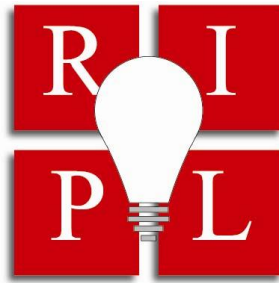


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DAMAGES CONTROL: RETURNING ROYALTIES TO THEIR REASONABLE ROOTS

ADAM FRIEDMAN

ABSTRACT

Calculating patent damages can be a costly and difficult process for litigants. Because of the requirement that damages not fall below a reasonable royalty, there has been substantial focus on how to determine what a reasonable royalty is. This article examines the history of the doctrine and the policies underlying its existence. Due to conflicting strains of the doctrine which serve distinct but separate policy goals, the article proposes that federal judges separate the two strains into distinct and independent bases for recovery. By doing this the courts will be able to expand and refine the two fundamentally different theories without needing to reconcile contradictory public-policy purposes.

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ROOTS

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ADAM FRIEDMAN*

I. INTRODUCTION

A patent-holder files suit, finishes discovery, and manages to win on the issues of infringement as well as damages. Happy as can be, the attorneys begin to uncork the champagne and celebrate, only to find their client cannot collect anything yet because they didn't prove damages 'well enough.' The firm followed the law, bringing in evidence to meet the long list of factors set out in *Georgia-Pacific*,¹ hired experts,² found licenses,³ did everything they were all-but told was needed by the Supreme Court in order to obtain their judgment—yet the court came back vacating the damage award because it was too 'speculative.'⁴ The attorneys stand scratching their heads trying to figure out what happened while they scramble to prepare for a new trial on the matter of damages.

Just like any tort, recovery for patent infringement not only requires the plaintiff prove the elements of the claim—a valid patent, and that the accused product infringes—but also requires an evidentiary showing of how much the patent-holder should be awarded.

For patent infringement, all remedies are defined in the statute,⁵ including injunction⁶ and damages awards.⁷ The awards available under the statute are generally divided conceptually into two camps: lost profits and reasonable royalty.⁸

* © Adam Friedman 2016. Adam Friedman 2016. Juris Doctor Candidate, The John Marshall Law School, 2017; Bachelor of Business Administration, Robert Morris University, 2015. I would like to thank my friends and family particularly my parents Corey and Leslie Friedman and my grandfather Robert Schey; without their support and love I would never have come to law school let alone receive the opportunity to write for this journal. I would further like to thank the 2015-16 board for The John Marshall Review of Intellectual Property Law as well as Professor Maureen Collins for supporting me during the process. I would also like to thank Professor Daryl Lim for his class on patents and RIPL alumnus Adam Kelly for inspiring this article with his guest lecture. Finally, I would like to thank Hoover Institution Fellow Richard A. Epstein. We have never met, however your podcasts, interviews, and books on policy and law were largely what inspired me to sit for the LSAT and arrive where I am today.

¹ *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970). The court lays out fifteen factors to consider, drawn from leading cases at the time (see full list *infra* note 22).

² 35 U.S.C. § 284 (2006). The last clause specifically calls for expert testimony to help in determining damages.

³ *Georgia-Pacific Corp.*, 318 F. Supp. at 1120 (factors one and two both specifically reference licenses).

⁴ *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1327 (Fed. Cir. 2009).

⁵ 35 U.S.C. §§ 283-285, 289.

⁶ 35 U.S.C. § 283.

⁷ 35 U.S.C. § 284.

⁸ *But cf. Lucent*, 580 F.3d at 1324 (the court appears to state that lost profits and reasonable royalty analyses are actually separate and distinct from "damages", calling them "*alternative categories of infringement compensation*" (emphasis added) after commenting on damages,

Between the two, lost profits might be considered the “pot of gold” for patent awards because, so long as you can provide sufficient evidence, the primary limit on collectible damages is one of mere causation.⁹ While the causal burdens may be high, the reach of conceivable compensation is broad once the hurdle is overcome.¹⁰ The reasonable royalty, as originally envisioned, might be better called a “consolation prize” and was originally created by the courts to allow for some compensation when a plaintiff won his or her infringement action, but could not meet the evidentiary burdens on the award.¹¹ Despite the policy underlying reasonable royalty, courts in recent cases such as *Lucent* have demonstrated that reasonable royalty awards are anything but automatic, even with a jury award in the patentee’s favor.¹² Even worse, *Georgia-Pacific*, the leading case in reasonable royalty calculations, gives a list of factors that are inclined to fall under *Lucent*’s scrutiny as speculative.¹³ With this in mind, patent-holders and policy-makers will be right to ask, “How do we resolve this tension?”

To explore this question, Part II will lay out the existing law, cases, policies, and standards which are used in addition to some economic considerations that might inform a solution. Part III will analyze the law and policy laid out in Part II and identify key strengths and pitfalls of the system. Additionally, Part III will point out alternative interpretations of the existing law which might not be currently favored.

generally, the previous sentence. This may just be a negligible misstatement, otherwise the *Lucent* court appears to view damages as a distinct category whose analysis differs from lost profits or reasonable royalty theories).

⁹ See *Panduit Corp. v. Stahlin Bros. Fibre Works*, 575 F.2d 1152, 1156 (6th Cir. 1978) (measure of compensation is the actual loss).

¹⁰ See *Minco, Inc. v. Combustion Engineering, Inc.*, 95 F.3d 1109, 1118 (Fed. Cir. 1996) (“the assessment of adequate damages under section 284 does not limit the patent holder to the amount of diverted sales of a commercial embodiment of the patented product.”). As a practical matter, for lost profits the patent-holder can recover just about any economic loss, or even lost economic opportunity which is a causal result of the infringement (assuming they can prove it). So long as there is a pecuniary harm of some form, the patentee shows causation to the infringement, and evidentiary hurdles are overcome, there are no real ‘limits’ to what can be recovered through lost profits.

¹¹ See, e.g., *Procter & Gamble Co. v. Paragon Trade Brands, Inc.*, 989 F. Supp. 547, 600 (D. Del. 1997) (citing *Hayhurst v. Rosen*, 1992 WL 123178, at *13 (E.D.N.Y. 1992) (“[R]easonable royalty . . . is a measure of recovery intended to provide a just recovery to persons who for evidentiary or other reasons cannot prove lost profits or an established royalty.”); see also 7 DONALD S. CHISUM, CHISUM ON PATENTS § 20.03[3] (2015)). Despite the repetition of this principle in many cases, modern reasonable royalty analysis more closely resembles traditional damages in terms of proof than it does some sort of truly lower burden for the instances where evidence is wanting. In many regards, the courts treat reasonable royalties as if they were merely an alternative type of profit which might be lost and must be proven.

¹² See *Lucent*, 580 F.3d at 1324 (“lost profits are not at issue in the present case”). Despite the determination that the award was for reasonable royalty rather than lost profits, the *Lucent* court ruled that the award was not supported by substantial evidence and was therefore impermissible. *Id.* at 1338.

¹³ See *Am. Med. Sys. v. Medical Eng'g Corp.*, 794 F. Supp. 1370, 1394 (E.D. Wis. 1992) (the process is truly artificial); *Tech. Licensing Corp. v. Gennum Corp.*, 2004 U.S. Dist. LEXIS 10604, *1 n.4 (N.D. Cal. Mar. 26, 2004) (the process is an “inaccurate, even fanciful, construct”); *Smith Eng'g Co. v. Eisenmann Corp.*, 2000 U.S. Dist. LEXIS 21803, *14 (C.D. Cal. Oct. 25, 2000) (“necessarily relies upon more than a bit of fantastical abstraction”). Despite the seeming agreement of the courts that there is little grounding in reality for the *Georgia-Pacific* hypothetical negotiation, it is still somehow deemed not to be *speculative* for the court to rely on a *fanciful arbitrary construct* in framing how to determine damages.

Part IV will explore the field of possible resolutions and decide upon a solution. Finally, Part V will conclude, summarizing the strengths of the proposed solution, and why it is preferable to the alternatives.

II. BACKGROUND

In terms of potential awards for recovery, lost profits theoretically outstrip reasonable royalties. Since the turn of the century, reasonable royalties have constituted in the range of eighty percent of all damages awards in patent litigation.¹⁴ Though from 2010 to 2014 the balance has shifted back toward lost profits, it is nonetheless crucial to understand from whence reasonable royalty stems and where it might or ought to go.¹⁵ First, we will look at the statute governing patent damages. Next, we will turn to the most relevant cases dealing with reasonable royalty damages today. *Georgia-Pacific* lays out the factors at the core of reasonable royalty litigation, while *Lucent*, *ResQNet*, and *WordTech Sys.* combine to form a line of cases detailing the quality and fitness required in litigation. Finally, we will turn to economic considerations by looking at the problem of royalty-stacking.

A. Differentiating Damages: The Policy Origins of Lost Profits and Reasonable Royalties.

Patent damages, like all other aspects of modern patent-law, are rooted in the constitution and statutes.¹⁶ The first step when examining damages should be the plain text of 35 U.S.C. § 284, which starts:

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court . . . the court may increase the damages up to three times the amount found or assessed.¹⁷

The modern statute codifies the reasonable royalty approach developed by the courts during the early twentieth century.¹⁸ Lost profits and the related rules and

¹⁴ CHRIS BARRY ET AL., 2014 PATENT LITIGATION STUDY 3 (2014).

¹⁵ *Id.* Lost profits from 2010 to 2014 are up to thirty-seven percent of cases. Noticing that *Lucent* was penned in 2009, and two more instances of the speculation standard being used to overturn awards within a year of the decision, it seems reasonable to suspect that the shift back towards lost profits is due to the arguably increased (or at least clarified) burdens for sufficiently proving reasonable royalty. If the patentee will have to prove-up substantial evidence to support their damages, they might as well go for lost profits which allow a wider range of compensable issues.

¹⁶ U.S. CONST. art. I, § 8, cl. 8; 35 U.S.C. §§ 1-390.

¹⁷ 35 U.S.C. § 284 (2006).

¹⁸ *U.S. Frumentum Co. v. Lauhoff*, 216 F. 610, 617 (6th Cir. 1914) (sets forth the right to recover in absence of evidence of lost profits or established royalty on a concept of “general damages” or “reasonable royalty”).

doctrines, on the other hand, come as a matter of necessity, and the traditional rule that compensation should restore the injured to the condition they would have been in if the infringement had never occurred.¹⁹ The reasonable royalty, understood as a separate category to consider independently of lost profits, was created by the courts in order to allow sufficient recovery for those patent-holders who could not satisfy the evidentiary burdens needed to show lost profits or established royalty.²⁰ Before this development in the courts (and its later codification in the 1952 code), reasonable royalty was merely another avenue to show pecuniary harm which warranted compensation.²¹

¹⁹ See *Yale Lock Mfg. Co. v. Sargent*, 117 U.S. 536, 552 (1886). The “pecuniary condition” analysis here is reminiscent of common-law breach of contract, as the objective is more or less to make the party whole. Given that the patent-instrument could be theoretically construed as a contract between the inventor and the public (through the government), this intuitively makes sense as the basis of recovery.

²⁰ 1-20 CHISUM, *supra* note 11, § 20.03.

²¹ *Hubbell's Case*, 5 Ct. Cl. 1 (Ct. Cl. 1869). Among the first cases to mention reasonable royalties in U.S. patent law is *Hubbell's Case*. This case was brought before the court as a result of a legislative resolution to determine whether Hubbell invented a shell and/or fuse used by the United States government and, if so, how much he should be paid for previous use and how much to award him in exchange for a total transfer of rights to the government. “Reasonable royalty” appears in the case at all due to claimant raising expert testimony on the matter, suggesting it as evidence of the value he should be awarded in the suit for past use. However, Joint Resolution 3d June, 1864, (13 Stat. L., p. 588.) granting the court authority to oversee the matter limited compensation to one hundred thousand dollars. The amount purported by the experts as the amount due under a reasonable royalty theory would have been near two hundred thousand dollars. The court disregarded this number and focused on the lesser mandated maximum reward in the resolution. The resolution, which allowed the case to come before the court, merely stated that the court would award an “amount of compensation [Hubbell] is entitled to receive for the use of the inventions up to the time of adjudication, and for a full and entire transfer of his patents to the United States.” *Hubbell*, 5 Ct. Cl. at 1. It did not prescribe any particular method or theory which would be used to determine the amount. In this way, Hubbell’s attorneys brought up reasonable royalty as essentially a form of profits to which Hubbell was entitled from the government’s use. The court in this case stated, “[t]he actual loss sustained by the patentee is to be measured by the actual profits or benefits received by the infringer.” *Id.* at 31. The court was initially receptive to the idea that the reasonable royalty would be a proper measure for determining the “actual loss” to be compensated. Congress’s resolution regarding the cap on damages, however, tied its hands. This rendered the reasonable royalty analysis essentially moot. Still, it is interesting to note that, at this point in time, the patentee was effectively arguing that the ‘reasonable royalty’ not paid was effectively a pecuniary harm reminiscent of lost profits—the patent-holder was denied the ability to obtain those royalties through license, there was no question of the causal link (once it was shown that he was the inventor), and his argument was proffering evidence to support why he was entitled to those specific damages.

At the time of *Hubbell's Case*, the statute in force stated damages be “any sum above the amount found by such verdict as the actual damages sustained by the plaintiff, not exceeding three times the amount thereof, according to the circumstances of the case, with costs.” Patent Act of 1836, Ch. 357, 5 Stat. 117 (July 4, 1836). The “up to three times greater” dynamic still persists. Courts have clarified that, in the modern statute, it is only to be used for willful infringement. See 35 U.S.C. § 284.

B. Georgia-Pacific: The Fifteen Factor Framework.

While 35 U.S.C. § 284 composes the modern backbone for reasonable royalty recovery, case law has been the vehicle to flesh out the particulars. Fights over evidence embody the focus in reasonable royalty litigation. In what might be called the ‘early years,’ courts determined many individual pieces of evidence which were particularly helpful in assisting the determination of reasonable royalty amounts. These myriad rulings were compiled and pruned to a list of fifteen factors commonly called the *Georgia-Pacific* factors, or *Georgia-Pacific* test.²² These factors amount to facts and circumstances of the market-place which tend to determine the range of

²² *Georgia-Pacific*, 318 F. Supp. at 1120.

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.
4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promotor.
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.
7. The duration of the patent and the term of the license.
8. The established profitability of the product made under the patent; its commercial success; and its current popularity.
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.
11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.
13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.
14. The opinion testimony of qualified experts.
15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

feasible agreements for each party, or which tend to point towards specific values within the feasible range.²³

C. The Substantial Evidence Standard

In addition to *what* kinds of evidence are necessary or useful for finding a reasonable royalty, recent decisions have focused on the *extent* of that evidence's usefulness. Starting with the Federal Circuit's reversal of a jury award in *Lucent*, cases began getting overturned for lack of substantial evidence justifying the jury's damage award at a regular clip for the better part of a year. In short order the Federal Circuit spawned a trilogy which shook loose previous conceptions on what constituted adequate proof for reasonable royalty damages.

1. Lucent Technology

In *Lucent*, the patentee brought into evidence licenses, examples of other lump-sum royalties in the industry, and expert testimony.²⁴ Based on these and other pieces of evidence—including the total market value of the infringing product—the jury returned its verdict to the tune of \$367 million.²⁵ The trial court decided the evidence proffered was substantial enough to support the award.²⁶ On appeal, however, the Federal Circuit disagreed holding that the evidence was speculative in nature, and that speculation cannot substantiate a damage claim.²⁷

²³ See 1-20 CHISUM, *supra* note 11, § 20.07. Chisum divides the factors into two groups, one of which is to determine the possible range of agreements the two parties might come to, and the other would specify or refine the inquiry to more discrete numbers (or at least tend to either increase or decrease the value based on how the factor went). Realistically, the entire list is composed of common-sense outposts of economic information that are informative of the environment and the product itself, both of which are causally related to what price a patentee would be willing to license at, and what price a purchaser would be willing to acquire a license. Taking factor 5 as an example; all else being equal, a licensor will tend to charge more for a license to a direct competitor than some other party. The corollary to this would be that if the licensee is a direct competitor, the reasonable royalty should be greater than if they were not, as this is a proper reflection of the underlying economic reality.

²⁴ *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F. Supp. 2d 1016, 1043 (S.D. Cal. 2008).

²⁵ *Id.* at 1028. The jury awarded \$357,693,056.18 on the '356 patent, and a combined \$10,401,000 between the two infringers on the '295 patent.

²⁶ *Id.* at 1043. The trial court stated in no uncertain terms "[t]he jury's verdict is supported by substantial evidence" with regard to the '356 patent's award. Further, the district court found "substantial evidence supports the jury's award" for the '295 patent. *Id.* at 1058.

²⁷ *Lucent*, 580 F.3d at 1337 (Fed. Cir. 2009) quoting *Garretson v. Clark*, 111 U.S. 120, 121 (1884) ("Evidence must be reliable and tangible, and not conjectural or speculative"). In spite of the seeming consensus that the *Georgia-Pacific* hypothetical negotiation is a fantastical construct, see *supra* note 13, the *Lucent* court had no apparent problem with utilizing the hypothetical negotiation. As the court spent no time addressing the myriad conjectures inherent in the entire proposition of determining what two parties who didn't negotiate would have agreed to be the bargain price each side would accept at the time of the infringement, when neither is apparently allowed to disagree and leave as would be typical in a real negotiation.

2. ResQNet

Not half a year after *Lucent* came *ResQNet*.²⁸ Despite dealing with a slightly different set of factual issues regarding damages,²⁹ the court ultimately turned its decision on the attenuated nature of the proffered licenses which were used for comparison under the first *Georgia-Pacific* factor.³⁰ Similarly to *Lucent*, despite eviscerating several of the proffered licenses in their analysis and concluding that they were too unreliable a measure to justify an increased royalty, the *ResQNet* court did not reverse the admission of the evidence it found insubstantial.³¹

3. Wordtech Systems

Completing a hat-trick of cases decided on very similar grounds on appeal, *Wordtech*³² finds the Federal Circuit once again reversing and remanding a case where the plaintiff's primary evidence was licenses the court deemed incomparable, leaving the award unsupported by sufficient evidence.³³ In looking at the lump-sum licenses upon which the verdict was based, the court seemed to imply that, without additional evidence to show how and why the previous lump-sum licenses compare to the license at issue, it would look skeptically on any award that results—even one as relatively 'modest' for a patent suit as this case.³⁴

²⁸ *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010).

²⁹ *Id.* at 868. At issue was a running royalty, rather than a lump sum. The award itself was not necessarily at issue. Instead, it was the percentage rate and methodology which were in question.

³⁰ *Id.* at 870. The court went as far as to say that the other factors had no weight in this case, and that Dr. David's calculation, based on noticeably different licenses rather than the "straight licenses" which were in evidence, rendered his testimony unreliable. Though, it is not clear whether the court believed the other factors had no weight because the other evidence available in this specific instance was weak, or whether it was the nature of the product and the fact that the patentee had actually licensed it in the past.

³¹ *See id.* at 872. The Federal Circuit seems to wag its finger at the lower court by quoting *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161 (Fed. Cir. 1991), all but saying "just because only one side had expert testimony doesn't mean you should have relied on it." *Id.* at 1168. The court later emphasized the point by calling it error to have increased the royalty based on the licenses which bore little relation. But no statement was made about whether such attenuated licenses should even have been allowed in the first place if they were so irrelevant as to be error for giving them the weight one would expect of them (to increase the royalty rate).

³² *Wordtech Sys. v. Integrated Networks Solutions, Inc.*, 609 F.3d 1308 (Fed. Cir. 2010).

³³ *Id.* at 1320 (citing *Lucent*, 580 F.3d at 1330). Unlike *ResQNet*, the court once again examined the differences between running and lump-sum royalties, and why evidence of one did not necessarily provide insights as to the other.

Based on cases such as *Lucent* and *Wordtech*, it would be unsurprising if the Federal Circuit might someday adopt a *per se* rule that, without defining the relationship between the licenses brought in as evidence and the case at issue, any award based on lump-sum licenses is necessarily invalid as speculative.

³⁴ *See Barry et al.*, *supra* note 14. Despite trending downward in recent years, the median patent damages award is still above four million dollars.

D. Royalty Stacking.

The underlying policy consideration in the *Lucent* line of cases is one of preventing overcompensation of patentees. Royalty-stacking adds an important look into the problems which are potentially caused if overcompensation runs rampant.³⁵ Even small overcompensation to component patents can quickly lead to an infringing product needing to pay out more in royalties for all of its components combined than the actual total value of the product itself.³⁶ The recent focus of patent damage litigation over reasonable royalties rather than lost profits accentuates these concerns.³⁷ The Federal Circuit has turned its eye to the issue, saying that considerations of royalty stacking *are* appropriate in hypothetical negotiation analysis for reasonable royalty calculation.³⁸ All together we can see there are two main schools of thought which have shaped what constitutes a “reasonable royalty.” The first line of thought is articulated by Judge Denison. The Denison framework acts as remedial recovery when infringement has been proven, but damages have not or cannot be. The alternative looks at the reasonable royalty in much the same manner as lost profits, and requires litigants to prove both infringement and the extent of their damages. In the latter formulation, cases like *Lucent* are instructive for the limits of what evidence is sufficient to prove the damages asserted.

III. ANALYSIS

To understand what a reasonable royalty is, case law’s lists of factors or considerations are insufficient. The starting point truly goes back to the damage theories themselves, and how they seek to serve the competing policy goals embodied in § 284.³⁹ To do this, we must look at the landscape in which these theories sit

³⁵ Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007). Royalty stacking is where a product incorporates many technologies, and attempting to get free of patent litigation through royalties, requires a large number of licenses to be “stacked” together to determine the total burden imposed.

³⁶ *Id.* This is easily and intuitively illustrated by simply taking a basic hypothetical case to a relative extreme. A product with one hundred and one patented components. If each component manages a royalty of “just” one percent each, the total royalty burden on each product sold will be greater than one hundred percent of the price of the product. It is thus easy to imagine how even a small overcompensation over a large number of patented components could easily eat up more than the entire profits of the infringer.

³⁷ *See id.* at 2012-2013.

³⁸ *See* *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 871-72 (Fed. Cir. 2003), *rev'd on other grounds*, 545 U.S. 193 (2005).

³⁹ *Compare* Lemley & Shapiro, *supra* note 35, at 1993 (which explores the problems of overcompensation) *with* *Procter & Gamble*, 989 F. Supp. at 600 (acknowledging the purpose of the reasonable royalty theory as to ensure compensation to patent holders (*citing* 7 Donald S. Chisum, *Chisum on Patents* § 20.03[3] at 20-159)). In broad terms, even the simplest scheme for damages must at the very least consider two factors to balance and weigh. Insufficient compensation systemically means that ‘wrongdoers’ can effectively appropriate value of others’ at a net-gain even after suit. Overgenerous compensation will punish ‘wrongdoers’ beyond what their activity warrants, this will cause potential ‘wrongdoers’ to refrain from such activity even when doing so would be a net-gain after proper compensation is given. In the former case you have inefficient

relative to one another. Overall, it appears that there are two great currents driving the law of reasonable royalty: under-compensation and overcompensation. First we will look at compensation generally, to have a baseline. Next we will look at how concerns of under-compensation ultimately created the reasonable royalty framework as explained by Judge Denison.⁴⁰ Next we will look at how overcompensation concerns (typical of lost profits analysis) shape the modern framework. Finally we will look at the history, both statutory and case law, to determine where the fault lines are which result in the confusion present today.

A. Compensation; The standard.

Looking at the statute,⁴¹ it is important to note that the primary principle for recovery is merely “compensation.” While this is typically divided into either lost profits recovery or reasonable royalty recovery,⁴² it is worth noting that so long as the recovery is compensatory in nature the statute seems to suggest it ought to be recoverable even if it isn’t strictly a “royalty” or “profit” which is being compensated.⁴³

It is likely better to describe the different theories of recovery not by the form they take, or even the policy objectives behind them, but rather the evidentiary burdens the theories require.⁴⁴ In this manner of examination, lost profits is the most intuitive of the standards and thus should be examined first.

activity being promoted by allowing the offset of some costs or potential costs, in the latter you have efficient activity being punished by introducing additional costs.

⁴⁰ U.S. *Frumentum Co. v. Lauhoff*, 216 F. 610, 616-618 (6th Cir. 1914).

⁴¹ 35 U.S.C. § 284 (2006).

⁴² *Georgia-Pacific*, 318 F. Supp. at 1120 (S.D.N.Y. 1970) (1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty). Though an “established royalty” is technically its own category of recovery, the requirements to prove it render it disfavored. Further, through reference in the first *Georgia-Pacific* factor, the established royalty question can be seen as more or less incorporated into the Reasonable Royalty analysis.

⁴³ See *Minco, Inc. v. Combustion Engineering, Inc.*, 995 F. 3d 1109, 1118 (Fed Cir. 1996). In practice, this may be a moot point—the broad recovery under lost profits is very likely sufficient to cover any “non-profit” costs or harms which are in need of compensation due to the infringement.

⁴⁴ Compare *Hubbell’s Case*, 5 Ct. Cl. 1 (Ct. Cl. 1869), with *U.S. Frumentum*, 216 F. at 617 (these two cases exemplify the two branches of thought when looking at patent recovery, compensation for actual loss in *Hubbell*, and compensation despite lack of proof of “actual” loss in *U.S. Frumentum*). At their core all of the damage theories which have existed in patents all amount to different manners of fulfilling the objective of compensating the patentee. Whether it is lost profits, established royalty, or reasonable royalty, the basic idea in patent recovery is “these are earnings or economic value the patentee would have obtained/retained if there had been no infringement; therefore, they are entitled to that amount.” Where the real differences between the theories occur is in the burdens of proof to successfully acquire the purported sums. Part and parcel to the change in evidentiary burden is also a reduction in the breadth of recovery. Since the objective is always compensation only those compensable ‘items’ which can be shown or presumed at the lower burden without running into overcompensation concerns will be obtained by using such a theory.

1. *Lost Profits and Causation.*

The standard for proving Lost Profits is exemplified in the *Panduit* “but-for” test.⁴⁵ The analysis revolves around simple causation: any economic harm which was caused by the infringement is compensable.⁴⁶ The “but-for” test here stands as a gatekeeper to prevent overcompensation, and to ensure that recovery is targeted at the correct party.

Even if, in the abstract, a harm did occur and even if it were properly attributed to the infringer, it may not be compensated unless it is *also* shown that the harm would not have otherwise occurred absent the infringement.⁴⁷ Once causation is shown, the risks of overcompensation or of the infringer being forced to compensate injury for which some other party is the source are substantially reduced.⁴⁸

2. *Established Royalty.*

Compared to general economic harm, courts quickly recognized a “separate” category of recovery with slightly different evidentiary burdens. The ‘established royalty’ works on a very simple premise: if the business has been licensing this product at a given price/profit, then any infringement can be presumed to have caused injury to the amount which the infringer would have paid under the existing royalty rates.

If the infringer had chosen not to infringe, then it is intuitive that they would have likely licensed the technology,⁴⁹ and the price at which the technology had been

⁴⁵ *Panduit Corp. v. Stahlin Bros. Fibre Works*, 575 F.2d 1152, 1156 (6th Cir. 1978).

⁴⁶ *See King Instruments Corp. v. Perego*, 65 F.3d 941, 952 (Fed. Cir. 1995).

⁴⁷ *Id.* In theory, since the policy is to compensate the patentee any harm that actually occurs ought to entitle the patentee to damages. However, in practice, evidentiary burdens exist to prevent overcompensation. The test of causation is ultimately a policy-decision on the part of the courts. At a purely abstract level, you could divide all harms that occur into two camps—harms which are demonstrably caused by the infringement, and those which have a more tenuous relationship. Tenuous harms by their nature are less definite, less concrete, and therefore more likely to result in overcompensation. Any harm which can be demonstrated to be caused by the infringement by definition will not be overcompensation (as the demonstration of the causation proves the entitlement to at least that amount). Intuitively, it makes sense to ask of a plaintiff claiming that a harm is demonstrably caused by the infringement to “prove up” this claim by actually demonstrating the causal link. Thus the but-for causation test both sets the line drawn on what can be recovered, and offers a mechanism to ensure the line isn’t crossed.

⁴⁸ *See Lemley & Shapiro*, *supra* note 35, at 1993 (examining the net effects of even small overcompensation in the patent context). It is still possible that the value of the harm claimed could be improperly valued at too high a rate. But this is a risk that likely cannot be eliminated. The causation test may not be perfect at preventing overcompensation, but it does reduce the risk of compensating injury that did not even occur, or injury for which the defendant is not the proper target and for which the plaintiff must seek recovery elsewhere or not at all.

⁴⁹ *See Georgia-Pacific*, 318 F. Supp. at 1120-1121. In the context of established royalty, the previous licensing of the technology evidences that companies wishing to use the patented technology would seek and acquire a license. In this sense the established royalty acts to show both how much the patentee would receive and how much a licensor would tend to be willing to pay. It also shows that licensing the technology is a likely method by which market-participants would acquire access to the technology, suggesting that revenues of this kind were surely lost. In other

licensed previously is indicative of what market-actors are willing to pay for the license.⁵⁰ The questions of causation mostly fall away in this framework, and instead the inquiry is whether a royalty has actually been established, or whether some other consideration should increase or decrease the established rate.⁵¹

B. Under-compensation, birth of the Denison Reasonable Royalty.

In the early twentieth century, however, some courts noted the difficulty a patentee can have in meeting the evidentiary burdens of the causation test.⁵² Courts began recognizing the idea that just because a patentee was unable to show causal harm did not mean they should go utterly uncompensated. It was at this point that a “general damages” theory, with a lower—arguably nonexistent—evidentiary threshold came into use.⁵³ Eventually this form of recovery was coined as “reasonable royalty,” even though some (like Judge Denison) readily acknowledged it as something of a misnomer.⁵⁴ In some sense, this form of analysis might be viewed as a kind of ‘heightened’ nominal damages.⁵⁵

words, if other market-participants were willing to license, then surely *this* firm would have also licensed if forced to participate in the proper marketplace rather than infringe.

⁵⁰ *Id.* On some level, this is tautological or reflexive in nature. “If market actors are willing to pay X, then the price a market actor would be willing to pay is also X.”

⁵¹ See *Rude v. Westcott*, 130 U.S. 152, 165 (1889). The elements of the test in this case all go towards establishing whether the pre-existing royalty ought to be used as a basis for recovery.

⁵² See *Georgia-Pacific*, 318 F. Supp. at 1120. The first few factors address existing royalties, but the remaining majority of factors address other questions relating to the status of the market in question and the relationship of the parties. Of course some technologies are not as easily susceptible to licenses, or business circumstances might make the selling of licenses impractical, or even foolish—such as the case when the only reasonable licensor would be a direct competitor.

⁵³ See *U.S. Frumentum*, 216 F. at 617. Taken to its logical extreme, if the purpose is to allow recovery when a plaintiff cannot meet the evidentiary burdens of lost profits, then it might even stretch to a plaintiff who brings or has no evidence at all in regard to damages, but has successfully proven infringement.

⁵⁴ *Id.* Judge Denison noting:

This damage or compensation is not, in precise terminology, a royalty at all, but it is frequently spoken of as a “reasonable royalty”; and this phrase is a convenient means of naming this particular kind of damage. It may also be well called “general damage”; that is to say, damage not resting on any of the applicable, exact methods of computation but upon facts and circumstances which permit the jury or the court to estimate in a general, but in a sufficiently accurate, way the injury to plaintiff caused by each infringing sale.

The entire thrust of this non-royalty is better viewed as an exercise of the court opting to use its equitable powers to ensure a sufficient recovery to further the patent-objective of innovation.

⁵⁵ *Cf. Id.* at 616-618. Nominal damages are traditionally token amounts, the understanding of the nature and value of patent-rights means courts are willing to go further than just a token gesture, even if in some non-patent contexts a similar insufficiency of evidence would not warrant such action.

C. Overcompensation and the “Lost Profit” Royalty.

In addition to the common-law created term of art “reasonable royalty” employed by Judge Denison, the phrase has also been used to refer to instances where the patentee is, at heart, claiming a form of lost profits. These claims essentially state that they would have profited to the amount of a royalty, and while there isn’t an “established” royalty to use, they ought to still be entitled to a “reasonable” royalty.⁵⁶ Unlike the Denison reasonable royalty, this “reasonable royalty” framework is talking about actual potential royalties in the context of income which was not realized due to infringement (which would be the same basic framework as lost profits).

1. Resolving the ambiguity.

In 1952 “Reasonable Royalty” was codified into the damages floor for recovery.⁵⁷ It was not, however, explicitly stated whether this was supposed to be a reference to the Denison reasonable royalty, or the more basic “reasonable royalty” which is merely a form of lost profits.⁵⁸ Cases which have become the standard for reasonable royalty analysis do not actually clear this up.⁵⁹

⁵⁶ *Cf. Panduit*, 575 F.2d at 1159. With the basic underlying premise being that if the amount were reasonable, then a market-actor would have been willing to pay it. If a market-actor would have paid it, then it is profit the patentee would have received if not for the infringement.

⁵⁷ 35 U.S.C. § 284 (2006).

⁵⁸ *Id.* While not explicitly stated in § 284, it is certainly arguable that when considered on the whole, the structure, wording, and context heavily suggest that it is the Denison Royalty which was intended to be codified. “When damages are not found by a jury the court *shall* assess them.” *Id.* (emphasis added). This might be most properly read as an instruction that when a jury does not come up with a verdict awarding damages (or when the jury does not find that the evidentiary hurdles on damages have been overcome) the court has a duty to assess an award itself. This is consistent with the “nominal-plus” framework the Denison Royalty intends to create. The last clause stating “[t]he court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances” seems particularly geared towards the idea that it may be the court itself, not the trier of fact, who may be assessing the award and allows for the court to rely on this expert testimony, consistent with the Denison Royalty. *Id.* Further, the addition of this clause would be redundant if it was intended to be used in the alternative framework. Relevant evidence in the form of expert testimony would already be allowable for attempting to prove damages to the trier of fact. Combined, the instructions for the court to act and the allowance of the court to receive expert testimony heavily favor a reading of the statute codifying the Denison Royalty (which is in fact not “a royalty at all”). *See supra* note 54.

⁵⁹ *Georgia-Pacific*, 318 F. Supp. at 1120. *Georgia-Pacific*’s factors are equally useful for a trier of fact determining an amount to award a plaintiff who failed to bring sufficient evidence supporting a lost profits theory under a Denison Royalty by guiding them through what is more like a lost profit framework. In the latter case, the fifteen factors are quite useful to illuminate market considerations that would ultimately determine the price of a royalty agreement. In the former case, they provide guideposts for the court or jury to consider when deciding what kind of award to grant. While Denison Royalty analysis is not limited to a hypothetical negotiation framework, determining what *would* have been a reasonable amount for a market-participant to pay to avoid infringement is certainly informative. Despite the acceptance of this framework, it was not stated which of the two above purposes in which it was intended to assist. Under the traditional rule that a statute using a common law term retains its common law meaning when not defined in the statute, it is reasonable to infer that in 1952 it was supposed to be a Denison Royalty. As with any

Of the cases on the subject, it is arguably *Lucent*, its progeny, and the various surrounding and related rules which might shed the most light on the matter. Read narrowly, *Lucent* may be less about substantive patent damages law and more of a reflection of the court's distaste for patent litigants attempting to inflate the damage award by use of the previous-license factor. Read broadly, *Lucent* might settle the question of which definition of reasonable royalty to use by effectively stating that the "lost profits" royalty framework is correct.

2. *Lucent* read Narrowly.

In *Lucent*—and the two cases following it, *ResQNet* and *Wordtech*—particular attention is paid to the fact that the licenses presented by the plaintiffs in each of these cases were not comparable to a license which would come out of the hypothetical negotiation. While it is far from explicit, it is entirely possible that these cases represent the court taking a stance against the practice of throwing numbers and agreements around without further analysis to dissect and parse out exactly how those licenses relate to the case in dispute, striking down awards both large and small to hammer home the point. But if this is not merely a string of cases used by the court to make examples out of particularly notable cases, then *Lucent* has far broader implications.

3. *Lucent* read Broadly.

Assuming that the *Lucent* line of cases does not merely represent the Federal Circuit attempting to quash what might have previously been sharp practice, it creates some interesting results. Read broadly, it is possible to derive from *Lucent* that the proper framework for reasonable royalty *must* be the "lost profits" royalty approach. If reasonable royalty was to mean the Denison Royalty, then the first objection the court should have is with it being sent to the jury at all. The Denison Royalty is not actually a factual question of "what royalty would have been factually reasonable," but rather the court exercising its power to grant an award when evidence would not warrant it. Second, if it was the Denison Royalty being examined, the proper analysis should not have been whether there was substantial evidence, but rather whether the award granted was an abuse of the trial court's discretion.⁶⁰ Since the entire purpose of the Denison Royalty is to eschew the need

other common law term, however, it is the prerogative of the courts to decide in what fashion its meaning/coverage will expand, change, or contract.

⁶⁰ *U.S. Frumentum*, 216 F. at 617. The Denison Royalty is designed to apply when evidence is wanting. If this is true, then it is by its very nature not a traditional factual question for the jury, which would require substantial evidence, just like lost profits. The most extreme circumstance where the Denison Royalty might apply is where the plaintiff chooses not to, or is incapable of bringing any evidence to bear as to the 'value' they have lost. In such a circumstance, *U.S. Frumentum* correctly calls for the court to simply use its discretion in evaluating the case as was presented for infringement and decide on an amount which is proper in light of the circumstances as they have been illuminated.

for evidence entirely,⁶¹ it would be utterly inconsistent for the *Lucent* court to have both been ruling regarding a Denison Royalty while simultaneously basing its decision on evidentiary sufficiency.

IV. PROPOSAL

Even *Lucent*, read broadly, does not appear to go so far as to resolve the ambiguity. Instead, it embodies it. There are fundamentally three approaches to solve the ambiguity of whether the Denison Royalty, or the “lost profits” royalty should be used by courts in a reasonable royalty analysis. We will examine each in turn, before deciding on the option which appears to best meet the underlying policy considerations. First, the court⁶² can eliminate one of the doctrines, leaving only one to apply.⁶³ Alternatively, the court could try to blend the two together into a single doctrine. Finally the court could segregate and differentiate the two, allowing each to exist as independent, but conceptually related, doctrines.

A. Elimination

The court’s first option is to simply pick from one of the two concepts of reasonable royalty and eliminate the other.⁶⁴ This approach would simplify the doctrine by deciding conclusively whether to favor the Denison policy of ensuring that recovery is always available for a patentee who proves infringement, or favoring the traditional evidentiary policy of avoiding overcompensation of litigants.⁶⁵

This simplification, however, comes at a systemic cost as elimination will necessarily entail undesirable consequences—as each of the two forms exists to combat particular undesirable consequences. Deciding which of the two policies will

⁶¹ *Cf.* 35 U.S.C. § 284 (2006). Though it is arguably not *needed*, expert testimony may still be provided to persuade the judge to exercise discretion in favor of one party or the other.

⁶² *See* *Marbury v. Madison*, 5 U.S. 137, 177 (1803) (discussing the principal that every instance of applying facts to a statute requires interpreting the text of the statute). As the current doctrinal layout was created by the courts interpreting § 248, it is clearly within their power to reverse or change course. In the alternative, Congress could of course resolve the issue through legislation. It is a cleaner fix for the court to handle this mess itself, because whatever fix Congress provides may lead to the same result as the present case due to the underlying issue having been caused by differing interpretations and applications of the statute in the first place.

⁶³ *Id.* Doing so is explicitly necessary. In the case of the “lost profits” royalty surviving, it can be argued that cases such as *Lucent* implicitly abrogate the Denison Royalty by having established precedent inconsistent with the Denison Royalty policy objectives and concerns. If the Denison Royalty is to survive, then the existing inconsistencies posed by cases, such as *Lucent*, need to be overturned in order to harmonize the doctrine and eliminate its compensatory analysis.

⁶⁴ *Id.* Since the ultimate matter is one of determining how to interpret 35 U.S.C. § 284’s “minimum” award, the remaining theory will constitute the amount which an award shall not be below.

⁶⁵ *See* Lemley & Shapiro, *supra* note 35, at 1993. This policy limiting or eliminating the potential harm of royalty stacking, or other negative consequences inherent in systemic overcompensation.

win in all cases forces upon the public the harms the losing variation intended to alleviate.⁶⁶

Additionally, in considering which policy objective to favor, the court may not be entirely free to pick from the two options and will be forced to decide the matter by fighting over the meaning and definition of the statute, rather than on the policy merits of the doctrines.⁶⁷

B. Blended

In order for the system to alleviate both Denison sufficient compensation and “lost profits” overcompensation concerns, the court might try and combine the two doctrines into a single reasonable royalty analysis. At first blush, however, it is unlikely the two doctrines can truly be reconciled.⁶⁸

On one hand, “lost profits” royalty analysis truly focuses on the factual question of reasonability and the policy concern of ensuring the infringer is not paying more than is rightly owed to restore the patentee.⁶⁹ On the other, Denison Royalty analysis forgoes any concern for the defendant, eschewing a factual evidentiary basis in favor of court discretion and experience to achieve the desired outcome. In order to give any effect to the Denison framework, it would be absolutely necessary to keep the question away from the jury, because the jury is only ever a trier of fact and the evidence-lacking Denison framework will never be appropriate for the jury. It should be accurate to say the Denison framework can *only* truly come into play when the evidence is insufficient, inconclusive, and there is no way for a jury to award any amount of damages, aside from speculation. At this point, it is the duty of the judge to exercise his or her discretion in determining what the appropriate award is given the facts that are available. The two theories require different presumptions on the

⁶⁶ Cf. ANTONIN SCALIA & BRIAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* 107 (2012) (relevant here is the implication of the risks faced by excluding entire categories). Intuitively, if there are competing policy objectives, then by stating one policy wins over the other in all cases will result in the harms of the eliminated doctrine having little or no means of alleviation.

⁶⁷ 35 U.S.C. § 284 (2006). To the extent that the legislature has spoken on the subject, the courts are relegated to merely interpreting and applying the statute. The gap filling power of the court might allow them to decide that one or the other doctrinal variation will be eliminated. But the court’s hands are tied, even when picking between them, to the extent that the court is obligated to give effect to the statute even if they disagree with the policy or outcomes. Despite the court’s justified concern for overcompensation in recent years, the structure of the statute and history of the term “reasonable royalty,” as used in the patent context when codified, would lean heavily toward the Denison framework.

⁶⁸ Compare *U.S. Frumentum*, 216 F. at 616-618, with *Lucent*, 580 F.3d at 1327 (these cases exemplify many of the arguments and underpinnings which are inherent in the two competing theories). If the two doctrines cannot be merged in a coherent fashion, then it is not only likely that attempting to merge them will not resolve the existing problems, but that new issues and confusion will emerge in the process of trying to do so.

⁶⁹ See *Lucent*, 580 F. 3d at 1325. In this context, the hypothetical negotiation becomes a tool for the jury to assess and weigh the facts of the case to create a logical chain which results in both the amount and form of the royalty. Since lump-sum and running royalties entail different distributions of risk between the parties, it will thus be necessary for the jury to not only consider the amount of the award, but also the form of the award.

amount of evidence. It is therefore difficult to see how a court would manage blending the two in any coherent fashion.

C. Segregating the theories

Eliminating one of the alternatives leaves only one of the two policy objectives fulfilled, and blending the two appears to lead to instability. Splitting the two theories into separate analyses seems to allow retention of most of the benefits and eliminates most of the flaws. If this is possible, there can be a principled manner to distinguish between the two forms of reasonable royalty and keep them doctrinally separate. To find these differences it is necessary to: (1) categorize them; (2) define the scope each should have; (3) identify which parts of the existing reasonable royalty analysis belong in each of the two groups; (4) identify under what circumstances each should be applied to remain consistent with their policy objectives; and (5) identify what the resulting legal requirements of proof should be for each.

1. “Lost Profits” royalty

The “lost profits” royalty essentially amounts to an acknowledgement of the following syllogism: minor premise, a royalty which is in-fact reasonable is more likely than not an amount which would be accepted by a market participant and therefore earned by the patentee in absence of infringement; major premise, any amount the patentee would have earned in-fact, but which was not earned due to the infringement is compensable under § 284; conclusion, a royalty amount which is in-fact reasonable is compensable under § 284.⁷⁰

This theory relies on factual assertions—the royalty is reasonable—and it should only be used in cases where the plaintiff is arguing that the defendant would have accepted the proffered royalty amount. Since the plaintiff is trying to prove the factual assertion as to the royalty’s reasonability, the burden is wholly upon them to proffer sufficient evidence to meet the preponderance standard, as well as show that the form of payment desired (running or lump-sum) would have been accepted at the rate/amount argued. These scenarios are where *Lucent*, *ResQNet*, and *Wordtech* have their greatest force. These cases illuminate the need for substantial evidence for both the type and amount of the royalty to be compensated and the requirement

⁷⁰ *Cf.* *Yale Lock Mfg.*, 117 U.S. at 552. The basis for allowing a price reduction analysis is just as relevant for royalties. If a patentee were to go onto the market and collect royalties on his patent, these would be a profit to him. By infringing the patent, the infringer denies the patentee this particular form of profit. By its nature, a “reasonable” royalty must be one which those in the market would be expected to pay. Thus, once it is established that a given royalty amount is reasonable, it is conclusive that a “willing participant” would have paid it. By definition, a royalty, under the *Georgia-Pacific* hypothetical analysis, is reasonable only if under the circumstances both parties would have agreed to the license terms in form and amount. If the price is unreasonable it will not be bought, but the license will be purchased so long as the price is reasonable. *Georgia-Pacific* is particularly illustrative in determining this issue. All of the factors in the test go toward proving up the price the patentee would demand or require to license its product—charging a premium when licensing to a direct competitor—or determining how much a licensee would reasonably be willing to pay—existing royalties showing what licensees pay.

that the evidence presented be similar enough to the case at hand to allow a jury to reasonably reach the concluded amount. In these cases, the proper appellate review would be that typical for other damages cases. In particular, that means reviewing the sufficiency of the evidence relative to the result the jury reached. The policies furthered here are § 284 compensation—normally governed by lost profits—and the desire to prevent overcompensation of plaintiffs.

2. Denison Royalty

The Denison Royalty is premised on the notion that even in cases where evidence is wanting or insufficient, it is still in the public interest to award a sum commensurate with both the circumstances and the policy of ensuring patents remain a valuable enough incentive to spur innovation.⁷¹ For this reason, when a jury cannot find compensable damages for want of sufficient evidence, the court itself must assess an award to grant the plaintiff. The decision of how much to award must be an exercise of the court's discretion. This comports with § 284's specific allowance of expert testimony for this purpose, which gives the parties the ability to assist the court in exercising this very narrow form of discretion.⁷² Given the method of determination, as well as the policy behind the Denison Royalty, the proper standard for reviewing the decision of the judge should be one of abuse of discretion.⁷³ This Denison Royalty should act as a 'residual' recovery—only applicable when other forms of recovery prove unavailable or insufficient. This should be viewed as the form of recovery which § 284 states the award shall not "be less than."⁷⁴

With the lines of the split doctrines in place, it becomes apparent that *Georgia-Pacific's* fifteen factors play a useful role in both: each factor points to a specific fact which, if proven, provides grounds upon which a jury could inform its decision when determining a lost-profits royalty.⁷⁵ Further, these same factors provide a helpful list of economic and factual considerations for judges exercising their discretion to determine a Denison Royalty, giving both guidance to district

⁷¹ See *U.S. Frumentum*, 216 F. at 616-618. It is not expressly addressed whether cases entirely lacking in damages evidence can obtain an award. But as a policy matter this would actually be consistent with the purposes of the doctrine. If one considers what would hypothetically happen, the need for awards, even without evidence becomes clear: in a world where a successful patent owner in an infringement action cannot obtain damages, or only nominal damages, the patent-right would be diminished in worth for many inventors. Inventors may stop seeking out patents, resulting in slower technological progress due to such inventors not disclosing their methods for others to build upon. In the case of patent trolls, or other non-practicing entities, who still wish to enforce their rights, the Denison Royalty is the mechanism they ought to be forced to use.

⁷² 35 U.S.C. § 284 (2006) (stating that the court may hear expert testimony when making its determination).

⁷³ *Id.* See also *U.S. Frumentum*, 216 F. at 616-618. This renders decisions like *Lucent* fundamentally immaterial to Denison Royalty analysis, because it can be readily presumed that "substantial evidence" will not have been presented—the entire theory is built to enter into the equation only when this is so (or in the *rare* case where the amounts a jury did find compensable were below even the amount a court would have awarded via its discretion).

⁷⁴ 35 U.S.C. § 284 (2006).

⁷⁵ *Georgia-Pacific*, 318 F. Supp. at 1120; see *supra* note 22.

courts for the initial calculation and guidance to appellate courts when reviewing whether the calculation by the district court was an abuse of discretion.

V. CONCLUSION

The jurisprudence surrounding patent “reasonable royalty” has resulted in both policy and result uncertainty due to the term being used in two distinct, but correct, manners without explicitly stating the different uses. While the court has multiple choices available to resolve the issue, the best choice is to segregate the two doctrines and force litigants to specify which theory they are arguing. Rather than eliminating one theory, or attempting to blend them both, separating the two pushes the policy concerns of each form of the doctrine in the desired direction. Additionally, this choice allows both full recovery and the opportunity for a jury to assess the facts under a compensation theory. This step also allows the court to retain residual recovery under the court’s discretion to further patent policy objectives. This division gives a more full effect to § 284 than removing either theory, and enables more streamlined and consistent application of the law than the blended approach. Finally, the segregated approach shifts much of the burden policy concerns and likely extent of recovery to the litigants rather than the court. Any balancing of contradictory policy objectives will inevitably have its hiccups. It may not truly be possible to obtain the ‘best’ of both worlds. But dividing these theories of recovery allows them both to grow and promote the good each theory has the potential to achieve.