* getting good X (or is not getting deprivation Y). What's more, though the argument doesn't need this step, the odds are good that the reasons adduced for giving X to the other person but not to you are much the same as would be produced if you simply, without reference to the other person, challenged the fact that you weren't getting X.[226]

In other words, simply stating that another class has received more (or less) than a different class will be insufficient to determine whether a law is impermissibly discriminatory. More detailed analysis is necessary to determine whether the law violates the Equal Protection Clause.

Third, determining whether the classification in question is justified is a necessary step in analyzing whether a challenged law violates equal protection.[227] That is, the government might provide a justification for the unequal treatment. Although the analysis of the methodologies that a court applies to decide an equal protection dispute exceeds the scope of this article, one can say—at the risk of oversimplification—that the court will examine, under any of the applied methodologies, (1) the purpose of the classification (that is, the purpose of having the differential treatment of two classes of persons), and (2) whether that classification is a means to achieving the law's end with the requisite tightness of causal fit.[228] A law regulating economic activity, such as a patent statute, does not violate the Equal Protection Clause if the clas-

[225] *See, e.g.*, Skinner v. Oklahoma, 316 U.S. 535, 539–40 (1942) ("Under our constitutional system the States in determining the reach and scope of particular legislation need not provide 'abstract symmetry.'"); San Antonio Indep. Sch. Dist. v. Rodriguez, 411 U.S. 1, 24 (1973) ("[A]t least where wealth is involved, the Equal Protection Clause does not require absolute equality or precisely equal advantages.").

[226] Ely, Democracy and Distrust, *supra* note 224, at 32 (emphasis in original).

[227] *See, e.g.*, United States v. Virginia, 518 U.S. 515, 533 (1996) ("Parties who seek to defend gender-based government action must demonstrate an 'exceedingly persuasive justification' for that action."); Personnel Adm'r of Mass. v. Feeney, 442 U.S. 256, 272 (1979) ("When the basic classification is rationally based, uneven effects upon particular groups within a class are ordinarily of no constitutional concern.").

[228] Grutter v. Bollinger, 539 U.S. 306, 308 (2003) ("Race-based action necessary to further a compelling governmental interest does not violate the Equal Protection Clause so long as it is narrowly tailored to further that interest."); Romer v. Evans, 517 U.S. 620, 631 (1996) ("The Fourteenth Amendment's promise that no person shall be denied the equal protection of the laws must coexist with the practical necessity that most legislation classifies for one purpose or another, with resulting disadvantage to various groups or persons. We have attempted to reconcile the principle with the reality by stating that, if a law neither burdens a fundamental right nor targets a suspect class, we will uphold the legislative classification so long as it bears a rational relation to some legitimate end." (internal citations omitted)); Craig v. Boren, 429 U.S. 190, 197 (1976) ("To withstand constitutional challenge, previous cases establish that classifi-

sification provides a discernible tool to achieve a permissible government objective.

C. Statutory Prohibitions Against Discrimination

Across varied fields of law, U.S. courts analyze discriminatory practices when interpreting statutory prohibitions against discrimination.

1. The Civil Rights Act

Courts routinely examine cases of alleged discrimination under Title VII of the Civil Rights Act of 1964.[229] Section 703(a)(1) of the Act prohibits an employer from "discriminat[ing] against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin."[230] An employee might show a violation of section 703(a)(1) by presenting direct evidence of discrimination,[231] such as a "racial slur[] made by employment decisionmakers."[232] If the employee presents such evidence, the employer will avoid liability only if it shows, by a preponderance of the evidence, that it had a legitimate justification for its employment decision.[233]

In employment-discrimination law, whether two employees are similarly situated is relevant when no direct evidence of discrimination exists. In *McDonnell Douglas Corp. v. Green*, a unanimous Supreme Court outlined a "burden-shifting analysis" for proving a violation of the prohibition against discrimination contained in Title VII on the basis of indirect evidence of discrimination.[234] The Court said that, to show that a violation of section 703(a)(1) has occurred, the employee bears the burden of establishing a *prima*

cations by gender must serve important governmental objectives and must be substantially related to achievement of those objectives.").

229 Civil Rights Act of 1964 § 703(a)(1), 42 U.S.C. § 2000e-2(a)(1).

230 *Id.*

231 Kocak v. Cmty. Health Partners of Ohio, Inc., 400 F.3d 466, 470 (6th Cir. 2005) ("'[D]irect evidence is that evidence which, if believed, requires a conclusion that unlawful discrimination was . . . a motivating factor in the employer's actions.'" (quoting Jacklyn v. Schering-Plough Healthcare Prods. Sales Corp., 176 F.3d 921, 926 (6th Cir. 1999))); Godwin v. Hunt Wesson, Inc., 150 F.3d 1217, 1221 (9th Cir. 1998) ("'Direct evidence [of discrimination] is evidence which, if believed, proves the fact [of discriminatory animus] without inference or presumption.'" (second alteration in original) (quoting Davis v. Chevron, U.S.A., Inc., 14 F.3d 1082, 1085 (5th Cir. 1994))).

232 Haynes v. W.C. Caye & Co., Inc., 52 F.3d 928, 931 (11th Cir. 1995).

233 *Kocak*, 400 F.3d at 470; *Haynes*, 52 F.3d at 931; Etienne v. Spanish Lake Truck & Casino Plaza, L.L.C., 778 F.3d 473, 475 (5th Cir. 2015) ("[I]f, however, the plaintiff presents direct evidence of discrimination, 'the burden of proof shifts to the employer to establish by a preponderance of the evidence that the same decision would have been made regardless of the forbidden factor.'" (quoting Brown v. E. Miss. Elec. Power Ass'n, 989 F.2d 858, 861 (5th Cir. 1993))); Wilson v. City of Aliceville, 779 F.2d 631, 634 (11th Cir. 1986).

234 411 U.S. 792 (1973) (Powell, J.); *see also* Texas Dep't of Cmty. Affairs v. Burdines, 450 U.S. 248, 252–53 (1981); Graham v. Long Island R.R., 230 F.3d 34, 38 (2d Cir. 2012); Peele v. Country Mut. Ins. Co., 288 F.3d 319, 326 (7th Cir. 2002).

facie case of discrimination.[235] To do so, the employee must show, among other things, evidence that it has been treated differently than similarly situated employees.[236] After the employee establishes a *prima facie* case, the employer has the opportunity to articulate a "legitimate, non-discriminatory" reason for the dissimilar treatment.[237] If the employer provides such a justification, the burden shifts back to the employee, who then must show that the employer's justification is merely a pretext[238]—that is, that it was "a dishonest explanation, a lie rather than an oddity or an error."[239] Therefore, when assessing indirect evidence of a discriminatory practice in employment law, the court will examine (1) whether there has been dissimilar treatment of similarly situated employees, and (2) whether the employer had a legitimate justification for that dissimilar treatment.[240]

Title VII cases are unique in that the statute specifically enumerates the prohibited reasons for discriminating among employees. The analysis of the employer's justification aims to determine whether a "discriminatory animus"—the employee's race, color, religion, sex, or national origin—motivated the employer's action. The contractual provisions of a FRAND or RAND agreement, as well as the SSO's intellectual property policy, typically do not provide a comparable list of prohibited reasons for discriminating among implementers. Nonetheless, by analogy, Title VII cases establish the principle that a finding of a dissimilar treatment of "similarly situated" comparators is necessary but not sufficient to prove discrimination. The defendant still has the opportunity to justify the dissimilar treatment of similar comparators.

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235 *McDonnell Douglas*, 411 U.S. at 802.

236 *See, e.g.*, Coleman v. Donahoe, 667 F.3d 835, 845 (7th Cir. 2012) ("To establish a prima facie case of discrimination a plaintiff must offer evidence that: '(1) she is a member of a protected class, (2) her job performance met [the employer's] legitimate expectations, (3) she suffered an adverse employment action, and (4) another similarly situated individual who was not in the protected class was treated more favorably than the plaintiff.'" (alteration in original) (quoting Burks v. Wisconsin Dep't of Transp., 464 F.3d 744, 750–51 (7th Cir. 2006)));*see also Texas Dep't of Cmty. Affairs*, 450 U.S. at 253–54 ("The prima facie case serves an important function in the litigation: it eliminates the most common nondiscriminatory reasons for the plaintiff's rejection.").

237 *McDonnell Douglas*, 411 U.S. at 802; *Texas Dep't of Cmty. Affairs*, 450 U.S. at 254 ("The defendant need not persuade the court that it was actually motivated by the proffered reasons. It is sufficient if the defendant's evidence raises a genuine issue of fact as to whether it discriminated against the plaintiff." (internal citation omitted); *id.* at 257 ("[T]he employer need only produce admissible evidence which would allow the trier of fact rationally to conclude that the employment decision had not been motivated by discriminatory animus.").

238 *Peele*, 288 F.3d at 326.

239 *Id.* (quoting Kulumani v. Blue Cross Blue Shield Ass'n, 224 F.3d 681, 685 (7th Cir. 2000)).

240 *See Texas Dep't of Cmty. Affairs*, 450 U.S. at 252–53 (citing *McDonnell Douglas*, 411 U.S. at 802–04). The Supreme Court emphasized that "[t]he ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff." *Id.* at 253.

2. *Discrimination in Tax Law*

In *Alabama Department of Revenue v. CSX Transportation, Inc.*, the Supreme Court examined whether the State of Alabama had imposed taxes that "discriminate against rail carriers," in violation of the Railroad Revitalization and Regulatory Reform Act (4-R Act).[241] The Court said that "a tax discriminates under . . . [the 4-R Act] when it treats 'groups [that] are similarly situated' differently without sufficient 'justification for the difference in treatment.'"[242] Lower courts have interpreted *CSX* as imposing "a two-step inquiry for evaluating a claim of discrimination" in context of the 4-R Act.[243] First, the plaintiff must establish a *prima facie* case of discriminatory tax treatment. Second, the defendant may provide a justification for the different treatment.[244] Therefore, as in the context of Title VII, evidence of dissimilar treatment of "similarly situated" persons is necessary but not sufficient to show impermissible discrimination.

D. Statutory Prohibitions Against Unjust, Unreasonable, and Undue Discrimination

Several pieces of economic legislation that prohibit unfair, unreasonable, or undue discrimination in the provision of regulated services are also informative for analyzing discriminatory practices in the FRAND or RAND context. In interpreting those laws, courts have applied a variation of the burden-shifting analysis by requiring evidence of dissimilar treatment of similarly situated entities and then offering the defendant the opportunity to justify the dissimilar treatment.

1. *Unjust and Unreasonable Discrimination Under the Communications Act of 1934*

In American telecommunications law, principles for discerning unjust and unreasonable discriminatory practices arise from section 202(a) of the Communications Act of 1934, which in relevant part provides: "It shall be unlawful for any common carrier to make any *unjust or unreasonable discrimination* in charges . . . for . . . like communication service."[245] The Federal Communications Commission (FCC) initially enforced section 202(a)'s prohibition against unreasonable discrimination through a mandatory

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[241] 135 S. Ct. 1136, 1139 (2015) (alteration in original) (quoting 49 U.S.C. § 11501(b)(4)).
[242] *Id.* at 1141 (quoting CSX Transp., Inc. v. Alabama Dep't of Revenue, 562 U.S. 277, 287 (2011)); *see also CSX*, 562 U.S. at 297 ("Discrimination cases sometimes do raise knotty questions about whether and when dissimilar treatment is adequately justified.").
[243] *See, e.g.*, BNSF Ry. Co. v. Tennessee Dep't of Revenue, 800 F.3d 262, 271 (6th Cir. 2015).
[244] *Id.* at 271.
[245] 47 U.S.C. § 202(a) (emphasis added).

tariffing regime required by section 203.[246] The Telecommunications Act of 1996[247] ended the tariffing regime and permitted carriers to negotiate rates directly with customers.[248] However, the 1996 legislation did not abolish the prohibitions against unjust or unreasonable discrimination codified in section 202(a).[249]

The U.S. Court of Appeals for the District of Columbia Circuit determines in three steps whether a carrier has engaged in discrimination violating section 202(a):

> An inquiry into whether a carrier is discriminating in violation of § 202(a) involves a three-step inquiry: (1) whether the services are "like"; (2) if they are, whether there is a price difference between them; and (3) if there is, whether that difference is reasonable.[250]

The accused carrier's duty to show that the discrimination is not unjust and not unreasonable arises only after the plaintiff has proven that the two services in question are like and that a price difference exists.[251]

Most cases applying section 202(a) have focused on the argument that no discrimination occurred because the two services in question were not "like."[252] The D.C. Circuit has said that "§ 202(a) is not concerned with the price differentials between qualitatively different services or service packages."[253] The analysis of whether two services are "like" focuses on their functional equivalence, primarily from the user's perspective.[254] The D.C.

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[246] *See, e.g.*, Orloff v. FCC, 352 F.3d 415, 418–19 (D.C. Cir. 2003); Ting v. AT&T, 319 F.3d 1126, 1131 (9th Cir. 2003). Although a carrier could propose any rate or terms for its services, the FCC had the authority to reject the proposal if it failed to meet the just, reasonable, and nondiscriminatory requirements.

[247] Pub. L. 104-104, 110 Stat. 56.

[248] *Ting*, 319 F.3d at 1132.

[249] *Id.* at 1139; *Orloff*, 352 F.3d at 419; Boomer v. AT&T Corp., 309 F.3d 404, 421 (7th Cir. 2002).

[250] Competitive Telecomms. Ass'n v. FCC, 998 F.2d 1058, 1061 (D.C. Cir. 1993); s*ee also* Union Tel. Co. v. Qwest Corp., 495 F.3d 1187, 1195 (10th Cir. 2007); Panatronic USA v. AT&T Corp., 287 F.3d 840, 844 (9th Cir. 2002); National Commc'ns Ass'n v. AT&T Corp., 238 F.3d 124, 127 (2d Cir. 2001).

[251] *Panatronic USA*, 287 F.3d at 844; *National Commc'n Ass'n*, 238 F.3d at 127; *Competitive Telecomms. Ass'n*, 998 F.2d at 1063–64; American Broad. Cos. v. FCC, 663 F.2d 133, 133, 139 (D.C. Cir. 1980); Hughes Sports Network, Inc. v. Am. Tel. & Tel. Co., 25 F.C.C.2d 550, 553 (1970); American Tel. & Tel. Co. Tariff F.C.C. No. 250, TELPAK Service and Channels, Memorandum Opinion and Order, 37 F.C.C. 1111, 1116 (1964), *aff'd sub nom.* American Trucking Ass'ns, Inc. v. FCC, 377 F.2d 121 (D.C. Cir. 1966).

[252] *See, e.g.*, *Competitive Telecomms. Ass'n*, 998 F.2d at 1061 ("If a user perceives the service 'as the same with cost considerations being the sole determining criterion,' then the services are 'like.'" (quoting MCI Telecomms. Corp. v. FCC, 917 F.2d 30, 39 (D.C. Cir. 1990))); *see also National Commc'ns Ass'n*, 238 F.3d at 128–29; LSSi Data Corp. v. Time Warner Cable, Inc., 892 F. Supp. 2d 489, 528 (S.D.N.Y. 2012); Li Xi v. Apple Inc., 603 F. Supp. 2d 464, 471 (E.D.N.Y. 2009).

[253] *Competitive Telecomms. Ass'n*, 998 F.2d at 1064; *see also* Ad Hoc Telecomms. Users Comm. v. FCC, 680 F.2d 790, 795 (D.C. Cir. 1982).

[254] *See, e.g.*, *Competitive Telecomms. Ass'n*, 998 F.2d at 1061 (explaining that the court must "'look to the nature of the services offered' and ascertain whether customers view them as performing the same functions" (quoting *MCI Telecomms. Corp.*, 917 F.2d at 39); *MCI Telecomms. Corp.*, 917 F.2d at 39; Beehive Tel., Inc. v. Bell Operating Cos., 12 FCC Rcd. 17,930, 17,963 (1997); *Ad Hoc Telecomms.*, 680 F.2d at 795; *see also Competitive Telecomms. Ass'n*, 998 F.2d at 1061.

Circuit has said that, at this stage of the analysis, the focus is on the nature of the service, and not on "cost differentials."[255]

If the plaintiff shows that a carrier has offered equivalent services at different rates or on different terms and conditions,[256] the accused carrier then has the burden to demonstrate that the difference is reasonable.[257] The D.C. Circuit has said that "courts have never interpreted § 202(a) as mandating strict uniformity."[258] Rather, the FCC and the courts have permitted carriers to justify differences in terms and conditions for services that are "like" both before and after the tariffing requirement,[259] reasoning that the statute prohibits only those differences in terms that are unjust or unreasonable.[260] A carrier might justify the differential by presenting either cost-based or non-cost-based arguments.[261] For example, in *Orloff v. FCC*, the D.C. Circuit found that it was reasonable for the carrier to offer individual customers in Cleveland, Ohio "special deals" given the competitive pressure that the carrier faced in that geographical area.[262] Likewise, in *Panatronic USA v. AT&T Corp.*, the Ninth Circuit found that the carrier's delay in assessing a universal connectivity charge on some of its large customers was reasonable, given the carriers' need to renegotiate complex "multi-million dollar contracts" with those customers.[263]

In sum, section 202(a)'s prohibition against unjust or unreasonable discrimination does not prevent a carrier from charging different rates to its customers. First, a carrier might charge different rates for services that are functionally different. Second, a carrier might offer services that are functionally equivalent on different terms and conditions if the carrier provides a valid justification for the differential. The leading treatise on American telecommunications law interpreted the case law as of 1999 as having

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255 *MCI Telecomms. Corp.*, 917 F.2d at 39 (internal quotation marks omitted).

256 *Competitive Telecomm. Ass'n*, 998 F.2d at 1062 ("An unreasonable 'discrimination in charges[]' . . . can come in the form of a lower price for an equivalent service or in the form of an enhanced service for an equivalent price." (quoting 47 U.S.C. § 202(a))); Boomer v. AT&T Corp., 309 F.3d 404, 420 (7th Cir. 2002) ("[I]f AT&T charges its customers the same rate, but provides different terms and conditions for service, that too is a form of 'discrimination in charges.'" (quoting 47 U.S.C. § 202(a))).

257 *See, e.g.*, *National Commc'ns Ass'n*, 238 F.3d at 129.

258 Ting v. AT&T, 319 F.3d 1126, 1140 (9th Cir. 2003).

259 *Id.*

260 Verizon v. FCC, 740 F.3d 623, 657 (D.C. Cir 2014); Orloff v. FCC, 352 F.3d 415, 420 (D.C. Cir. 2003) ("[T]he Commission emphasizes that § 202 prohibits only ***unjust*** and ***unreasonable*** discrimination in charges and service." (emphasis in original)).

261 Union Tel. Co. v. Qwest Corp., 495 F.3d 1187, 1196 (10th Cir. 2007); Panatronic USA v. AT&T Corp., 287 F.3d 840, 844–45 (9th Cir. 2002); MCI Telecomms. Corp. v. FCC, 917 F.2d 30, 39 (D.C. Cir. 1990); National Ass'n of Regulatory Util. Comm'rs v. FCC, 737 F.2d 1095, 1136–37 (D.C. Cir. 1984); Ad Hoc Telecomms. Users Comm. v. FCC, 680 F.2d 790, 797 n.15 (D.C. Cir. 1982).

262 352 F.3d at 417; *see also id.* at 421 ("Haggling is a normal feature of many competitive markets. It allows consumers to get the full benefit of competition by playing competitors against each other."). Similarly, in a 1971 case, the Second Circuit said that if the carrier's efforts to meet a competitor's offer were a matter of "competitive necessity . . . then the existing discrimination would not be unlawful." American Tel. & Tel. Co. v. FCC, 449 F.2d 439, 448 (2d Cir. 1971).

263 287 F.3d at 844–45.

produced a legal environment in which "price discrimination remains the norm rather than the exception across the telephone industry."[264]

2. Undue Discrimination Under the Federal Power Act

Courts and regulators have also construed the statutory prohibitions against undue discrimination in the Federal Power Act (FPA), section 205(b) of which provides: "No public utility shall, with respect to any transmission or sale [of electricity] subject to the jurisdiction of the Commission, (1) make or grant any undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage, or (2) maintain any unreasonable difference in rates."[265] Section 206 of the FPA further provides in relevant part that, if the Federal Energy Regulatory Commission (FERC) finds the transmission or sale to be "unjust, unreasonable, unduly discriminatory or preferential," FERC "shall determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order."[266] On the basis of its authority pursuant to sections 205 and 206, FERC requires utilities to file open-access tariffs for transmission services.[267]

The D.C. Circuit has applied a variation of the burden-shifting framework discussed above to claims of undue discrimination under sections 205 and 206 of the FPA. For example, in the 2010 case *Transmission Agency of Northern California v. FERC*,[268] the D.C. Circuit said:

> In filing a revision to a tariff, the public utility bears the ultimate burden of demonstrating that the rate is not unduly discriminatory. Yet "[o]nly upon a [section 205] complainant's showing that a rate design has different effects on similarly situated customers does the burden shift to the respondent [public utility] to justify those disparities."[269]

However, FERC and the courts have not always applied a strict burden-shifting framework. Instead, they sometimes combine in a single evaluation their analysis of the multiple questions of (1) whether two customers are similarly situated, (2) whether the utility has treated them differently, and (3) whether

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[264] Michael K. Kellogg, John Thorne & Peter W. Huber, Federal Telecommunications Law 289 (Little, Brown & Co. 2d ed. 1999).

[265] 16 U.S.C. § 824d(b).

[266] *Id.* § 824e(a).

[267] *See, e.g.*, New York v. FERC, 535 U.S. 1, 11 (2002).

[268] 628 F.3d 538 (D.C. Cir. 2010).

[269] *Id.* at 549 (quoting Southwestern Elec. Coop., Inc. v. FERC, 347 F.3d 975, 981 (D.C. Cir. 2003)); *see also* Sacramento Mun. Util. Dist. v. FERC, 616 F.3d 520, 537–38 (D.C. Cir. 2010); Public Serv. Co. of Ind., Inc. v. FERC, 575 F.2d 1204, 1212 (7th Cir. 1978).

the differential treatment is justified.[270] Moreover, the court might consider a particular factor—such as cost differences—in any of the three "steps" of its analysis.[271] Thus, in contrast to the courts' analysis of unjust or unreasonable discrimination under the Communications Act, courts have applied a looser approach to incorporating cost differences to identify undue discrimination under the FPA.

FERC and the courts have typically found that two customers are similarly situated for purposes of section 205 and 206 if they request similar services from the same utility.[272] However, FERC and the courts have recognized at least two exceptions to that implicit rule. First, they have found that differences in cost of service support the conclusion that two customers are not similarly situated. For example, in the 1982 case *Alabama Electric Cooperative, Inc. v. FERC*,[273] the D.C. Circuit said that, "[i]f the costs of providing service to one group are different from the costs of serving the other, the two groups are in one important respect quite dissimilar."[274] Such groups are dissimilarly situated for purposes of section 205 even if they are "in most respects similarly situated" in that they "require similar types of service."[275]

Second, courts have found that two customers of a utility are not similarly situated if they cannot offer similar consideration to the utility. In *Sacramento Municipal Utility District v. FERC*,[276] the D.C. Circuit considered whether two utility customers, the Sacramento Municipal Utility District (SMUD) and the Western Area Power Administration (Western), were similarly situated within the meaning of section 205.[277] After terminating transmission contracts with both customers, the utility, Pacific Gas & Electric (PG&E), negotiated a successor agreement with Western but refused to negotiate such an agreement with SMUD. The D.C. Circuit rejected SMUD's argument that PG&E's refusal constituted undue discrimination. The court noted that Western could offer PG&E benefits that SMUD could not: "SMUD, unlike Western, owns no portion of [an important transmission facility] and thus

[270] *See, e.g.*, Arkansas Elec. Energy Consumers v. FERC, 290 F.3d 362, 367–68 (D.C. Cir. 2002); Entergy Servs., Inc. Generator Coal v. Entergy Servs., Inc., 103 FERC ¶ 61,125, ¶ 61,398 (2003).

[271] *See, e.g.*, Alabama Elec. Coop., Inc. v. FERC, 684 F.2d 20, 27–28 (D.C. Cir. 1982) (including cost factors in the court's analysis of whether two parties are similarly situated); City of Frankfort v. FERC, 678 F.2d 699, 706 (7th Cir. 1982) (accepting cost differences as a justification for different treatment of similarly situated parties).

[272] *See, e.g.*, NRG Power Mktg., LLC v. FERC, 718 F.3d 947, 957 (D.C. Cir. 2013); PJM Interconnection, LLC v. Pub. Serv. Elec. & Gas Co., 132 FERC ¶ 61,221, ¶ 62,242 (2010) ("The Commission further finds that no other entity has been unduly discriminated against by denial of substantially similar service on the same terms and conditions as those requested by ConEd, because no entity has requested such service."); *see also* Dynegy Midwest Generation, Inc. v. FERC, 633 F.3d 1122, 1127 (D.C. Cir. 2011) ("The Commission has revealed no basis for its contention that generators in different zones are not 'similarly situated' for purposes of receiving reactive power compensation.").

[273] 684 F.2d 20 (D.C. Cir. 1982).

[274] *Id.* at 27.

[275] *Id.*

[276] 474 F.3d 797 (D.C. Cir. 2007).

[277] *Id.* at 802.

'cannot offer a similar capacity exchange between California and the Pacific Northwest markets.'"[278]

Evidence of dissimilar treatment of similarly situated customers does not suffice to establish that the public utility engaged in undue discrimination. FERC and the courts have found that a difference in rates, terms, or conditions is not unduly discriminatory if it is justified by "factual differences."[279] The Seventh Circuit has said that "[d]ifferences in cost will normally provide the best justification for differences in prices."[280] However, the courts have also emphasized that the question of "whether factual differences justif[y a] rate disparity . . . [is] not limited to cost or service-related factors."[281] For example, in *City of Frankfort v. FERC*, one justification that both FERC and the Seventh Circuit accepted for the utility's rate differential was that "Frankfort had an opportunity to enter into a fixed-rate contract [as the other cities had done] and did not do so."[282] Thus, a rate differential that derives from the customer's own choice (in this case, Frankfort's rejection of the utility's offer of a fixed-rate contract) is justified.

E. Price Discrimination Under the Robinson-Patman Act

The principal statutory prohibition against price discrimination in American antitrust law is section 2 of the Clayton Act,[283] as amended in 1936 by the Robinson-Patman Act.[284] Section 2(a) of the Robinson-Patman Act, the statute's core provision, makes it unlawful for a seller "to discriminate in price between different purchasers of commodities of like grade and quality . . . where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly."[285] The Robinson-Patman Act embodies an understanding of price discrimination that differs from the economic definition of that term. Economists consider price discrimination to occur when the ratio of price to marginal cost differs between two consumers.[286] In contrast, for purposes of section 2(a), "a price discrimination . . . is merely a price difference."[287]

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[278] *Id.* (quoting Pac. Gas & Elec. Co., 111 FERC ¶ 61,175, ¶ 61,849 (2005)).

[279] *See, e.g.*, Public Serv. Co. of Ind. v. FERC, 575 F.2d 1204, 1211–12 (7th Cir. 1978); American Elec. Power Serv. Corp., 67 FERC ¶ 61,168, ¶ 61,490 (1994) ("[T]raditionally the focus of our undue discrimination analysis has been whether factual differences justify different rates, terms and conditions for similarly-situated customers.").

[280] City of Frankfort v. FERC, 678 F.2d 699, 706 (7th Cir. 1982).

[281] *Id.*; *see also Public Serv. Co. of Ind.*, 575 F.2d at 1211–12.

[282] 678 F.2d at 702.

[283] Pub. L. No. 63–212, 38 Stat. 730 (1914), codified at 15 U.S.C. §§ 12–27.

[284] Pub. L. No. 74–692, 49 Stat. 1526 (1936), codified at 15 U.S.C. § 13.

[285] *Id.* § 13(a).

[286] *See* Tirole, *supra* note 192, at 133–34; Stigler, *supra* note 192, at 209.

[287] Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 220 (1993) (quoting Texaco Inc. v. Hasbrouck, 496 U.S. 543, 558 (1990)).

In evaluating the effects of price discrimination on markets, Robinson-Patman cases distinguish between "primary-line" injury and "secondary-line" injury to competition.[288] In a primary-line case, the plaintiff is the seller's competitor. To prevail on a claim of primary-line price discrimination under the Robinson-Patman Act, the plaintiff must show that the seller's price discrimination is designed to drive competitors from the market.[289] After the Supreme Court's 1993 decision in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*,[290] an allegation of primary-line injury forms a cause of action that is virtually identical to a claim of predatory pricing brought under section 2 of the Sherman Act.[291] The plaintiff in a primary-line Robinson-Patman case must prove (1) "that the prices complained of are below an appropriate measure of its rival's costs,"[292] and (2) "that the competitor had a reasonable prospect, or . . . a dangerous probability, of recouping its investment in below-cost prices."[293] To avoid liability after the plaintiff has established its *prima facie* case, the defendant must "establish a legitimate business justification for its conduct."[294]

In a secondary-line case, the plaintiff is a buyer whose purchase at a disfavored price allegedly impairs his ability to compete with another buyer of the same product from the same seller.[295] To establish a secondary-line injury, the buyer must prove (1) that the discriminating sales were made in interstate commerce, (2) that the goods sold to one buyer were of the same grade and quality as the goods sold to the plaintiff, (3) that the defendant offered the two different buyers discriminatory prices, and (4) that the discrimination had a prohibited effect on competition.[296] In *Aerotec International Inc. v.*

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288 *See, e.g.*, Volvo Trucks N. Am., Inc. v. Reeder-Simco GMC, Inc., 546 U.S. 164, 176 (2006).

289 *See* Utah Pie Co. v. Cont'l Baking Co., 386 U.S. 685, 702–03 (1967).

290 509 U.S. at 220–22.

291 15 U.S.C. § 2; *Brown & Williamson*, 509 U.S. at 221; *see also* Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 549 U.S. 312, 318 n.1 (2007) ("The standard adopted in *Brooke Group* applies to predatory-pricing claims actionable under § 2 of the Sherman Act." (citing *Brown & Williamson*, 509 U.S. at 222)).

292 *Brown & Williamson*, 509 U.S. at 222.

293 *Id.* at 222, 224.

294 William Inglis & Sons Baking Co. v. ITT Cont'l Baking Co., Inc., 668 F.2d 1014, 1041 (9th Cir. 1981).

295 In a secondary-line case, the burden is on the plaintiff to establish a *prima facie* case of price discrimination that has the effect of injuring competition. *See* Volvo Trucks N. Am., Inc. v. Reeder-Simco GMC, Inc., 546 U.S. 164, 176 (2006); Texaco Inc. v. Hasbrouck, 496 U.S. 543, 556 (1990).

296 *Volvo Trucks*, 546 U.S. at 176; *Texaco*, 496 U.S. at 556. Courts have permitted an inference of secondary-line injury to competition if there is evidence of competition between two buyers, and a substantial price differential has persisted for a substantial period of time with respect to a product that is resold in a market subject to vigorous resale competition. *See, e.g.*, Falls City Indus. v. Vanco Beverage, Inc., 460 U.S. 428, 436 (1983); FTC v. Morton Salt Co., 334 U.S. 37, 50–51 (1948); *see also Volvo Trucks*, 546 U.S. at 177. Whether a given price differential is substantial depends on whether the differential substantially affected competition among the discriminating seller's customers. *See id.* at 180 ("In short, if price discrimination between two purchasers existed at all, it was not of such magnitude as to affect substantially competition between Reeder and the 'favored' Volvo dealer."). Such an inquiry necessarily depends on the facts of the case, particularly on the "timing of the competition" between the buyers and the "nature of the market." Feesers, Inc. v. Michael Foods, Inc., 591 F.3d 191, 198 (3d Cir. 2010) (citing *Volvo Trucks*, 546 U.S. at 178–79).

Honeywell International, Inc., the Ninth Circuit said in 2016 that "[u]nlawful secondary-line price discrimination exists only to the extent that the differentially priced product or commodity is sold in a 'reasonably comparable' transaction"[297]—that is, a transaction "involving similar goods under comparable market conditions at approximately the same time."[298]

If the plaintiff establishes the comparability of the differentially priced sales, the burden shifts to the defendant to prove that the discrimination was justified.[299] The Supreme Court has said that the Robinson-Patman Act provides the defendant "two affirmative defenses."[300] First, the defendant may present a cost justification for the difference in price.[301] Section 2(a) enumerates as possible justifications cost differences relating to the "manufacture, sale, or delivery" of the product,[302] and courts have also allowed sellers to assert the cost-justification defense on the basis of differences in other costs, such as billing and credit losses, advertising, promotion and selling, and freight.[303]

The second affirmative defense is the "meeting competition" defense.[304] Section 2(b) of the Robinson-Patman Act provides that a seller may rebut a *prima facie* case of price discrimination by showing that its lower price to any purchaser or purchasers was made in good faith to meet an equally low price of a competitor, or the services or facilities furnished by a competitor.[305] The seller's showing must consist of "facts which would lead a reasonable and prudent person to believe that the granting of a lower price would in fact meet the equally low price of a competitor."[306]

Some antitrust scholars have criticized the Robinson-Patman Act as discouraging legitimate price competition in the name of protecting small competitors.[307] In particular, Judge Richard Posner has argued that drafting a blanket prohibition against price discrimination "that did not constrain or inhibit legitimate pricing behavior as well" would be "infeasible."[308] He,

297 836 F.3d 1171, 1188 (9th Cir. 2016) (quoting Texas Gulf Sulphur Co. v. J.R. Simplot Co., 418 F.2d 793, 807 (9th Cir. 1969)).

298 *Texas Gulf Sulphur*, 418 F.2d at 806–07.

299 *Morton Salt*, 334 U.S. at 44–45 ("[Section] 2(b) of the Act specifically imposes the burden of showing justification upon one who is shown to have discriminated in prices.").

300 *Texaco*, 496 U.S. at 555.

301 *Id.*

302 15 U.S.C. § 13(a).

303 *See* United States v. Borden Co., 370 U.S. 460, 465 (1962); American Motors Corp. v. FTC, 384 F.2d 247, 251–52 (6th Cir. 1967); Uniroyal, Inc. v. Hoff & Thames, Inc., 511 F. Supp. 1060, 1071 (S.D. Miss. 1981).

304 *Texaco*, 496 U.S. at 558.

305 15 U.S.C. § 13(b).

306 United States v. U.S. Gypsum Co., 438 U.S. 442, 451 (1978) (quoting FTC v. A.E. Staley Mfg. Co., 324 U.S. 746, 759–60 (1945)).

307 *See, e.g.*, Roger D. Blair & Christina DePaquale, *"Antitrust's Least Glorious Hour": The Robinson-Patman Act*, 57 J.L. & Econ. 201 (2014); D. Daniel Sokol, *Limiting Anticompetitive Government Interventions That Benefit Special Interests*, 17 Geo. Mason L. Rev. 119, 128 (2009); Thomas W. Ross, *Winners and Losers Under the Robinson-Patman Act*, 27 J.L. & Econ. 243, 252 (1984).

308 Posner, *supra* note 196, at 86.

along with other scholars, has explained that "forbidding price discrimination can foster cartelization."[309] Consequently, these scholars argue that the Robinson-Patman Act harms consumer welfare.

In sum, the Robinson-Patman Act prohibits only price discrimination among sales of products of like grade and quality that has the potential to harm competition. The plaintiff in a Robinson-Patman case has the burden of showing that the price discrimination had a prohibited effect on competition through either primary-line or secondary-line injury. The statute allows the defendant to show that cost savings to the seller or the need to meet market competition justified the price differential.

F. Antitrust Decrees Imposing a Duty to License on Nondiscriminatory Terms

Another relevant body of law that analyzes discriminatory practices consists of patent-licensing decrees issued as remedies in antitrust cases concerning abuse of patent rights. In his article, *A Brief History of FRAND: Analyzing Current Debates in Standard Setting and Antitrust Through a Historical Lens*, Jorge Contreras astutely analyzes the consent decrees issued in the twentieth century that imposed on the patent holder a duty to license its patents on fair, reasonable, and nondiscriminatory terms.[310] Contreras' analysis shows that courts have accepted multiple justifications for the patent holder's differential treatment of its licensees.

For example, in *Hartford-Empire Co. v. United States*, the Supreme Court examined a decree that imposed on the patent holder a duty to license its patents for "uniform reasonable royalties" without "discrimination or restriction."[311] The decree permitted the patent holder to charge different royalties to different categories of market participants, such as container manufacturers and machinery manufacturers.[312] Hence, the duty to license on uniform terms applied only to market participants of the same category. In addition, as Contreras observes, although the decree required that "similar licenses at uniform reasonable royalties [be made] . . . available to all who desire them," there were some exceptions to this requirement.[313] The patent holder could

[309] *Id.*; *see also* Ross, *supra* note 307, at 252 ("A related and much discussed aspect of the act concerns the possibility that it may help to enforce cartel price rules by discouraging secret price shading by members.").

[310] Contreras, *A Brief History of FRAND*, *supra* note 121.

[311] The decree initially imposed on the patent holder a duty to license its patents "to any who may desire to take licenses . . . at standard royalties and without discrimination or restriction." Hartford-Empire Co. v. United States, 323 U.S. 386, 419 (1945). The Court subsequently substituted the phrase "uniform" royalties for "standard" royalties. Hartford-Empire Co. v. United States, 324 U.S. 570, 574 (1945), *cited in* Contreras, *A Brief History of* FRAND, *supra* note 121, at 53 n.79.

[312] Contreras, *A Brief History of FRAND*, *supra* note 121, at 79 (citing Note, *Compulsory Patent Licensing by Antitrust Decree*, *supra* note 122, at 93, 121 (Final Judgment ¶ 13(B)) (reprinting excerpts from decrees in additional cases).

[313] *Id.* (quoting *Hartford-Empire*, 324 U.S. at 574).

deviate from those "uniform" rates when (1) the licensee offered non-monetary consideration, such as a cross license to its patent rights or "development work," or (2) differential treatment was required by law.[314] The patent holder could therefore justify charging different royalties to similarly situated licensees.[315]

In *Rudenberg v. Clark*, the court similarly recognized that differential treatment of similarly situated licensees could be justified in specific circumstances.[316] In that case, the decree provided that the patent holder would "grant . . . a non-exclusive unlimited license . . . on a non-discriminatory basis."[317] The court emphasized that the decree sought "to give the same chance to all who are or may be in competition regardless of whether they have or lack large funds and influential connections."[318] However, the court also emphasized that the decree

> was not intended to place the . . . holder of patents at the mercy of large corporate enterprises which could use the invention, decline to accept the inventor's reasonable offers, allow him to sue for infringement and in the end, if beaten in the infringement suit, pay him not even a royalty high enough to cover the expenses of the litigation but the lowest royalty rate the inventor is receiving from anyone whatsoever.[319]

The court recognized, at least implicitly, that an infringer that refuses a license might need to pay a higher royalty or might have no right to a license at all. Accordingly, it permitted rescission of the decree in specific circumstances, such as when a manufacturer "persistently infringe[d] and refuse[d] reasonable offers of a license."[320] In other words, the court recognized that the infringer's conduct might justify the patent holder's charging a different rate to that infringer than it did to other licensees.[321]

Similarly, in *American Securit Co. v. Shatterproof Glass Corp.*, the court confirmed that the license terms offered to different licensees need not be identical to comply with the decree's nondiscrimination requirement.[322] In

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[314] *Id.* at 54 (citing Note, *Compulsory Patent Licensing by Antitrust Decree*, *supra* note 122, at 124 (Final Judgment ¶ 13(E))).

[315] *Id.* at 80.

[316] 81 F. Supp. 42, 44–45 (D. Mass. 1948); *see also* Contreras, *A Brief History of FRAND*, *supra* note 121, at 56–58. It is worth noting that *Rudenberg* was not an antitrust case. Instead, the patent holder executed the patent-licensing decree to settle a litigation in which it sought to recover the title to patents that the U.S. Alien Property Custodian had previously seized.

[317] *Rudenberg*, 81 F. Supp. at 43.

[318] *Id.* at 45.

[319] *Id.*

[320] *Id.*; *see also* Contreras, *A Brief History of FRAND*, *supra* note 121, at 57–58.

[321] My own independent analysis of *Rudenberg* accords with Contreras' earlier analysis. *See* Sidak, *A FRAND Contract's Intended Third-Party Beneficiary*, *supra* note 51, at 1010–12.

[322] 154 F. Supp. 890 (D. Del. 1957), *aff'd*, 268 F.2d 769 (3d Cir. 1959), *cited in* Contreras, *A Brief History of FRAND*, *supra* note 121, at 66–67.

that case, American Securit, the patent holder, refused to license its patents covered by the decree unless the potential licensee, Shatterproof, agreed also to license American Securit's other patents not covered by the decree.[323] After an extended negotiation, Shatterproof started manufacturing products that infringed the patents covered by the decree, and American Securit sued for patent infringement.[324] During litigation, Shatterproof argued that American Securit misused its patents by, among other things, tying a license for the patents covered by the decree to patents not covered by the decree, something that the decree specifically prohibited. American Securit attempted to defend its licensing practice by arguing (1) that licensing its entire portfolio was its established business practice and (2) that deviating from that practice would discriminate against existing licensees. However, the court rejected American Securit's argument and said that it was not clear that such a deviation from the established licensing practice would be discriminatory.[325] In other words, the court recognized that a patent holder need not include precisely the same terms in all license agreements to comply with the nondiscrimination requirement.[326]

In sum, as Contreras has observed, when interpreting the nondiscrimination requirement included in antitrust decrees regarding patent licenses, courts have not required identical terms for all licensees. Instead, even in this area of law, courts have accepted various justifications for the differential treatment of similar licensees.

VI. Limiting Principles

I present in this part the criteria that a court might consider when applying the positive principles distilled from the nondiscrimination jurisprudence to the nondiscrimination requirement of a FRAND or RAND commitment. Specifically, I present normative economic arguments that might aid the court in determining whether (1) the claimant is situated similarly to other implementers, (2) the SEP holder has treated the claimant differently, and (3) a valid justification exists for any differential treatment. Some of the criteria that I consider relevant to the determination of differential treatment of similarly situated implementers could also be relevant to the determination

323 Contreras, *A Brief History of FRAND*, *supra* note 121, at 66.

324 *Id.* at 67.

325 *American Securit*, 154 F. Supp. at 895–97; *see also id.* at 897 ("The argument of plaintiff that any variance in its licensing policy in defendant's favor, or otherwise, would have resulted in discrimination against the existing licensees is without merit. While I appreciate the sensitiveness of a licensor not to discriminate among licensees, it has not been demonstrated by heeding defendant's wishes . . . plaintiff would have traveled the sure road to discrimination.").

326 *See, e.g.*, Contreras, *A Brief History of FRAND*, *supra* note 121, at 79 ("*American Securit* suggests that identical packages of patents need not be offered to every licensee to comply with a non-discrimination covenant.").

of whether that differential treatment was justified. However, the decision of whether to examine a specific factor at an early stage (when determining whether two implementers are similarly situated) as opposed to a later stage (when evaluating the SEP holder's justification for the given dissimilar treatment) should not affect the outcome of the analysis.

A. Is the Implementer Situated Similarly to Other Implementers?

There is no generally accepted test to determine whether two implementers are similarly situated. "After all," as Justice Clarence Thomas emphasized (in a different context) in his dissent in *Alabama Department of Revenue v. CSX Transportation, Inc.*, "Black's Law Dictionary contains no entry defining what it means to be 'similarly situated.'"[327] Nonetheless, courts have emphasized that, although two comparators need not be completely identical, they must be sufficiently similar, such that the court does not compare "apples with oranges."[328]

1. Are the Implementers Practicing the Standard in the Same Product?

There is general agreement in the legal and economic literature that a necessary (but in my view not sufficient) condition for two implementers to be deemed similarly situated for the purposes of a FRAND or RAND commitment is that they implement the relevant standard in similar products.[329] That proposition is economically sound. Manufacturers of different products

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[327] 135 S. Ct. 1136, 1146 (2015) (Thomas, J., dissenting).

[328] *See, e.g.*, Burke-Fowler v. Orange County, 447 F.3d 1319, 1323 (11th Cir. 2006) ("When making that determination, '[w]e require that the quantity and quality of the comparator's misconduct be nearly identical to prevent courts from second-guessing employers' reasonable decisions and confusing apples with oranges.'" (alteration in original) (quoting Maniccia v. Brown, 171 F.3d 1364, 1368 (11th Cir. 1999))); *see also* Lee v. Kansas City S. Ry. Co., 574 F.3d 253, 259–60 (5th Cir. 2009).

[329] *See, e.g.*, Carlton & Shampine, *supra* note 15, at 546 ("[C]ompeting firms are similarly situated if ex ante they expect to obtain the same incremental value from the patented technology compared with the next best alternative available to be incorporated into the standard. Firms in different industries, for example, such as a handset manufacturer and a maker of wireless heart monitors, might make devices that obtain different incremental values from a patented technology and do not compete with one another, and thus can pay different rates under this interpretation."); Layne-Farrar, *supra* note 131, at 815 ("The licensee 'situation' is then determined by a number of characteristics, *such as the firms' particular use for the licensed IP* (and hence its valuation of that IP)." (emphasis added)); Shampine, *supra* note 116, at 3 n.12 ("Some firms are sufficiently unrelated to one another that differing terms and conditions do not raise economic concerns such as unequal playing fields between competitors. For example, two firms might make products that are in entirely separate industries and do not compete with one another (wireless cardiac monitors and mobile phones)."); Damien Geradin, *FRAND Arbitration: The Determination of Fair, Reasonable and Non-Discriminatory Rates for SEPs by Arbitral Tribunals*, 3 CPI Antitrust Chron., Summer 2016, at 1, 9 ("The 'ND' of FRAND is necessary to ensure that a standard implementer is not commercially penalized by having to pay a higher license fee to an SEP holder than other similarly-situated standard implementers with which it competes [i]n downstream product markets (e.g. computers, tablets, smartphones, etc.)."); Edward F. Sherry, David J. Teece & Peter Grindley, *FRAND Commitments in Theory and Practice: A Response to Lemley and Shapiro's 'A Simple Approach'* 4 n.14 (Tusher Ctr. for the Mgmt. of Intell. Capital, Working Paper No. 3, 2015) ("[F]rom both a legal (patent exhaustion) and an economic perspective, a chipset manufacturer is not 'similarly situated' to a handset manufacturer or a cellular service provider.").

typically derive different values from implementing a given industry standard, and, consequently, they are willing to pay different royalties for the use of the SEP holder's technology.

For example, an implementer that expects to use the Wi-Fi standard in a line of high-end mobile devices might derive more value from that use than would an implementer that expects to use the Wi-Fi standard in a smart toaster.[330] Consumers might be willing to pay only a few extra dollars for Wi-Fi functionality in a toaster, such that the value of the entire Wi-Fi standard as implemented in the toaster is only, say, $2. In contrast, Wi-Fi functionality adds significant value to a high-end mobile device such as a smartphone or tablet. It is unlikely that a consumer would be willing to purchase a high-end mobile device that lacked Wi-Fi functionality. Consequently, a high-end mobile-device manufacturer's maximum willingness to pay for the use of Wi-Fi SEPs likely exceeds the toaster manufacturer's maximum willingness to pay for those same SEPs. It is therefore unsurprising that it is common industry practice for SEP holders to charge a different rate to implementers that practice the licensed SEPs in different products.[331]

Imposing on the SEP holder a duty to license its SEPs to all implementers on the same terms and conditions, irrespective of the product in which the standard is implemented, would frustrate the goals of a FRAND or RAND commitment, and would harm the SSO and the SEP holders, as well as implementers and consumers.[332] In particular, imposing such an obligation on the SEP holder would frustrate the SSO's goal of achieving the standard's widespread adoption. The toaster manufacturer would not enter into a license agreement with the SEP holder for the same royalty that a handset manufacturer would be willing to pay, because that royalty would exceed the toaster manufacturer's maximum willingness to pay. In that scenario, there would be no smart toaster with Wi-Fi functionality available in the market. Moreover, if the high-end mobile device manufacturer demands a royalty anchored to the toaster manufacturer's (much lower) maximum willingness to pay, the SEP holder's compensation will be based on the lowest-value use of its technology. That pricing outcome would hinder the SEP holder's ability

330 *See* Roberto Baldwin, *The World Now Has a Smart Toaster*, Engadget (Jan. 4, 2017), https://www.engadget.com/2017/01/04/griffin-connects-your-toast-to-your-phone/.

331 *See, e.g.*, *Blue-Ray Royalty Rates*, One-Blue, http://www.one-blue.com/royalty-rates.html (offering different royalties, depending on the product, for patents essential to implementing the Blu-Ray Disc standard); Microsoft Corp. v. Motorola, Inc., No. C10–1823JLR, 2013 WL 2111217, at *101 (W.D. Wash. Apr. 25, 2013) (Robart, J.) (for a given portfolio of SEPs, determining one range of RAND royalties for Microsoft Xbox products and a separate range for "all other Microsoft products").

332 *Cf.* Gilbert, *supra* note 92, at 28 ("It is artificial and counterproductive to impose a definition of non-discrimination that requires identical licensing terms for every licensee. Such a requirement is facially ambiguous and, if defined literally to mean that every licensee pays the same amount, would sacrifice economic efficiency.").

to receive fair compensation for its contribution to the standard—another purpose of the FRAND or RAND commitment.[333]

Therefore, when interpreting the nondiscrimination requirement of a FRAND or RAND commitment, only implementers that implement the standard in the same products (or services) can be deemed similarly situated.

2. *Are the Implementers Executing Comparable Market Transactions with the SEP Holder?*

Other considerations might further reduce the set of similarly situated implementers. For example, the execution of comparable transactions with the SEP holder is necessary but not sufficient for two implementers to be deemed similarly situated. By analogy, in employment-discrimination law, courts consider (among other things) whether two employees were "involved in or accused of the same or similar conduct" when evaluating whether those employees are similarly situated.[334] If the employees were not engaged in sufficiently similar conduct, the court will conclude that the employees are not similarly situated for the purpose of the discrimination analysis, even if they are similar in all other respects.[335] Similar reasoning can inform the analysis of discrimination in SEP licensing. The court should conclude that two implementers that practice a given standard to make a given product must be executing comparable transactions with the SEP holder to be deemed similarly situated.

The transactions that implementers execute with the SEP holder are comparable only if they concern the same portfolio of SEPs. However, not all transactions involving the use of a given portfolio of SEPs are sufficiently comparable to support the conclusion that the implementers are similarly situated. For example, the sale of a portfolio of SEPs is a fundamentally different transaction from a license agreement for that same portfolio. When the SEP holder sells its SEPs to another firm, it permanently transfers the

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[333] *See, e.g.*, ETSI IPR Policy, *supra* note 8, § 3.2, at 35 ("IPR holders whether members of ETSI and their AFFILIATES or third parties, should be adequately and fairly rewarded for the use of their IPRs in the implementation of STANDARDS and TECHNICAL SPECIFICATIONS."); *see also* J. Gregory Sidak, *The Meaning of FRAND, Part II: Injunctions*, 11 J. Competition L. & Econ. 201, 212 (2015); FTC v. Qualcomm Inc., No. 17-CV-00220-LHK, 2017 WL 2774406, at *21 (N.D. Cal. June 26, 2017) (Koh, J.) ("Indeed, as [the] FTC alleges, FRAND commitments are *intended* to ensure that the patent holder receives fair compensation for its intellectual property." (emphasis in original)).

[334] *See, e.g.*, Humenny v. Genex Corp., 390 F.3d 901, 906 (6th Cir. 2004) ("[T]o be deemed 'similarly situated,' the individuals with whom Appellant compares herself '"must have dealt with the same supervisor, have been subject to the same standards, and engaged in the same conduct without such differentiating or mitigating circumstances that would distinguish their conduct or the employer's treatment of them for it."'" (quoting Gray v. Toshiba Am. Consumer Prods., Inc., 263 F.3d 595, 599 (6th Cir. 2001) (quoting Mitchell v. Toledo Hosp., 964 F.2d 577, 583 (6th Cir. 1992)))); *see also* Burke-Fowler v. Orange County, 447 F.3d 1319, 1323 (11th Cir. 2006).

[335] *See, e.g.*, Bearden v. Int'l Paper Co., 529 F.3d 828, 832 (8th Cir. 2008); Wagner v. Matsushita Elec. Components Corp., 93 F. App'x 714, 716 (6th Cir. 2004).

totality of its patent rights to the buyer. Conversely, under a one-way patent license, the SEP holder merely permits the licensee in question to use its patented technology for a specified duration. Although in both transactions the implementer obtains the right to practice the SEP holder's patents that read on the standard, the two implementers cannot be said to be similarly situated for purposes of the nondiscrimination requirement of a FRAND or RAND commitment. A comparison between the terms of a patent transfer agreement and a one-way license cannot inform the question of whether the SEP holder's licensing practice is discriminatory.

A similar rationale applies where the SEP holder has established a strategic partnership with an implementer. For example, if the agreement establishing the strategic partnership includes a royalty-free cross license, it would be erroneous to conclude that, from that point forward, the SEP holder would need to license its SEPs to all other implementers on a royalty-free basis, regardless of the structure of the transaction. A broad collaboration agreement, such as a strategic partnership, might generate vastly different benefits for both the SEP holder and the implementer than would a one-way license agreement.[336] For example, if the implementer has a strong global brand, a strategic partnership might provide significant benefits to the SEP holder in the form of a "halo effect," which is recognized in the scholarly literature in both business economics and sociology.[337] In addition, depending on the structure of the agreement, the SEP holder's strategic partner might undertake risks related to developing and launching a product jointly developed with the SEP holder. The strategic partner might also undertake the risk of providing financial resources to the SEP holder. In contrast, an implementer that enters into a one-way license with the SEP holder neither bears similar risks nor provides similar consideration to the SEP holder. Therefore, such an implementer cannot be situated similarly to an SEP holder's strategic partner, even if the two companies are similar in all other respects.[338]

Furthermore, even if both implementers are executing a license agreement for a given portfolio of SEPs, the transactions with the SEP holders might not be sufficiently comparable if there is a significant difference in the values of the patent portfolios that the implementers are cross-licensing to

[336] *Cf.* Sacramento Mun. Util. Dist. v. FERC, 474 F.3d 797, 802–04 (D.C. Cir. 2007) (finding that two customers are deemed not similarly situated for the purpose of the Federal Power Act if they cannot offer similar consideration to the utility).

[337] *See, e.g.*, Diana Crane, *The Gatekeepers of Science: Some Factors Affecting the Selection of Articles for Scientific Journals*, 2 Am. Sociologist 195, 195 (1967) (analyzing the effects of an author's academic affiliation on the evaluation of his work by referees); *see also* Judith H. Washburn, Brian D. Till & Randi Priluck, *Co-Branding: Brand Equity and Trial Effects*, 17 J. Consumer Marketing 591, 599 (2000); Wesley David Sine, Scott Shane, Dante Di Gregorio, *The Halo Effect and Technology Licensing: The Influence of Institutional Prestige on the Licensing of University Inventions*, 49 Mgmt. Sci. 478, 481 (2003).

[338] *See, e.g.*, Brooks & Geradin, *supra* note 62, at 19 n.8 (suggesting the "formation of broader business relationships and cooperation" with the SEP holder as a justification for concluding that two implementers are not similarly situated).

the SEP holder. When licensing its portfolio of SEPs, an SEP holder might request a cross-license to the implementer's SEPs, and perhaps also to the implementer's non-standard-essential patents. In that case, the parties would execute a cross-license agreement, possibly with a zero net royalty payment, if the values of the cross-licensed portfolios are comparable. If the implementer has no patents to cross license, then the SEP holder and the implementer will typically agree to a one-way license agreement. All other factors held constant, the stated royalty in a cross-license agreement will be lower than the stated royalty in a one-way license. It would be unreasonable to require an SEP holder to offer to license its portfolio of SEPs on the same terms and conditions (including at the same royalty rate) to all implementers regardless of the value of the patent portfolio that a given implementer can cross-license to the SEP holder. Rather, only implementers that have portfolios of comparable value to cross-license are executing comparable transactions with the SEP holder and, consequently, are entitled to comparable license offers.

Importantly, transactions with the SEP holder need not be identical to be sufficiently comparable for analyzing discrimination in an SEP license.[339] Indeed, transactions for the use of a given portfolio of SEPs are almost never identical. However, when there is a significant difference in the transactions that the SEP holder is executing with the two implementers (for example, because the license agreement for SEPs is only a small part of a complex transaction), there might be too much of an analytical gap to permit a reasonable comparison of the transactions that the SEP holder is executing with the two implementers. In those circumstances, the court could reasonably conclude that the two implementers are not similarly situated for purposes of the nondiscrimination requirement of a FRAND or RAND commitment.

3. Are the Costs of Providing a License to the Implementers Similar?

Another factor that a court might examine to determine whether two implementers are similarly situated is whether they impose on the SEP holder similar costs of licensing. I explained in Part IV that charging a different price for the same good or service does not constitute price discrimination (in an economic sense) if there is a corresponding difference in the marginal costs of providing that good or service to the two customers. Courts have

[339] *Cf.* Coleman v. Donahoe, 667 F.3d 835, 846 (7th Cir. 2012) ("So long as the distinctions between the plaintiff and the proposed comparators are not 'so significant that they render the comparison effectively useless,' the similarly-situated requirement is satisfied." (quoting Humphries v. CBOCS West, Inc., 474 F.3d 387, 405 (7th Cir. 2007), *aff'd*, 553 U.S. 442 (2008))); Lee v. Kansas City S. Ry. Co., 574 F.3d 253, 260 (5th Cir. 2009) ("Applied to the broader circumstances of a plaintiff's employment and that of his proffered comparator, a requirement of complete or total identity rather than near identity would be essentially insurmountable.").

recognized this economic insight in regulated network industries when analyzing, for example, whether two groups of consumers are similarly situated for purposes of the nondiscrimination provision of the Federal Power Act.[340] As I explained in Part V, courts have found that a difference in the costs of providing a service to two groups of consumers supports the conclusion that the two groups are differently situated. Likewise, a difference in the costs to the SEP holder of licensing an SEP portfolio to one implementer relative to another implementer should be relevant to determining whether those two implementers are similarly situated.

The factors that increase the costs of licensing for a given implementer will be case-specific. For example, if an implementer insists on executing multiple licenses for a given portfolio of SEPs, each covering an individual jurisdiction or region, the costs to the SEP holder of licensing that implementer might be higher than the costs to the SEP holder of licensing otherwise similar implementers that accept a single global license. Executing multiple licenses will require multiple negotiations, which will in turn cause higher costs. It is economically rational for the SEP holder to treat differently (and charge a higher royalty to) an implementer that imposes higher licensing costs. Such a practice by the SEP holder does not constitute price discrimination.[341] Rather, the difference in the costs of licensing the same portfolio of SEPs to two different implementers supports the conclusion that the two are not similarly situated.

B. Has the SEP Holder Treated Two Similarly Situated Implementers Differently?

If the court finds that the claimant is situated similarly to other implementers, it must then determine whether the SEP holder has treated the claimant differently from those implementers. The court's analysis should focus on the SEP holder's license *offers* to each implementer, rather than on its fully negotiated and executed license agreements. The terms of an offer are entirely within the SEP holder's control. The terms of an executed license, in contrast, reflect factors outside the SEP holder's control, such as the implementer's risk preferences and bargaining skill, and exogenous factors such as the demand for the implementer's products.

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[340] *See, e.g.*, Alabama Elec. Coop., Inc. v. FERC, 684 F.2d 20, 27 (D.C. Cir. 1982) (finding that a difference in costs of providing the service to two groups supported the conclusion that the groups were dissimilar).

[341] *See* Payne v. Washington Metro. Area Transit Comm'n, 415 F.2d 901, 915 n.71 (D.C. Cir. 1968) ("[D]iscrimination . . . exists where equal rates are charged for services whose rates ought to be different, or where, though the lower cost service is provided at a lower price, the difference in the costs of providing the two services requires a greater differential than in fact exists."); Atchison, Topeka & Santa Fe Ry. Co. v. United States, 549 F.2d 1186, 1191 (8th Cir. 1977) ("[D]ifferent rates may not be charged similarly situated shippers for the same service, based on the mode of transportation used in a prior or subsequent movement, *where the cost of providing the service is the same*." (emphasis added)).

To understand the differences between a license offer and the royalty that implementers pay under the terms of a executed license agreement, suppose that an SEP holder offers both implementer *A* and implementer *B* a $5 per-unit royalty for a license to practice its SEPs for five years. Suppose further that implementer *A* accepts the offer outright, while implementer *B* negotiates a perpetual license for a lump sum of $300 million.[342] Also suppose that, because implementer *B*'s actual sales exceeded its projected sales, its royalty payment (when computed after the sales are made) amounts to a per-unit royalty of $3. In that scenario, although both implementers received the same offer, they will face different costs of licensing the same portfolio. However, the difference between the negotiated licenses arises from (1) differences in the implementers' conduct and preferences, and (2) exogenous factors, such as uncertain demand for implementer *B*'s product. There is no reason to presume that the SEP holder is the efficient bearer of that species of risk. Thus, differences in executed licenses are typically not a reliable basis for a finding of differential treatment of similarly situated implementers. The relevant inquiry is whether the SEP holder made similar offers to two similarly situated implementers—***not*** whether those two implementers ultimately paid a comparable rate for a license to a given SEP portfolio.

To determine whether the SEP holder has made different offers to similarly situated implementers, one must not confine the analysis to the monetary compensation. Instead, one must examine all terms and conditions of the offer. A difference in the offered royalty might support a finding of differential treatment. For example, if the SEP holder offers a $1 per-unit royalty to implementer *A* but insists on a $5 per-unit royalty from implementer *B*, a court might find that the SEP holder has treated the two implementers differently (assuming they are similarly situated). However, a court must also consider other (nonmonetary) terms of the SEP holder's license offer, such as the term length, the inclusion of a waiver of the right to challenge validity and infringement, or a discount for the prompt execution of a license agreement. Differences in those three terms (among others) will likely change the value of the license to both parties. As a general rule, evidence that the SEP holder presented the same menu of royalty options to similarly situated implementers should weigh against a finding of differential treatment.[343]

[342] A lump-sum royalty specifies a fixed, aggregate amount that the implementer pays to obtain the right to use the patented technology during the term of the license. The licensing parties typically calculate a lump-sum payment in advance by using the implementer's projected sales revenue or unit shipments for the duration of the license. *See* Sidak, *Converting Royalty Payment Structures for Patent Licenses*, *supra* note 200, at 903–04.

[343] *See, e.g.*, Gilbert, *supra* note 92, at 873 (contending that similarly situated licensees should be able to "choose from the same schedule of royalty payments").

C. Is the Differential Treatment of Similarly Situated Implementers Justified?

If the implementer shows that it has received a license offer that differs significantly from the offers that the SEP holder has extended to other similarly situated implementers, the court should consider whether the SEP holder had a valid justification for the differential treatment. In this part, I suggest some possible justifications for the SEP holder's extending different offers to similarly situated implementers. However, the list is not exhaustive. Courts should examine the circumstances of each case to determine whether there is a valid justification for the differential treatment.

1. The SEP Holder's Financial Duress

Differential treatment of similarly situated implementers might be justified. Suppose that the SEP holder made a particularly favorable offer to an implementer when the SEP holder was in financial distress—for example, because the SEP holder was facing widespread infringement of its SEPs and could not obtain access to capital. In those circumstances, the SEP holder might have been compelled to offer a discounted royalty to an implementer that agreed to provide prompt payment to relieve the SEP holder's liquidity crisis. However, there is no valid economic reason to require the SEP holder to continue licensing its SEPs for the same low rate to subsequent implementers.

From an economic perspective, widespread infringement might artificially depress the patent holder's minimum willingness to accept—that is, the minimum value that the patent holder will accept to license its patent while still being better off than it would be if it did not issue a license. If the SEP holder can license some SEPs, such that its credit constraints then relax, its minimum willingness to accept will increase. Although I use the term "minimum willingness to accept" for simplicity, that term is actually a misnomer in the scenario of widespread infringement. If the patent holder is facing widespread infringement, then the patent holder's ability to commercialize and monetize its invention is diminished. It is a misuse of language to say that, in a world where infringers widely use the patent holder's patents or challenge the patent holder's title to the patents, a patent holder would willingly accept a diminution of the returns that it can receive from those patents. Thus, in the scenario of widespread infringement, the patent holder's minimum willingness to accept should be understood as having been *artificially* suppressed as a result of coercion, such that the royalty is not a true measure of the patent holder's *willingness* to license.

Forcing the SEP holder to license its portfolio of SEPs to all implementers for a royalty that is below the SEP holder's minimum willingness to accept would have negative effects for both innovation and the standardization

process. It would deprive the SEP holder of reasonable compensation for its contribution to the standard. Consequently, it would decrease the SEP holder's incentives both to invest in research and development and to continue to contribute its technologies to the SSO in question, if not also to industry standards generally. Thus, the court should examine any extraordinary circumstances that might have motivated the SEP holder to make a more favorable offer to one of the similarly situated implementers so as to determine whether the differential treatment given the subsequent implementer was justified.

2. The Implementer's Negotiating Conduct

The reason for the differential treatment might also be attributable to the implementer's conduct.[344] For example, evidence from industry practice shows that SEP holders sometimes offer an "early bird" discount to a licensee that executes a license agreement within a specific time frame—for example, within four months after the commencement of the negotiation.[345]

The practice of charging a lower royalty to an implementer that promptly executes a license agreement is economically rational and serves the interests of the SSO, the SEP holder, and consumers. Prompt execution of license agreements benefits the SSO by facilitating the market's rapid adoption of its standard. The SEP holder also has an interest in promptly executing license agreements, given that a prolonged negotiation denies the SEP holder timely compensation for its contributions to the standard. In addition, the creation and consumption of the innovative products that the new standard generates confers large welfare gains on consumers and producers. A delay in licensing SEPs irretrievably attenuates those welfare gains.[346]

If an implementer unduly delays the initiation of a negotiation process, the SEP holder might justifiably refuse to include an "early bird" discount in its FRAND or RAND offer. That could be the case, for example, if the implementer has failed to reply to the SEP holder's invitation to enter into a license negotiation within a reasonable time, or if the implementer has unduly delayed the execution of the nondisclosure agreement necessary for the commencement of the negotiation. Accepting the implementer's delaying tactics as a valid justification for the SEP holder's differential treatment of similarly situated implementers would promote the interests of the SSO, the SEP holder, and consumers.

344 *Cf.* City of Frankfort v. FERC, 678 F.2d 699, 702 (7th Cir. 1982).

345 *See, e.g.*, Sisvel LTE License Agreement, *supra* note 191.

346 *See* Sidak, *Irreparable Harm from Patent Infringement*, *supra* note 204, at 2–5; Sidak, *A FRAND Contract's Intended Third-Party Beneficiary*, *supra* note 51, at 1013.

3. Changes in Market Conditions

Changes in market conditions might also justify differential treatment of similarly situated implementers. One change in market conditions that could affect the analysis of discriminatory licensing is that the relevant standard has started to face competition from an alternative standard. Because the implementer's maximum willingness to pay for a portfolio of SEPs depends on the next-best noninfringing alternatives available to that implementer at the time of the license negotiation, competition from the new alternative standard would decrease the implementer's maximum willingness to pay for the original standard (and for the SEPs that read on it).[347] In such a circumstance, the SEP holder might be willing to charge a lower royalty for its SEP portfolio to attract implementers who would otherwise opt for the alternative standard. There is no economic justification for forcing the SEP holder to charge the same royalty that it did in the past. Permitting the SEP holder to adjust to new market conditions and to offer to license its SEPs at lower rates to new implementers would foster competition among standards and would benefit, not harm, consumers. Thus, increased or new competition from an alternative standard might justify a difference in an SEP holder's offer to similarly situated implementers.

Similarly, a difference in the offered license terms might also be justified if an SEP included in the portfolio is approaching its expiration date. Consider a closed-end portfolio—that is, a portfolio in which there are no new patents being added. For simplicity, assume that all SEPs included in that portfolio will expire at the same time. The license for the use of such a portfolio should, all other factors held constant, have a declining royalty over time, as the average time until the patents in the portfolio expire decreases. From an economic perspective, waiting to practice a standard until the SEPs expire becomes a noninfringing alternative to taking a license for that portfolio and thus decreases the implementer's maximum willingness to pay. It is therefore not surprising that SEP holders tend to reduce the royalties for licensed SEPs as they become older.[348] There is no economic reason to require the SEP holder to charge the same royalty for its portfolio simply because it has charged that royalty in the past. A decrease in the royalty for a license to a given SEP portfolio can benefit both consumers and the SEP holder by increasing demand for the standard. Therefore, a difference in the length of time between the negotiation date and the SEPs' expiration can justify a differential in the license offers.[349]

[347] J. Gregory Sidak, *Bargaining Power and Patent Damages*, 19 Stan. Tech. L. Rev. 1, 15 (2015).

[348] *See, e.g.*, *Blue-Ray Royalty Rates*, One-Blue, *supra* note 331 (offering lower per-unit royalties for shipments of standard-compliant products after April 1, 2017).

[349] In contrast, if the SEP holder is continuously replenishing the portfolio with newly granted patents, the average value and average age of patents in the portfolio can be calibrated to remain relatively constant

In short, changes in the market conditions, such as increased competition from an alternative standard or the proximity of the SEP's expiration, can also justify a difference in the offers that the SEP holder extends to similarly situated implementers for a given portfolio of SEPs.

4. Summation

The SEP holder might have legitimate justifications for making different offers to similarly situated implementers. For example, if the SEP holder faced financial distress when it made a particularly favorable offer to an implementer, or if an implementer used delaying tactics to negotiate a more favorable license with the SEP holder, or if a material change in market conditions has occurred since the previous implementer completed its license negotiation, then the differential treatment might be justified. The court should scrutinize the proffered justification to determine whether the differential treatment rationally advances a legitimate interest or violates the nondiscrimination requirement of a given FRAND or RAND commitment.

Conclusion

Legal disputes between SEP holders and implementers regarding FRAND or RAND royalties for SEPs have increasingly focused on the meaning of the nondiscrimination requirement contained in a FRAND or RAND commitment. However, as of August 2017, there is no agreement on the precise duties arising from such a requirement. The legal and economic literature has proposed divergent, and mainly normative, interpretations of the nondiscrimination requirement. Some commentators say that the nondiscrimination requirement prohibits the SEP holder from excluding individual implementers from using its SEPs, but that the requirement does not limit the terms and conditions that the SEP holder may offer to different licensees. Others say that the requirement imposes on the SEP holder a duty to offer similar terms to similarly situated implementers—although, even then, there is no agreement on how to implement the "similarly situated" construct in practice. The most misguided and unhelpful interpretation in that literature comes from economic scholars who contend that the nondiscrimination requirement imposes on the SEP holder the duty to create and maintain a "level playing field" among the SEP holder's licensees. The majority of these proposed interpretations rest on normative expressions of what the nondiscrimination requirement *should* be, as opposed to positive principles of what

over time. Waiting to practice the standard until the expiration of the SEPs is no longer a plausible noninfringing alternative for the implementer. In that case, the terms and conditions to license a given portfolio will, all else equal, remain constant over time.

that requirement *is*. Thus, they are limited in their ability to guide a court's interpretation of the nondiscrimination requirement in the FRAND or RAND commitment at issue in a given dispute.

If American law controls the interpretation of the obligations arising from an SEP holder's FRAND or RAND commitment, there exists a rich positive jurisprudence on nondiscrimination that provides common principles that can aid a court's interpretation of an SSO's nondiscrimination requirement. Those principles, which are consistently applied across various fields of law, suggest that evidence that the SEP holder has treated similarly situated implementers differently is necessary but insufficient to prove that the SEP holder has violated the nondiscrimination requirement of a FRAND or RAND commitment. The court must also examine whether the SEP holder had a valid justification for the differential treatment of similarly situated implementers. Economic analysis can help a court to determine whether (1) the claimant is situated similarly to other implementers, (2) the SEP holder has treated the claimant differently, and (3) a valid justification exists for any differential treatment. A finding of impermissible discrimination is supportable only when the SEP holder lacks a legitimate justification for the disparate treatment of similarly situated implementers.