

A Case Against the Entire Market Value Rule

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I. Introduction

Throughout the history of patent law, courts and juries have struggled to determine the value of a single component in a multifaceted device or process when that single component alone is found to have infringed a valid patent.¹ Given the intricacies

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1. See, e.g., *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604, 617 (1912) (“[Judge Lindley] said in *Siddell v. Vickers*, 9 Rep. Pat. Cas. 162, that there ‘was no form of account more difficult to work out tha[n] an account of profits.’”). As a prelude, note the explicit reference to profits as opposed to the difficulty involved in deriving a value attributed to a certain

inherent in electronic devices today, a large number of patents often cover a single product.² The difficulties in placing a value on a single infringed patent incorporated in such a device have become apparent in several recent cases before the United States Court of Appeals for the Federal Circuit.³ These cases have muddled the rules applied in determining patent-infringement damages. This Note intends to challenge the logic of applying what has become a court-adopted evidentiary exclusion rule, known as the entire market value rule (EMVR), to reasonable royalty determinations. This Note concludes that courts have transformed what was originally a sword for plaintiffs into a shield for defendants without clearly justifying the change under remedies law principles.⁴

II. Present State of Patent Damages Law

Pursuant to constitutional authority, Congress has authorized limited-term monopolies, in the form of patents, to be granted to inventors for their inventions.⁵ The limited monopoly seeks to give adequate incentive for undertaking financial risks associated with invention, while still providing competition in the market over the long term.⁶ The United States Patent and Trademark Office decides whether to grant or deny a patent after application for one, but when a patent holder alleges

component more abstractly. Juries are referenced because the amount of damages in patent infringement cases is a question of fact. *See* Smithkline Diagnostics, Inc. v. Helena Labs. Corp., 926 F.2d 1161, 1164 (Fed. Cir. 1991) (“[T]he amount of a prevailing party’s damages is a finding of fact.”).

2. *See, e.g.*, Lindsey Gilroy & Tammy D’Amato, *How Many Patents Does It Take to Build an iPhone?*, INTELLECTUAL PROPERTY TODAY, <http://www.iptoday.com/issues/2009/11/articles/how-many-patents-take-build-iPhone.asp> (last visited Nov. 14, 2011) (explaining that the iPhone is covered by at least 200 patents) (on file with the Washington and Lee Law Review).

3. *See infra* Part IV.

4. Thanks to Professor Doug Rendleman for this useful metaphor.

5. U.S. CONST. art. I, § 8, cl. 8; *see* 35 U.S.C. § 1 (2006) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”).

6. DAN B. DOBBS, LAW OF REMEDIES: DAMAGES—EQUITY—RESTITUTION 33 (2d ed. 1993).

infringement, federal courts typically decide on the patent's ultimate validity.⁷ A valid patent is infringed if another party makes, uses, or sells the patented invention without the patentee's consent.⁸ The United States Court of Appeals for the Federal Circuit has exclusive jurisdiction over appeals from final decisions of a federal district court when the underlying civil action arises under the patent statute.⁹

Section 284 of Title 35 of the United States Code¹⁰ provides that “[u]pon finding for the claimant [a] 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.”¹¹ The statute, based on the Patent Act of 1946, has been interpreted since 1964 as precluding the remedy of disgorgement of the infringer's profits related to a utility patent.¹² In the event of a conscious and willful infringement, the court may decide to “increase the [total damages award] up to three times the amount [of compensation damages] assessed.”¹³ Thus, punitive damages are available under the statute. Furthermore, courts may grant injunctions prohibiting an infringer from further infringement subject to the “traditional four-factor framework that governs the award of injunctive relief.”¹⁴

7. *Id.* The validity of a patent may also be challenged during reexamination or post-grant review. *See* 35 U.S.C. § 311 (2006) (allowing inter partes reexamination); 35 U.S.C. § 302 (2006) (allowing ex parte reexamination); 35 U.S.C.A. § 321 (West 2012) (allowing for post-grant review).

8. *Id.*

9. 28 U.S.C. § 1295 (2006).

10. 35 U.S.C. § 284 (2006).

11. *Id.*

12. RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 42 cmt. b (2011). Congress has authorized three broad types of patents: utility patents, 35 U.S.C. §101 (2006), design patents, 35 U.S.C. § 171 (2006), and plant patents, 35 U.S.C. § 161 (2006).

13. *Union Carbide Corp. v. Graver Tank & Mfg. Co.*, 282 F.2d 653, 675 (7th Cir. 1960). Other situations may also lead to imposition of punitive damages. *See Laskowitz v. Marie Designer, Inc.*, 119 F. Supp. 541, 554 (S.D. Cal. 1954) (stating that a court may award punitive damages when there is oppressive or fraudulent conduct on the part of the defendant).

14. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 394 (2006). The four factors that an injunction-seeking plaintiff must demonstrate are:

(1) that it has suffered an irreparable injury; (2) that remedies

In court, a patentee has two options when seeking compensation from an infringer. First, the patentee may seek profits that it lost due to the existence of the infringer's product in the marketplace.¹⁵ In seeking lost profits, a patentee must show that but for infringement, it would have made additional sales or could have charged a higher price for its own product.¹⁶ This can be accomplished, for example, by establishing the four factors expressed in *Panduit Corp. v. Stahlin Bros. Fibre Works*:¹⁷ (1) the patented feature was in demand; (2) the patentee had the capability to manufacture and market the patented feature to fulfill that demand; (3) there were no noninfringing substitutes available to the infringer; and (4) a profit would have been made on the additional sales.¹⁸

available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

Id. at 391; see also John M. Golden, *Injunctions as More (Or Less) than "Off Switches:" Patent-infringement Injunctions' Scope*, 90 TEX. L. REV. 1399 (2012).

15. See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1546 (Fed. Cir. 1995) (describing the lost-profits determination as a "but for" analysis limited by "objective foreseeability").

16. See *id.* (establishing a but-for test).

17. *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978). In *Panduit*, Panduit Corporation successfully sued Stahlin Brothers for infringing a patent "covering duct for wiring of electrical control systems." *Id.* at 1155. As part of the proceedings below, a master was appointed to determine Panduit's deserved damages. *Id.* The master's report found that the plaintiff failed to establish sufficient evidence of lost profits, and the report recommended a reasonable royalty. *Id.* at 1155-56. This report was adopted by the district court below. *Id.* at 1155. Panduit appealed the decision, arguing that it was entitled to lost profits on lost sales and price competition. *Id.* In the alternative, it sought a higher reasonable royalty rate. *Id.* The court of appeals denied the lost profits argument, ruling that there was insufficient evidence to establish the amount of profit it would have made. *Id.* at 1156. But the court of appeals agreed with Panduit on the insufficiency of evidence to support the master's reasonable royalty (which was lowered due to his conclusion that there were acceptable noninfringing substitutes on the market). *Id.* at 1162. The case was remanded to reexamine the royalty based on (1) the lack of acceptable noninfringing substitutes; (2) Panduit's policy of not licensing the patent at issue; (3) the future business and profit Panduit would expect to lose by licensing at the time of initial infringement; and (4) the fact that the infringed patent gave the entire marketable value to the product sold. *Id.* at 1164.

18. *Id.* at 1156. These factors are not the exclusive means of proving lost profits. See *Rite-Hite*, 56 F.3d at 1545.

If a patentee cannot prove lost profits, the default measure of damages is no less than a reasonable royalty for the infringed patent.¹⁹ A reasonable royalty has been defined as the amount that “a person, desiring to manufacture and sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make and sell the patented article, in the market, at a reasonable profit.”²⁰ *Georgia-Pacific Corp. v. United States Plywood Corp.*²¹ is the seminal case setting forth the factors courts weigh when determining a reasonable royalty. Most often, this involves reconstructing a hypothetical licensing negotiation between a willing licensor and a willing licensee on the date of initial infringement.²² Typically, an established royalty rate for the same patented component will be the controlling factor.²³ In the absence of an established royalty rate, the other *Georgia-Pacific* factors are considered in determining

19. See 35 U.S.C. § 284 (2006) (stating that damages adequate to compensate for infringement should “in no event [be] less than a reasonable royalty for the use made of the invention by the infringer”).

20. *Panduit*, 575 F.2d at 1157–58 (citing *Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co.*, 95 F.2d 978, 984 (6th Cir. 1937)).

21. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1116 (S.D.N.Y. 1970), *modified sub nom. Georgia-Pacific Corp. v. U.S. Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir. 1971). In *Georgia-Pacific*, U.S. Plywood (USP) successfully proved infringement of one of its patents for striated fir plywood in the proceedings prior. *Id.* at 1117. A special master was appointed to determine USP’s compensatory damages. *Id.* The award of \$685,837 was based on Georgia-Pacific’s (GP) profit on the sale of the infringing article. *Id.* The judge presiding over the trial took exception to the master’s report, and found that GP’s profits were not the proper measure of recovery, but rather, the proper measure was a reasonable royalty. *Id.* The court then analyzed several factors in coming to a reasonable royalty of \$50 per thousand square feet of the patented product, amounting to \$800,000. *Id.* at 1120–43. It should be noted that apportionment was not applied in the court’s analysis because the “patent was not one for an improvement on an article nor was GP’s infringement of a patented feature sold together with unpatented parts. [The patent covered] a marketable article—a panel of striated fir plywood—as an entirety.” *Id.* at 1132.

22. See *Unisplay, S.A. v. Am. Elec. Sign Co.*, 69 F.3d 512, 518 (Fed. Cir. 1995) (stating that the royalty should not be based on an “after-the-fact assessment”). This is an oft-reiterated point of analysis that courts should consider banishing. The benefit of hindsight allows a court to craft an equitable result for both parties.

23. *Monsanto Co. v. McFarling*, 488 F.3d 973, 978–79 (Fed. Cir. 2007).

what a reasonable royalty would have been at the time of initial infringement.²⁴

To fully grasp this Note's central argument, it will be useful to have an understanding of what these factors are. As stated in *Georgia-Pacific*, the factors relevant to making a reasonable royalty determination are:

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 promoter.
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.

24. See *Georgia-Pacific*, 318 F. Supp. at 1121 (stating that there was an absence of an established royalty, and thus, it was "necessary to resort to a broad spectrum of other evidentiary facts probative of a 'reasonable' royalty").

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.²⁵

If a running royalty is presumed, the reasonable royalty calculation requires the parties to ascertain both the royalty base and the royalty rate.²⁶ The base is the total amount to which the rate is applied in determining the damages owed by the infringer.²⁷ If a lump-sum royalty is presumed, there are additional factors to consider, including the risk discount involved in the lump-sum valuation.²⁸

25. *Id.* at 1120.

26. *Cornell Univ. v. Hewlett Packard Co.*, 609 F. Supp. 2d 279, 286 (N.D.N.Y. 2009).

27. *Id.*

28. *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1326 (Fed. Cir.

Taking only the above explanation of the current state of the law, it appears that courts have crafted a logical process for evaluating what a patent embedded in a device covered by a sea of patents would be worth in calculating a patentee's damages. Even if a hypothetical negotiation at the time of the infringement seems nearly impossible to ascertain, its ultimate purpose is at least objectively fair: to give the patentee what it would have received had the infringer obtained a license in the first instance. This goal aligns with the patent-statute's goal of providing the patentee with damages adequate to compensate it for the infringement.²⁹

Special attention should be directed to *Georgia-Pacific* factor thirteen, which offers as relevant to the reasonable royalty calculation "[t]he 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."³⁰ This evaluation, historically called apportionment, is arguably the fairest starting point for retroactively forging a reasonable royalty.³¹ The "realizable profit . . . credited to the invention" impliedly requires introducing into evidence the market value of the product that includes the patented component; otherwise, there is no base profit value to apportion.³² Similarly, factor eight refers to the "established profitability of the product made under the patent;"³³ the language implies a consideration of the profits made after a hypothetical negotiation, but before the instant

2009) (discussing the benefits and risks of a lump sum payment in a typical licensing agreement).

29. See 35 U.S.C. § 284 (2006).

30. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified sub nom.* *Georgia-Pacific Corp. v. U.S. Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir. 1971).

31. See Eric E. Benson & Danielle M. White, *Using Apportionment To Rein In the Georgia-Pacific Factors*, 9 COLUM. SCI. & TECH. L. REV. 1, 46 (2008) (arguing that "apportionment should be a required part of every reasonable royalty analysis, not just a factor that may or may not be given any weight"). The Article continues with the argument that the reasonable royalty calculation should not only be bounded by the profits attributable to the infringed patent but also by some portion of those profits since a prudent licensee would not seek a license if it did not yield some profit for itself. *Id.* at 47.

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

33. *Id.*

litigation. Thus, it is important to note that apportionment has been recognized to be one element of the reasonable-royalty analysis.

Patent damages are meant to be compensatory, meaning the measurement should be based on the plaintiff's loss, rather than the defendant's gain.³⁴ The damages determination starts with the patentee trying to prove its lost profits, and if that fails, then it tries to prove a reasonable royalty based on a hypothetical negotiation informed by other factors. Although this Note makes the argument that a reasonable royalty should almost always be informed by the profits on the infringing product, presently, the reasonable royalty analysis is being perverted to exclude such profits in instances involving a product covered by numerous patented and nonpatented components.³⁵

Eric Benson and Danielle White propound that a hypothetical negotiation seeking to compensate a patentee via a reasonable royalty should be informed by the actual profits made on a product incorporating the infringed patent—stating that “apportionment should be a *threshold* determination in every reasonable royalty analysis.”³⁶ There is much to be said for this suggestion. Less convincing, however, is their necessarily bounding a patentee's potential royalty by the infringer's profits.³⁷ Under such a limitation, a patentee's compensation for the lost opportunity to bargain for a license could be circumvented by an inefficient infringer. Nevertheless, Benson and White's argument implicitly recognizes the importance of using the income attributable to the entire product even if the patented component at issue is not the basis for the product's demand in the market.

The reason for introducing an infringing product's profits, even if the infringed patent does not contribute the basis for demand for that product, is that it gives the jury concrete

34. Doug Rendleman, *Measurement of Restitution: Coordinating Restitution with Compensatory Damages and Punitive Damages*, 68 WASH. & LEE L. REV. 973, 980 (2011).

35. See *infra* Part III (discussing the EMVR).

36. Benson & White, *supra* note 31, at 46–48.

37. See *id.* at 2 (“By treating apportionment as a threshold question, courts can ensure that the resulting reasonable royalty award is properly confined to a *portion* of the profit attributable to the patent.”).

evidence of what the patent might be worth to the infringer, and this evidence would be relevant to determining what amount the infringer would have agreed to pay as a royalty.³⁸ With such evidence before a jury, it is unlikely that any infringement of a minor component, taken alone, would threaten the infringing entity with major economic disruption. It therefore helps to avoid uninformed awards that may wander into the punitive category. At the same time, the patentee's compensation is necessarily in correlation to the patent's contribution to the product incorporating it rather than some abstractly determined value. An infringer would likely have made the licensing decision with respect to the perceived value of the overall product. Actual profits provide an objective, reliable value for the jury in cases in which the opposing parties' experts often provide largely divergent royalty estimates.³⁹

Even if the compensatory nature of patent damages could rebut bounding reasonable royalties by an infringer's profits, the profits on the infringing product should still be considered an essential factor in a hypothetical negotiation.⁴⁰ But the importation of the EMVR into reasonable royalty determinations has, in effect, needlessly made this factor nearly impossible to get into evidence.

38. Note that the present state of the law does not provide a right to an accounting of profits. *See Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified sub nom. Georgia-Pacific Corp. v. U.S. Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir. 1971) (referring to profits as a factor to be considered). The proposed method essentially seeks to place far greater weight on actual profits than present law effectually allows in the reasonable royalty analysis.

39. *See, e.g., Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318–20 (Fed. Cir. 2011) (stating that Microsoft's expert suggested a royalty of \$7 million, and Uniloc's expert suggested a royalty of nearly \$565 million).

40. The language of the patent damages statute does not clearly preclude classifying reasonable royalties as restitutionary. *Compare* 35 U.S.C. § 284 (2006) (providing that in no event should a patentee of an infringed patent be awarded less than a "reasonable royalty"), *with* RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 50 cmt. e (2011) (providing that the remedy in restitution for an innocent recipient of some unjust enrichment is measured by a "reasonable value" standard).

III. Enter the Entire Market Value Rule

Before addressing a present point of confusion in patent damage calculations, it is useful to examine the definition and origin of the EMVR. In seeking to elicit the present justification behind the rule, this Note will compare the rule's original logic to how it is being applied by courts today.

The EMVR, most near its original understanding, allows a patentee to recover damages that encompass unpatented features sold with the patented feature if: (1) the patented feature is the basis for customer demand for the entire product or products sold; (2) the patentee reasonably anticipates the sale of the unpatented parts along with the patented component; and (3) there is a functional relatedness between the patented and unpatented components.⁴¹ The idea is that whatever value was contributed by the unpatented components would not have been realized without the patented component—it was the reason the entire product had market value at all.⁴² Note that the entire market value rule is not clearly an evidentiary exclusion rule; rather, it is an affirmative grant of a degree of recovery provided the requisite elements are met. Plainly interpreted, the rule allows the patentee to recover the full value of an infringing product if the infringing component, on its own, drove demand.⁴³

Presumably, the patentee would have captured the value of the unpatented components itself, but for infringement. Thus, the rule seems to make sense when viewed in conjunction with the lost-profits analysis. But, in actuality, the EMVR does not fully comport with the language of the patent statute even in lost-profits scenarios absent proof of the patentee's plans and capability to manufacture the entire device.

One of the earliest cases in which the rule appears is *Garretson v. Clark*.⁴⁴ The patent at issue in *Garretson* was an

41. See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1549–51 (Fed. Cir. 1995) (providing a summary of the EMVR case law).

42. See *id.*

43. See *id.* at 1549 (“We have held that the entire market value rule permits recovery of damages based on the value of a patentee's entire apparatus containing several features when the patent-related feature is the ‘basis for customer demand.’”).

44. *Garretson v. Clark*, 111 U.S. 120 (1884).

improvement for a method of fastening mop-heads.⁴⁵ The patentee proved infringement and sought all of the infringer's profits in damages.⁴⁶ The U.S. Supreme Court affirmed the lower court's denial of all of the infringer's profits, invoking the EMVR:

The patentee . . . must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show, by equally reliable and satisfactory evidence, that the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature.⁴⁷

Thus, *Garretson* provided two clear alternatives: (1) apportion the infringer's profits and the patentee's lost profits according to the value of the patent, or (2) prove that the entire value of the product is derived from the patented component to receive the full value of the profits associated with the product, sold by the patentee, which incorporated the patented component.⁴⁸ Note how these two choices are restitutionary in nature, with the damages being measured by the defendant's gain attributable to the patented component. There was no requirement that the patentee prove manufacturing capability or any other factor supporting a claim of actual loss.

If *Garretson* had produced the requisite evidence to prove that his improvement was worth 25% of the value of a mop, the rule would apportion to *Garretson* that amount of the infringer's net profits (this restitutionary measure is no longer available).⁴⁹ Note that an improvement that contributed 25% of the value of a mop would mathematically not constitute the basis of consumer demand, yet the original rule (in conjunction with the apportionment alternative) would necessarily allow into evidence the entire amount of profits made on the infringing product. This

45. *Id.* at 121.

46. *Id.*

47. *Id.*

48. *Id.*

49. *See supra* note 12 and accompanying text.

understanding of the rule continued into the early twentieth century.

In *Westinghouse Electric & Manufacturing Co. v. Wagner Electric & Manufacturing Co.*,⁵⁰ the U.S. Supreme Court found Wagner to have infringed a patent for an electrical transformer incorporating a nonconducting cooling oil.⁵¹ Prior to reaching the Supreme Court, it was determined that Wagner had made a profit of \$132,433 on infringing transformers, but because Westinghouse failed to prove what portion of the profits was attributable to the infringement, it was only awarded nominal damages.⁵² Note that this case was decided before the present patent-damages statute was enacted. In this case, the Court correctly delineated between apportionment and recovery of all of an infringer's profits. The Court, in describing the law, stated that when the patent "is only part of the machine and creates only part of the profits[,] . . . [the plaintiff] is only entitled to recover that part of the net gains."⁵³ It then quoted *Garretson's* delineation between apportioning defendant's profits and awarding the entirety of the profits (as would be the case if the EMVR were satisfied).⁵⁴

Although the Court sensibly explained the EMVR in *Garretson*, later, lower court decisions expanded it from a rule requiring a threshold to be met in recovering all of the infringer's profits to a rule that excluded evidence of the infringer's profits in the reasonable royalty context. The confusion appears to have originated in *Marconi Wireless Telegraph Co. v. United States*,⁵⁵ when the United States Court of Claims found that the patent at

50. *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604 (1912).

51. *Id.* at 607.

52. *Id.* at 614.

53. *Id.* at 614–15.

54. *Id.* at 615.

55. *Marconi Wireless Tel. Co. v. United States*, 99 Ct. Cl. 1 (1942), *aff'd in part and vacated in part on other grounds*, 320 U.S. 1 (1943). The Court of Claims was abolished in 1982. Note that while the Court of Claims was meddling with the EMVR's original application, the Court of Appeals for the Seventh Circuit was remaining true to it. *See Cover v. Chi. Eye Shield Co.*, 130 F.2d 25, 28–30 (7th Cir. 1942) (affirming the master's finding that, because the entire market value of infringing device was not attributable to the patent at issue, the profits from the device had to be apportioned).

issue “substantially created the value of the component parts utilized in radio transmitters and receivers purchased . . . and that it therefore falls within the [EMVR]. The complete cost of the transmitting and receiving sets [was] used as the base in the application of a reasonable royalty.”⁵⁶ *Marconi* dealt with a reasonable royalty, a compensatory measure, and thus it can be seen as expanding the applicability of the EMVR. The Court of Claims did not claim that Marconi’s patent was the basis for consumer demand; rather, it created a new standard, claiming that it “substantially created the value of the component parts.”⁵⁷

The court in *Marconi* applied the EMVR and lowered the standard—from “the basis of consumer demand” to “substantially created value”—but did not totally abrogate the rule. The court did not explicitly provide its reasons for doing so, but based on a reading of the facts, some possible justifications present themselves. First, the court may have recognized that in the valuation of a component in a device as complex as the radio was at the time, it would be difficult to pinpoint one component that was the basis for demand. Implicit in this reasoning is that the market value of the product is an essential tool in placing a value on a single component of that product. Second, creating a tension with the first point, the court likely recognized that, as devices were beginning to interact with large numbers of other devices, it would become necessary to limit the royalty base in some manner to protect against applying inherently uncertain royalty rates to exorbitant royalty bases. A good example of this today is a patentee of a computer program (other than something as integral as an operating system) seeking damages based on the market value of a desktop computer sold by the infringer.

Although these presumed concerns are valid, the *Marconi* court’s standard was far too restrictive when applied, essentially, as an evidentiary rule in reasonable royalty scenarios—that is, by excluding the profit made on the entire product from evidence when the standard is not met. A major problem with the court’s reasoning is its belief that it had to invoke the EMVR, a progeny of restitution, when in fact it was calculating a compensatory reasonable royalty. Thus, in *Marconi*, two remedies theories—

56. *Id.* at 49.

57. *Id.*

those of damages and restitution—were obscured and a legal device was forged to limit what is often times the only reliable evidence available to ensure that a royalty is indeed reasonable. It is important to note that in 1952, Congress passed the present patent statute, including 35 U.S.C. § 284, which provided for 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.” It is difficult to rectify the continued existence of the restitutionary EMVR with this codification.

Interestingly, the “reasonable royalty” measure of damages arose out of evidentiary proof difficulties when courts sought to apportion profits in disgorgement scenarios.⁵⁸ Courts have interpreted the patent statute’s granting of compensatory damages or a reasonable royalty as precluding the remedy of disgorgement.⁵⁹ While this interpretation is arguably questionable,⁶⁰ it need not be erroneous to logically align with this Note’s modest proposal. Determining a reasonable royalty and apportioning an infringer’s profits both initially aim to find what value the patent contributes to the overall product.⁶¹ The patent statute’s reference to a “reasonable royalty” may preclude disgorgement of profits related to an infringed patent, but it does not necessarily preclude calculating a royalty in reference to the infringer’s profits. Thus, a balance can be struck between full disgorgement under a restitutionary theory and the exclusion of profits entirely from consideration in a reasonable royalty calculation.⁶² A more nuanced evidentiary standard makes more sense than a categorical bar.

58. Caprice L. Roberts, *The Case for Restitution and Unjust Enrichment Remedies in Patent Law*, 14 LEWIS & CLARK L. REV. 653, 659–60 (2010).

59. *See id.* at 661 (“[C]ourt opinions interpreted the alteration as eliminating the patent owner’s traditional equitable remedy of an accounting of the infringer’s profits.” (citations and internal quotation marks omitted)). The legislative history for the patent statute does elicit an attitude against using apportionment in every infringement suit. *See* S. REP. NO. 79-1503, at 2 (1946) (stating that it is impossible to apportion profits due to an improvement patent in a complex machine and referring to the associated long, expensive road to dubious justice in that pursuit).

60. *See* Roberts, *supra* note 58, at 661–64 (discussing the ambiguous reasoning behind excising an accounting of profits from the patent statute).

61. *See supra* Part II (discussing the patent remedies law).

62. *See* Roberts, *supra* note 58, at 683–84 (arguing that under existing law, reference to an infringer’s profits should be allowed when there is a relevant

IV. Recent Cases Applying the Rule

To illustrate the issue, it is necessary to analyze how recent cases have applied the EMVR. In *Lucent Technologies, Inc. v. Gateway, Inc.*,⁶³ Lucent initially brought a patent infringement claim against Gateway for a method patent involving entering information into fields on a computer screen without the use of a keyboard.⁶⁴ Microsoft Corporation subsequently intervened, and Lucent alleged indirect infringement of the patent by Microsoft's sale of Microsoft Money, Microsoft Outlook, and Windows Mobile.⁶⁵ The jury awarded \$357,693,056.18 to Lucent after finding Microsoft liable on claims covering all three products.⁶⁶ On appeal, Microsoft argued that "the jury should not have applied the entire market value rule to the value of its three software products."⁶⁷ At trial, the parties agreed that the measure of damages was to be determined using a hypothetical negotiation in accord with *Georgia-Pacific*.⁶⁸ Under this approach, Lucent sought a running royalty, but Microsoft argued it would have paid a lump sum of \$6.5 million for the rights to incorporate the patented method in its products.⁶⁹ Because the jury indicated that its award was a lump-sum payment, the U.S. Court of Appeals for the Federal Circuit sought to determine whether there was substantial evidence to find that Microsoft would have paid nearly \$358 million up front for the use of the patent.⁷⁰

In support of its finding that there was not substantial evidence to support the award, the court cited precedent stating that "[t]he issue of the infringer's profit is to be determined not on the basis of a hindsight evaluation of what actually happened, but on the basis of what the parties to the hypothetical license negotiations would have considered at the time of the

bearing on calculating a reasonable royalty).

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

64. *Id.* at 1308; *see also* U.S. Patent No. 4,763,356 (filed Dec. 11, 1986) (describing the patented technology).

65. *Lucent*, 580 F.3d at 1308.

66. *Id.* at 1309.

67. *Id.* at 1323.

68. *Id.* at 1325.

69. *Id.*

70. *Id.*

negotiations.”⁷¹ The court seemingly disregarded this logic, however, in claiming that evidence regarding the frequency of use by the infringing users of the software programs was not barred, even though that particular evidence originated after the hypothetical negotiation.⁷² It is unclear why evidence of actual use of the patented method would be helpful in determining the reasonableness of a royalty while evidence of actual profit from the infringing product would not be. If “[e]xperience is . . . available to correct uncertain prophecy”⁷³ on evidence of actual use, why not on evidence of actual profits? Both would necessarily be matters of speculation during a hypothetical negotiation.⁷⁴

Microsoft claimed that the jury must have applied some percentage rate to the entire market value of its infringing products relevant to the award determination.⁷⁵ Microsoft claimed that this was an improper application of the EMVR.⁷⁶ The court recognized that “it is difficult to understand how the jury could have chosen its lump-sum figure down to the penny unless it used a running royalty calculation.”⁷⁷ Note that from a negotiation standpoint, while there is a difference between a lump sum and a running royalty, the lump sum will be mathematically connected to a running royalty—as determination of a lump sum will be based on a speculated running royalty, discounted to present value, with further discounts for risk.⁷⁸

Here, the court agreed that, if the jury applied the EMVR, it would have been error.⁷⁹ This statement is correct as applied to

71. *Id.* at 1333 (quoting *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1081 (Fed. Cir. 1983)).

72. *See id.* at 1333–34 (“[Evidence of frequency of usage], assuming it meets admissibility requirements, ought to be given its proper weight, as determined by the circumstances of each case.”).

73. *Id.* at 1333 (quoting *Sinclair Ref. Co. v. Jenkins Petroleum Process Co.*, 289 U.S. 689, 698 (1933)).

74. The Federal Circuit’s recent reliance on a “smallest salable patent-practicing unit” test fails to take this into account. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 66–67 (Fed. Cir. 2012).

75. *Id.* at 1323.

76. *Id.*

77. *Id.* at 1336.

78. *See id.* at 1327 (analyzing an expert’s determination of a lump sum).

79. *Id.*

the historical meaning of the EMVR. Recall that the EMVR was originally applied to allow the patentee to recover all of the infringer's profits when a product was not entirely covered by an infringed patent, but the patent was nevertheless the basis for consumer demand.⁸⁰ The high threshold of proving that a component was the basis of demand was presumably necessary because depriving the infringer of the entirety of its profits is a harsh result. But the court of appeals did not follow this line of reasoning.

The court found two problems with applying the EMVR, which it interpreted as allowing an award to be associated with the entire market value of a product even if a low royalty rate was applied. First, there was no evidence that the patent provided the basis of consumer demand.⁸¹ Second, the court criticized the methodology employed by Lucent's expert.⁸² The expert initially applied a royalty rate to the price of an entire computer, but when the district court excluded this from evidence, the expert increased his royalty rate as applied to the software price and came to the same number as when he used the aggregate computer sales as the royalty base.⁸³ Although the court should be concerned with deceptive tactics, it appears that this criticism of the expert's royalty-rate inflation weighs more toward the quality of the evidence and does not justify excluding the price of the software from the royalty base if the patentee could prove what value of that price was profit attributable to the infringed patent.

The court itself acknowledged this point in dictum, which was rebuked in subsequent cases, when it stated, "Simply put, the base used in a running royalty calculation can always be the value of the entire commercial embodiment, as long as the

80. See *supra* notes 41–57 and accompanying text (explaining the EMVR).

81. See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1337 (Fed. Cir. 2009) ("The first flaw with any application of the entire market value rule in the present case is the lack of evidence demonstrating the patented method of the Day patent as the basis—or even a substantial basis—of the consumer demand for Outlook.").

82. See *id.* at 1338 ("The second flaw with any application of the entire market value rule in this case lies in the approach adopted by Lucent's licensing expert.").

83. *Id.*

magnitude of the rate is within an acceptable range (as determined by the evidence).⁸⁴ It was not necessary for the court to rule on the issue of whether the jury erroneously applied the EMVR because it found that there was not substantial evidence to support the damages award regardless, but it is more than apparent that the award would have been reversed on EMVR grounds had it been necessary to decide the issue.⁸⁵ The damages award did not give the entire market value or all of the profits to the patentee. Thus, when the court claimed that a lack of evidence proving the patented component was the basis for consumer demand of the software programs was fatal to the application of the EMVR, it is apparent that the court believed the EMVR was applied even though the award amounted to approximately 5.5% of the total sales revenue of the infringing product.⁸⁶ The court implied that the EMVR is applied when the market value of the product is used as the royalty base. This implication parallels the reasoning in *Marconi*⁸⁷ but runs counter to the court's dicta quoted above. The tension in the court of appeals's logic would be resolved—incorrectly, this Note asserts—two years later in *Uniloc USA, Inc. v. Microsoft Corp.*⁸⁸

In *Uniloc*, the patent at issue was directed at preventing unauthorized installation of copied software.⁸⁹ Uniloc alleged that Microsoft's Product Activation feature on Microsoft Word XP, Word 2003, and Windows XP infringed the patent.⁹⁰ The jury

84. *Id.* at 1338–39.

85. *See id.* at 1338 (arguing the flaws with applying EMVR in this case). Again, because the patentee was not seeking the entirety of Microsoft's profits, the EMVR, as originally understood, was not applied. Note how applying the "substantial evidence" standard allowed the court to overturn the large damages award without any need for the EMVR. This provides further support for abrogating the EMVR entirely.

86. *Id.* at 1336–38. It is not clear why the experts did not focus on the net profits, which are what this Note encourages courts to look to in solving the problem of unjust damage awards. Of course, this evidence should be subject to other admissibility considerations.

87. *See infra* Part III (discussing *Marconi*).

88. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011).

89. *Id.* at 1296; *see also* U.S. Patent No. 5,490,216 (filed Sept. 21, 1993) (describing the patented product). An understanding of the functionality of the patented process is not necessary for the purposes of this Note.

90. *Uniloc*, 632 F.3d at 1296.

found infringement and awarded Uniloc \$388 million.⁹¹ Uniloc's expert explained to the jury, based on a document internal to Microsoft, that product activation keys could be worth anywhere from \$10 to \$10,000 each, depending on usage—instead of installing a copy of the software, users will presumably have to buy the software to get a valid key.⁹² The expert then took the lowest estimated value, \$10, and assumed this was the isolated value of the patent per product license sold.⁹³ He then utilized the 25% rule-of-thumb, which presumes that 25% of the value of the patent would go to the patent owner and the rest would go to the party selling the product.⁹⁴ Thus, \$2.50 per license was attributable to the patent.⁹⁵ After finding that the *Georgia-Pacific* factors balanced out, the expert applied the \$2.50 rate to the total number of Office and Windows product licenses sold and determined that \$565 million was a reasonable royalty.⁹⁶ As a check to this calculation, the expert then estimated gross revenues for the products by multiplying the total number of licenses by the average sales price per license, yielding a gross revenue value of \$19.28 billion.⁹⁷ Thus, the royalty rate turned out to be 2.9% of the estimated gross revenues.⁹⁸ He then opined that this was reasonable because, in his experience, royalty rates for software are on average generally above 10%.⁹⁹

This methodology of creating the value of the infringed patent from scratch, instead of first apportioning profits, should only be resorted to in the rare case in which a defendant cannot produce evidence of the profits for the larger device of which the infringed patent is a component. The concern that the conclusion in the expert's methodology might be seen as fair, because there is a low royalty percentage, is deceiving partially because he is comparing the royalty to revenues instead of profits; the

91. *Id.* at 1311.

92. *Id.* (citing *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F. Supp. 2d 147, 150 n.2 (D.R.I. 2009)).

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.* at 1318.

manufacturer is bearing all the risk, and this is reflected in the market price. This illustrates why the reasonable royalty calculation should, in most instances, be tied to net profits. Of course, it would be more helpful if the parties actually presented evidence on net profits instead of just gross revenues.

Microsoft contested the admission of the expert's testimony, alleging that it used the EMVR, even if it was only part of the check on the reasonable royalty calculation.¹⁰⁰ Microsoft's contention was based on Uniloc's lack of evidence proving that the product activation feature was the basis of consumer demand for the product.¹⁰¹ The district court granted a new trial on damages based on this alone, stating that the "\$19 billion cat was never put back into the bag."¹⁰² The U.S. Court of Appeals for the Federal Circuit affirmed.¹⁰³ First, the court found that the application of a 25% rule-of-thumb was arbitrary and inadmissible under *Daubert v. Merrell Dow Pharmaceuticals, Inc.* and the Federal Rules of Evidence.¹⁰⁴ Second, the court addressed Microsoft's allegation that the expert's check was an inadmissible application of the EMVR.¹⁰⁵ After aptly laying out the law, citing *Lucent*, *Rite-Hite*, and *Garretson*, the court of appeals agreed with the district court's finding that the "entire market value of Office and Windows in the form of the \$19 billion figure was 'irrelevant' and 'taint[ed]' the jury's damages award."¹⁰⁶ The court of appeals then resolved the tension in logic described in *Lucent*, stating that "[t]he Supreme Court and this court's precedents do not allow consideration of the entire market value of accused products for minor patent improvements simply by asserting a low enough royalty rate."¹⁰⁷

100. *Id.* at 1312.

101. *Id.*

102. *Id.*

103. *Id.* at 1321.

104. *Id.* at 1315 (citing *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993)).

105. *Id.* at 1318.

106. *Id.* at 1319 (alteration in original).

107. *Id.* at 1320 (citations omitted). It seems that there is a misinterpretation of the phrase *based on*. As originally intended, to award damages based on the entire value of the product means to give the entirety of the profits. See *Garretson v. Clark*, 111 U.S. 120, 121 (1884) (focusing on the profits to determine damages).

Following this logic, evidence of the entire market value of a product will not even be admitted unless the patented component is proven to provide the basis of demand. What started as a standard for finding that a patentee was entitled to the entire value of a product—a sword for plaintiffs—has essentially been broadened into an evidentiary admissibility standard—a shield for defendants. Considering the complexity inherent in technology today, there is little chance that a single component will ever be the basis of consumer demand. The market value of a product in which a patented component is incorporated informs rather than taints a jury in its quest of finding a reasonable royalty. The Federal Circuit’s decision with respect to the EMVR is blind to the patent damages statute’s construction and to how the EMVR has been perverted since it was promulgated by the Supreme Court.

V. District Courts and the EMVR

The error in the application of the EMVR is spreading. It can be found in district courts that are now relying on *Uniloc*. In *Mirror Worlds, L.L.C. v. Apple, Inc.*,¹⁰⁸ the patents at issue involved a document stream operating system and method that stored documents in a chronological order that was transparent to the user.¹⁰⁹ The user could scroll through the documents in a stack and see a miniature version of the document before accessing it.¹¹⁰ The patentee claimed that Apple’s operating systems and mobile devices (the iPhone, iPod, and iPad) infringed the patents.¹¹¹ To determine the revenue pool, Mirror Worlds “used both software and hardware incorporating the accused [operating system] to calculate a \$72 billion royalty base.”¹¹² Mirror Worlds argued that the EMVR did not apply.¹¹³ This argument was correct as applied to the originally promulgated

108. *Mirror Worlds, LLC v. Apple, Inc.*, 784 F. Supp. 2d 703 (E.D. Tex. 2011).

109. *Id.* at 708.

110. *Id.*

111. *Id.* at 709.

112. *Id.* at 726.

113. *Id.*

EMVR. Mirror Worlds was not seeking the entire market value in damages. In fact, Mirror Worlds was attempting to apportion the value of the infringed patent based on the total value of the product in which it was incorporated as a starting point for finding a reasonable royalty.¹¹⁴ In such a scenario, it is illogical to exclude from evidence the total value of the product. If Mirror Worlds were able to provide substantial evidence that its patent constituted precisely 1% of the market value of the product (including the hardware), wouldn't the starting point for a just damages award be 1% of the profits relating to the infringing product? And from there, the 1% profit figure could be tweaked based on a hypothetical negotiation, presuming a licensee would not negotiate to give up all profits related to the license. Including the hardware in the royalty base is arguably reasonable because an operating system is necessary to make the hardware useful for a consumer; thus, a sufficient functional relatedness exists between the patented component and the product incorporating it.

Based on the following excerpt from the opinion, it seems the court would exclude the profits from the evidence unless the patentee could prove that the infringed features created “the basis for customer demand” or “substantially create[d] the value of the component parts.”¹¹⁵

Despite Mirror Worlds' protestations that the entire market value rule does not apply, it undisputedly used the entire market value of the accused commercial products in calculating its royalty base—and the accused products contain several features, both accused and non-accused. Therefore, Mirror Worlds must show the connection between the accused commercial products, which form its royalty base, and the patented features. Accordingly, at trial Mirror Worlds was obligated to show that the Spotlight, Cover Flow, and Time Machine features create the “basis for customer demand” or “substantially create[] the value of the component parts” in the accused software and hardware products that contain Mac OS X 10.4–6.¹¹⁶

114. *Id.*

115. *Id.* (internal quotation marks omitted) (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011)).

116. *Id.* (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011)).

From this excerpt, it is apparent that the district court has now imported two concepts present in the history of patent damage calculations that were originally applied in both lost profits and apportionment scenarios. In apportionment, the theory of damages sought to deprive the infringer of its unjust enrichment, and thus, the patentee was entitled to deprive the infringer of the entire value attributed to the patent.¹¹⁷ This is harsher than the present statute because a reasonable royalty would not deprive a hypothetical licensee from the entirety of the profits associated with the licensed patent because a licensee would expect some profit from the deal.¹¹⁸ Even so, apportionment is a necessary element and should be treated as such in the reasonable royalty determination, as discussed in Part II.

In lost-profits scenarios, the recovery of all of an infringer's profits may sometimes comport with the adequate compensation standard; here the patentee may recover more than just the precise value of the patent as incorporated in the infringer's product; it may also recover the value from reasonably anticipated market transactions associated with the patent and lost sales. Thus, if the infringed patent was the basis of demand, the patentee could have arguably made all of the infringer's profits. But *Mirror Worlds* did not seek all of Apple's profits. Rather, it sought a reasonable royalty based on the precise value of its patent with respect to Apple's infringing products. The cases discussing the EMVR following *Lucent v. Gateway* unreasonably apply the same high standard—the “basis of consumer demand” test—to two distinguishable subsets of compensatory damages.¹¹⁹

117. See *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 646 (1915) (stating that the burden of proof was on the patentee because it was entitled to recover the portion of the profits attributable to the patent). *Dowagiac* ended with a remand to determine apportionment, in part because of the *Westinghouse* decision. *Id.* at 651.

118. See *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157–58 (6th Cir. 1978) (“A reasonable royalty is an amount ‘which a person, desiring to manufacture and sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make and sell the patented article, in the market, at a reasonable profit.’” (quoting *Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co.*, 95 F.2d 978, 984 (6th Cir. 1937)).

119. See *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1223 (Fed. Cir. 1995) (“[T]he purpose of compensatory damages is not to punish the infringer, but to make the patentee whole.”).

VI. Remedies in Copyright Law

It seems absurd to declare evidence of the actual revenues as “irrelevant” to a reasonable royalty calculation when the projected revenues would have most certainly been a part of that determination in a hypothetical negotiation.¹²⁰ To address this absurdity, this Note suggests that courts draw experience from copyright law.¹²¹ In particular, it may be of interest to look at how courts determine remedies in a copyright infringement suit in which the infringing work has substantial noninfringing components. Under the copyright statute:

The copyright owner is entitled to recover the actual damages suffered by him or her as a result of the infringement, and any profits of the infringer that are attributable to the infringement and are not taken into account in computing the actual damages. In establishing the infringer’s profits, the copyright owner is required to present proof only of the infringer’s gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work.¹²²

Thus, copyright law provides a copyright holder with a right to choose between compensation and restitution.¹²³ Any reasonable infringer would do everything possible to present evidence of expenses and attributes of the work not covered by the plaintiff’s copyright in attempting to reduce a restitutionary award. Drawing some parallels between the copyright and the patent statutes, one initially finds that the patent statute grants damages “adequate to compensate for the infringement,”¹²⁴ while the copyright statute grants “actual damages” suffered as a result

120. See *infra* Part VII (discussing the elements of licensing valuation).

121. Cf. *Sony Corp. of Am. v. Univ. City Studios, Inc.*, 464 U.S. 417, 439 (1984) (finding it appropriate to refer to patent law as an analogy in a copyright case “because of the historic kinship between patent law and copyright law”).

122. 17 U.S.C. § 504(b) (2006).

123. See *DOBBS*, *supra* note 6, at 54 (“In effect, the owner may recover either damages specified by the statute or the infringer’s profits, whichever sum is higher.”); see also RESTATEMENT (THIRD) OF RESTITUTION & UNJUST ENRICHMENT § 42, cmt. d, illus.1 & 2 (2011) (illustrating the same result under the copyright statute).

124. 35 U.S.C. § 284.

of the infringement.¹²⁵ Both forms of recovery are compensatory. The patent statute then provides that in no event should an award be less than a reasonable royalty.¹²⁶ This language has no requirement that the plaintiff prove its actual loss, and thus is not clearly compensatory in every case.¹²⁷ In a case where a patentee was not seeking to license or produce under the patent, if a reasonable royalty is awarded, how is the award classified? It appears such an award could be labeled quasi-restitutionary. In such a case, looking to the defendant's profits seems even more justified.¹²⁸ Instead of a reasonable royalty floor to recovery, the copyright statute grants the right to completely disgorge profits attributable to the infringement from the infringer.

Whereas the copyright holder may choose between compensation and full restitution, the patent holder may only choose compensation. The lack of a restitutionary option in patent law arguably results in insufficient deterrence. When disgorgement is an option, as in copyright law, the infringer gives up all gains from the infringement—leaving the infringer indifferent to the act of infringement.¹²⁹ When recovery is based solely on compensation, a liability rule has been adopted, and a rational infringer will choose to infringe when its expected gain exceeds the patentee's expected loss.¹³⁰ This gives an infringer every incentive to prevent a patentee from establishing a loss.¹³¹ The patent statute does provide punitive deterrence in allowing

125. 17 U.S.C. § 504(b).

126. 35 U.S.C. § 284.

127. See DOBBS, *supra* note 6, at 34 n.2 (stating that “a plaintiff who is not exploiting a patent at all will still be entitled to a reasonable royalty”).

128. See RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 50 cmt. e (2011) (providing that the remedy in restitution for an innocent recipient of some unjust enrichment is measured by a “reasonable value” standard).

129. See Robert D. Cooter, *Punitive Damages, Social Norms, and Economic Analysis*, 60 L. & CONTEMP. PROBS. 73, 77 (1997) (“[P]erfect disgorgement restores the injurer to the same indifference curve as if no injury had occurred.”).

130. See *id.* at 88 (“[A]ssuming certain ideal conditions including perfectly compensatory damages, a liability rule causes efficient self-monitoring by a rational actor.”).

131. See *infra* Part IX (discussing the perverse incentives created by the present patent damages regime).

for treble damages in the event of willful infringement;¹³² however, willfulness is difficult to prove in practice.¹³³

Applying the EMVR in lost-profits scenarios to award a patentee the entire market value of a product when the patent is the basis (but not the sole source) of demand for the product is restitutionary, and thus contrary to the present patent statute's grant of a compensatory remedy.¹³⁴ Applying the EMVR in reasonable-royalty scenarios to block a patentee from basing a royalty on the infringing product's profits further favors an infringer in a system that already encourages, to some extent, efficient infringement. The EMVR has no place in patent law.

Most importantly, the copyright statute explicitly allows a copyright holder to introduce an infringer's profits on a larger work into evidence without requiring proof that the infringed component constitutes the basis of demand.

VII. An Attempt to Impart Clarity

The EMVR has evolved to its present state because the decisionmaker in patent infringement determinations is often a jury of laypeople. As such, the rule is not entirely without purpose, for when a patented component contributes less than 1% of the value of the device being sold, it becomes increasingly difficult for an infringer to prove, for instance, that the patent is worth 0.01%, rather than only 0.001%.¹³⁵ But this problem is only

132. 35 U.S.C. § 284 (2006).

133. See *Damage Relief for Patent Infringement*, GALLAGHER & DAWSEY CO. (Dec. 2002), http://www.invention-protection.com/ip/publications/docs/Damage_Relief_for_Patent_Infringement.html (last visited Nov. 13, 2012) (providing a practitioner's opinion on the difficulty of proving willfulness) (on file with the Washington and Lee Law Review).

134. There is no requirement under the EMVR (as opposed to the requirements expressed in the *Panduit* factors) that there be proof that the patentee had the manufacturing capability to exploit the demand for the overall product, or even that the patentee contemplated the idea of marketing the overall product. See *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978).

135. See *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012) ("Admission of such overall revenues, which have no demonstrated correlation to the value of the patented feature alone, only serve to make a patentee's proffered damages amount appear modest by comparison, and to artificially inflate the jury's damages calculation beyond that which is adequate

a minor issue. Assume an infringer of a minor patent made \$100,000,000 in profits on a larger device containing other unpatented components. The difficulty in proving that the infringed patent was worth either 0.01% or 0.001% means the difference between a reasonable royalty of \$10,000 and one of \$1,000. Considering the cost of litigation, such a difficulty in proof is of little consequence. Only when the profits are in the billions of dollars does the difficulty yield consequential differences, and in such a case, the trial judge must be more demanding in scrutinizing a damages expert's methodology. Although it may be easier to pinpoint a value of a patent when it contributes a substantial portion of the value to the broader device, adoption of the EMVR does more harm than good because it excludes material evidence in most cases without exception.¹³⁶

Let us take *Uniloc* to its logical conclusion when omitting the EMVR and placing heavier weight on the evidence of profits. The gross revenues for the products at issue were approximately \$19.28 billion.¹³⁷ Microsoft's latest profit margin, based on its 2011 annual report, was approximately 33%.¹³⁸ Thus, we could assume that the profits on the products at issue in *Uniloc* were approximately \$6.36 billion. *Uniloc's* expert multiplied \$2.50 by the number of licenses sold to get roughly \$565 million; thus there were approximately 226 million licenses sold by Microsoft.¹³⁹ The expert's calculation would value a reasonable royalty (after adjusting for a hypothetical negotiation) at approximately 8% of the profit for Microsoft Office and Windows. To evaluate the reasonableness of this rate, it is necessary to provide some context.

to compensate for the infringement." (internal quotation marks omitted) (citing *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011)).

136. See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2021 (2007) (providing an example of how a low percentage royalty based on the product price might seem reasonable but may easily exceed the royalty the parties would have negotiated, or even exceed the entire value of the infringing component).

137. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1312 (Fed. Cir. 2011).

138. MICROSOFT CORP., 2011 ANNUAL REPORT 41 (2011), available at http://www.microsoft.com/investor/reports/ar11/download_center.html.

139. *Uniloc*, 632 F.3d at 1311.

Digital rights management (DRM) refers to methods of preventing unauthorized use of a company's software; the term encompasses product activation codes.¹⁴⁰ Microsoft's PlayReady, as one example to show the amount charged for DRM, is a content access and protection technology for digital entertainment content, products, services, and devices.¹⁴¹ The fee structure for PlayReady is based on a client's quarterly unit volume, with the royalties per unit decreasing as unit volume increases.¹⁴² The most expensive royalty per unit is \$0.20.¹⁴³ Taking this conservative rate, and assuming it is in line with industry norms, Microsoft would have incurred a cost of about \$45,200,000 for the 226 million licenses sold (assuming it was paying for a product comparable to its own).¹⁴⁴ Yet the jury awarded \$388 million in damages.¹⁴⁵ Based on this rough estimate, the jury's award was more than eight times the value that Microsoft charges for its own DRM software. Considering this large difference, it would not be a stretch for a judge to rule that no reasonable jury could find that the evidence supported a \$388 million award.¹⁴⁶ Notice how the reasonableness of an award can be attacked at the trial level without any reference, and therefore without any need, for the EMVR.

140. Pamela Samuelson & Jason Schultz, *Should Copyright Owners Have to Give Notice of Their Use of Technical Protection Measures?*, 6 J. TELECOMM. & HIGH TECH. L. 41, 42 (2007) ("[S]ome copyright owners have adopted technical protection measures (or 'TPMs', sometimes also referred to as 'digital rights management' or 'DRM' technologies) to control unauthorized access to and uses of digital content in mass-market products and services.").

141. *Microsoft PlayReady: Overview*, MICROSOFT CORP., <http://www.microsoft.com/playready/overview> (last visited Oct. 12, 2012) (on file with the Washington and Lee Law Review).

142. *Id.* It appears that Microsoft has taken the fee structure cited herein off of its website. See www.diigo.com/item/image/8c52/5wt6?size=o for a clipped version.

143. *Fee Structure for Microsoft PlayReady Final Products*, <http://www.microsoft.com/playready/PFPLFees.msp> (last visited Feb. 4, 2012). Check the website mentioned in note 142 if this site is no longer available.

144. This figure does not apply the tiered royalties per unit that the fee structure would in actuality. *Id.* This is conservative because it applies the highest rate to all licenses.

145. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1311 (Fed. Cir. 2011).

146. See FED. R. CIV. P. 50 (stating the standard for granting a judgment as a matter of law).

Admittedly, the above analysis is not entirely accurate considering that the patents covering PlayReady (assuming they exist) were not at issue in *Uniloc*. But the analysis can be supported as relevant because the marginal production cost of software is typically near zero.¹⁴⁷ This low marginal cost would apply to both the product activation code at issue in *Uniloc* as well as the code for Microsoft PlayReady. Thus, it is reasonable to assume the costs per unit and the sale price of the two DRM programs, when dealing with economies of scale, would be comparable.

Perhaps contributing to excessive, misinformed jury awards are the sometimes confusing jury instructions. Looking at a standard jury instruction, the contradictions in logic would confuse a lawyer, let alone a layperson: “A reasonable royalty is the royalty that would be reasonable for the infringer to pay and for the patent owner to accept for use of a patent that they both know is valid and that the infringer wants to use.”¹⁴⁸ The instruction then provides: “You are to decide what a reasonable royalty would be based on circumstances as of the time just before [defendant] began [selling or using] the infringing [product or process].”¹⁴⁹ Taking this sentence literally, the actual profits of the product, including the infringed patent, would seemingly be precluded from consideration. But the jury instruction then provides a list of factors the jury should consider, including “the portion of the profit that is due to the patented invention, as compared to the portion of the profit due to other factors, such as unpatented elements or unpatented manufacturing processes, or features or improvements developed by [defendant].”¹⁵⁰ The instruction, like the case law, contradicts itself. It asks the jury to base its royalty as of the time of initial infringement but, at the same time, to consider the actual profits attributed to the patent that necessarily incur after this point in time. It would be wise to eliminate the contradiction and tell the jury that when an infringer cannot prove lost profits, a reasonable royalty informed

147. Matt E. Thatcher & Dave E. Pingry, *Understanding the Business Value of Information Technology Investments: Theoretical Evidence from Alternative Market and Cost Structures*, 21 J. MGMT. INFO. SYS. 61, 64 (2004).

148. MODEL JURY INSTRUCTIONS: PATENT LITIG. 197 (2005).

149. *Id.*

150. *Id.* at 198.

by the infringer's profits (amongst other factors) should be determined.¹⁵¹

The primary forces driving royalty rates for intellectual property are the amount of profits, the duration of profits, and the risk associated with the expected profits.¹⁵² In licensing, “[t]he basis of all value is cash.”¹⁵³ And to determine net cash flow, one must take into account gross revenues.¹⁵⁴

In light of the above analysis, this Note proposes a change to the test that courts apply when determining whether to exclude total product revenue (en route to finding profits) from evidence: A patentee may recover damages associated with the value of an entire apparatus containing several features when the feature patented constitutes *some* basis for customer demand and there is a sufficient functional relatedness between the patented feature and the product.¹⁵⁵ This change is suggested in the spirit of eventually abrogating a rigid test entirely in moving toward judges' increased scrutiny of experts under *Daubert* and their increased willingness to grant judgments notwithstanding a jury verdict on damages. The United States District Court for the District of Delaware has, at least in one case, interpreted the rule in a way that most aligns with the spirit behind this change. In *Lucent Technologies, Inc. v. Newbridge Networks Corp.*,¹⁵⁶ the district court stated: “[T]he test for the application of the entire market value rule is not whether the unpatented products are

151. This assumes that the patentee has provided sufficient evidence to prove the value that the patent contributed to the product.

152. RUSSELL PARR, ROYALTY RATES FOR LICENSING INTELLECTUAL PROPERTY 124 (2007).

153. *Id.* at 143.

154. *See id.* at 144 (providing a basic net cash flow calculation).

155. This language (other than the emphasized change) was taken from *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 901 (Fed. Cir. 1986) (citations omitted). Courts have impliedly rejected this change. For example, in *Schindler Elevator Corp. v. Otis Elevator Co.*, 561 F. Supp. 2d 352 (S.D.N.Y. 2008), the court granted a motion *in limine* to exclude the testimony of plaintiff's damages expert because it relied on proof that the infringed patent was a substantial basis for consumer demand rather than the higher standard requiring that it was the basis for consumer demand. *See Schindler Elevator Corp. v. Otis Elevator Co.*, 1-06-cv-05377 (S.D.N.Y. June 23, 2011) (granting motion *in limine*).

156. *Lucent Techs., Inc. v. Newbridge Networks Corp.*, 168 F. Supp. 2d 181 (D. Del. 2001).

necessary for the device to operate . . . but whether a hypothetical licensee would have anticipated an increase in sales of collateral unpatented items because of the patented device.”¹⁵⁷

VIII. Support from the Federal Rules of Evidence

Presumably because the EMVR originated before the current Federal Rules of Evidence were enacted, there are no cases discussing how the EMVR comports with these rules of evidence.¹⁵⁸ Originally, it did not operate as an evidence rule at all. As applied today, does the EMVR make sense in light of Federal Rules of Evidence 401, 402, and 403? In general, relevant evidence is admissible unless the United States Constitution, a federal statute, the Federal Rules of Evidence, or rules prescribed by the Supreme Court provide otherwise.¹⁵⁹ The EMVR did originate in the U.S. Supreme Court, and thus it is arguably a rule prescribed by it.¹⁶⁰ But when the Supreme Court has invoked the EMVR, it has never been in association with reasonable royalties—it has been in association with restitutionary remedies.¹⁶¹ Thus, the Supreme Court exception to relevancy should not apply to the EMVR as perverted.

Is the amount of profits made on a complex device incorporating a patented subcomponent relevant in determining a reasonable royalty if the patent is infringed? This question turns on whether the evidence “has any tendency to make a fact [here, what a reasonable royalty would be] more or less probable than it would be without the evidence; and [whether] the fact is of consequence in determining the action.”¹⁶² The argument opposing relevancy would be that the actual profits on a device

157. *Id.* at 238.

158. *See* Act to Establish Rules of Evidence for Certain Courts and Proceedings, Pub. L. No. 93-595, 88 Stat. 1926 (1975) (showing that the rules were not codified until the 1970s).

159. FED. R. EVID. 402.

160. *See* *Garretson v. Clark*, 111 U.S. 120, 121 (1884) (applying the EMVR).

161. The EMVR was imposed in reasonable royalty determinations by the United States Court of Claims. *See* *Marconi Wireless Tel. Co. v. United States*, 99 Ct. Cl. 1 (1942), *aff'd in part and vacated in part on other grounds* by 320 U.S. 1 (1943).

162. FED. R. EVID. 401.

incorporating the patent are not relevant because the valuation method relies on a hypothetical negotiation before the product was manufactured and sold; thus, the actual value would not have yet come into existence for consideration.¹⁶³ Further, the irrelevancy argument may point to the possibility that without proof of some value to the patent, the profits of the device in which it is incorporated mean nothing in ascertaining the value of the patent to any precision.

Taking the first argument, *Georgia-Pacific* has fleshed out the elements indicative of a reasonable royalty, and among these elements is the “established profitability of the product made under the patent.”¹⁶⁴ The hypothetical negotiation was not meant to totally preclude consideration of events occurring after the initial infringement. Rather, it is to be determined in context. The second irrelevancy argument is stronger, and certainly the patentee should prove some benefit to the overall product before being able to introduce profits of the product incorporating the infringed patent among other patented or unpatented components. But if the infringed patent had no value whatsoever, why would the infringer find it necessary to include it in its device? Once the patent is found infringed, unless there are no profits on the broader device, the existence of some value attributed to the patent might be presumed. Whether that value is ten cents or ten million dollars is for the jury to decide. The evidence of profits is relevant to this determination.

Even so, a “court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.”¹⁶⁵ Thus, if the market value is relevant under Federal Rules of Evidence 401 and 402, which it likely is, then do any of the above considerations substantially outweigh the probative value of the actual profit of the broader device on the proper amount of a reasonable royalty? If there is a

163. See *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1164 (6th Cir. 1978) (“The infringer’s profit element, in the post-judgment ‘reasonable royalty’ equation, is not related to the infringer’s actual profit.”).

164. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

165. FED. R. EVID. 403.

functional relatedness between the infringed patent and the overall product, and proof of this relatedness to some degree of consumer demand, the answer is “not always.”¹⁶⁶

Presuming the existence of these elements, there is no persuasive argument that there is unfair prejudice against the infringer. The argument for unfair prejudice might be that if a jury sees a large profit figure it will be more inclined to think the infringer can afford a large award even if the award does not reflect the true value of the infringed patent. Based on that inclination, the jury will unfairly value the patent in the patentee’s favor. Perhaps it would be unfair if the parties only introduced net profits into evidence and sent the jury to deliberate. But the parties employ experts to put that figure into context. The infringer has every opportunity to explain how the device operates, why it is attractive to consumers, and how the other elements contribute to the product’s value. It is not unfair to require an infringer to explain its product.¹⁶⁷

Nor does the amount of profits tend to mislead the jury. Expert valuations will incorporate expected profits and actual profits. As stated earlier, the basis of value is cash flow.¹⁶⁸ Thus, to determine the value attributable to the infringed patent, the necessary cash value is the profit made. When the entire device is not infringing, the profit attributable to the infringed component must be apportioned from the total profit made en route to determining a reasonable royalty. In summary, the Federal Rules of Evidence do not support a categorical bar to admitting an infringer’s profits into evidence in reasonable royalty determinations (even when the patent isn’t the basis for demand),

166. See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1550 (Fed. Cir. 1995) (requiring a functional relationship between the infringed patent and the product to allow recovery based on unpatented components sold with patented components).

167. See Lemley & Shapiro, *supra* note 136, at 2024 (stating that in practice, it is rare for an infringer to introduce evidence of other patented components). The Article explains that such evidence is rare because an infringer usually will “not want to admit that it might be infringing other patented inventions.” *Id.* Further contributing to the dearth of this type of evidence is courts’ reluctance to admit evidence of patents other than that at issue in the trial. See *id.* (“[C]ourts do not want to admit such evidence because it will require collateral litigations during the damages phase over the existence and value of parts of the product that are not covered by the patent at trial.”).

168. See PARR, *supra* note 152, at 143.

provided there is a functional relatedness between the infringed patent and the broader product and that some value to the patent can be proven or inferred.¹⁶⁹ Of course, this determination is inherently fact-specific.

Courts have stated that without the EMVR requirement, “an infringer could be required to pay multiple recoveries on a single product to numerous patentees, each of whom file infringement claims directed to different components of the product without regard to the extent to which its patented component contributed to the overall profitability of the product.”¹⁷⁰ But this logic does not extend to calculating a reasonable royalty based on profits because, in attempting to formulate a reasonable royalty, the precise goal is to determine the extent to which the patent contributed to overall profitability.

Some decisions have explicitly recognized the relevancy of the infringer’s profits in assessing the reasonableness of a royalty award. The United States District Court for the District of Delaware has stated that “[w]here the commercial value of a product is increased by the use of the patented process and infringement is present, profits are considered a relative element.”¹⁷¹

IX. Harmonizing Patent Damages with the Goals of Patent Law

Congress’s power to grant limited monopolies in the form of patents is to be used “[t]o promote the Progress of Science and the useful Arts.”¹⁷² The right to exclude others from making, using, or

169. See Roberts, *supra* note 58, at 670 (“Measuring the infringer’s profits may sometimes provide a useful proxy for assessing the patent owner’s compensatory loss.”). Certain circumstances may justify excluding profits from evidence.

170. *Izume Prods. Co. v. Koninklijke Philips Elecs. N.V.*, 315 F. Supp. 2d 589, 614 (D. Del. 2004).

171. *Hartford Nat’l Bank & Trust Co. v. E.F. Drew & Co.*, 188 F. Supp. 353, 358–59 (D. Del. 1960); see also *Locklin v. Switzer Bros., Inc.*, 235 F. Supp. 904, 906 (N.D. Cal. 1964) (stating that “an infringer’s profits may have an evidentiary bearing on the determination of the reasonableness of a royalty”).

172. U.S. CONST. art. I, § 8, cl. 8.

selling a patented invention provides encouragement for taking investment-based risk in developing new technologies.¹⁷³

If the entire market value is excluded in cases in which the patent does not constitute the basis of demand for the product, proving a reasonable royalty becomes significantly more difficult—especially if a court decides to exclude evidence of other patents incorporated in the device. Intentional infringers know this, so the EMVR as applied produces a moral hazard for an infringer to aggressively market the infringing product in hopes of eliminating any chance for the patentee to establish a record of sales that could support an award of lost profits, thus relegating a patentee to the reasonable royalty remedy. The infringer's aggressive marketing would also reduce the likelihood that a patentee could successfully negotiate a license for the patent with a potential competitor to the infringer due to the infringer's head start on manufacturing and advertising and the consequent reluctance of a competitor to enter a saturated market. This would tend to prevent an actual royalty rate from being established. Thus the patentee is put in the position of trying to prove a reasonable royalty without evidence of established rates and, under the EMVR, without reference to the infringer's profits made on a device incorporating the patent. An infringer has every incentive to put the patentee in this position because it substantially impairs the patentee from rebutting a low-ball royalty suggestion from the infringer's expert.

The goals of promoting technological advancement are not furthered when inventors cannot get adequate compensation for a violation of their right to exclude. Entities investing in innovation theoretically take the risk of being inadequately compensated for infringement of a potential patent into account—this risk arguably stymies investment to a certain extent. In encouraging investment in the technical arts, it is better to overcompensate patentees in rare instances rather than undercompensate them in most instances of infringement. This idea is supported by the patent statute's inference that a reasonable royalty is the floor to a potential damages award.¹⁷⁴

173. *King Instruments Corp. v. Perego*, 65 F.3d 941, 950 (Fed. Cir. 1995).

174. *See* 35 U.S.C. § 284 (2006) (stating that in no event is the owner of an infringed patent to be awarded less than a reasonable royalty).

X. Conclusion

Some scholars believe that the EMVR has no place in reasonable royalty cases.¹⁷⁵ Professor Mark Lemley has said that applying the EMVR “necessarily overcompensates the patent owner by giving it value not in fact attributable to the patent.”¹⁷⁶ This Note agrees with the inapplicability of the rule, but not with Professor Lemley’s reasoning. The rule has no place in a reasonable royalty calculation not because the market value of a product should always be excluded from evidence when the patent at issue covers only a portion of the product, but because such evidence should almost always be included. In most cases, “market value” should more narrowly refer to net profits as long as the infringer has kept adequate records with good-faith accounting for revenues and expenses (and was not unreasonably inefficient). A patentee is not necessarily overcompensated when the royalty base includes the entire product, but it is overcompensated if a judge fails to properly scrutinize damages experts’ methodologies in comparing a royalty rate to net profits or if a judge fails to grant a judgment as a matter of law in the case of an unreasonable award. When an infringer seeks judgment as a matter of law on a reasonable-royalty award that is not reasonably linked to the profits attributed to the patent, a

175. See, e.g., Mark A. Lemley, *Distinguishing Lost Profits from Reasonable Royalties*, 51 WM. & MARY L. REV. 655, 663–64 (2009) (“The logic of the entire market value rule breaks down in reasonable royalty cases . . .”). “Until courts abandon current doctrine and apply the entire market value rule only when the patented component of the accused devices truly accounts for the entire market demand for the infringed device, patentees will continue to be unjustly rewarded.” Brian J. Love, *Patentee Overcompensation and the Entire Market Value Rule*, 60 STAN. L. REV. 263, 293 (2007). For a sure-to-be rewarding trek into mathematics, the reader ought to consider that the mathematical proof in Love’s Note might assume its own conclusion. See *id.* at 273–75 (concluding that when a reasonable royalty is based on the entire value of a device, the benchmark royalty will only be achieved if the infringing component accounts for the entire value of the accused product). That is, V_{EMVR} was assumed to be $v_{product}$ in reaching this conclusion. *Id.* at 275. Should not $v_{product}$ have been included in the summation of individual patents such that the only conclusion to draw would be that $B \cdot v_{product} = B \cdot V_{EMVR} - B \cdot \sum_{i=2}^N v_i$ (assuming that $v_{product} = v_1$ in the summation)? See *id.*

176. Lemley, *supra* note 175, at 664.

trial judge should find that no reasonable person would find the award supported by sufficient evidence.¹⁷⁷

In limiting any unfair prejudice, a court should only admit into evidence the profits made on a product that are functionally tied to the patented component when the patent is shown to have provided some value; the patentee should then prove with sufficient evidence the profit of the entire product that is attributable to the patent.¹⁷⁸ The limitation on a patentee's purported royalty base should be the functional nexus plus "some value" standard, not a "basis of consumer demand" or "substantially creates demand" standard. It may be possible to infer value based on positive net profits. Once some value for the patent is established by the patentee, the defendant has the opportunity to rebut by attempting to highlight the value attributed to the other features of the machine. Once these elements are established, the valuation for reasonable royalty purposes should typically be in reference to the profits, not the revenues. The inherent uncertainties in valuation are thereby limited. Furthermore, this reference to profits of the entire device compensates the patentee for the synergistic value of the patent, rather than the value of the patent in a vacuum. It is fair to assume that an infringer/hypothetical licensee would take this into account when negotiating a license even if the patent is not expected to cover a component that is the basis of demand.

In summary, courts have taken a restitutionary sword from plaintiffs and reforged it into a shield for defendants in a

177. See *Dow Chem. Co. v. Nova Chems. Corp.*, No. 05-737-JJF, 2010 WL 3056617, at *1 (D. Del. July 30, 2010) ("[A] court may grant judgment as a matter of law if 'the court finds that a reasonable jury would not have a legally sufficient evidentiary basis' to find for a party on a given issue after that party has been fully heard." (citing FED. R. CIV. P. 50(a))).

178. See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1550 (Fed. Cir. 1995) ("[W]hen recovery is sought on sales of unpatented components sold with patented components . . . the unpatented components must function together with the patented component in some manner so as to produce a desired end product or result."). Thus, this Note's proposed revision to reasonable royalties in patent damages law would maintain the functional nexus requirement while dropping the "basis for consumer demand" requirement. Ultimately, upon review, the findings at trial will be judged on a substantial evidence standard. See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1333 (Fed. Cir. 2009) (stating that on appellate review, findings of fact are reviewed on a substantial evidential support standard).

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compensatory system. The result will not be more reasonable awards, but rather awards that are more likely to be arbitrary and a system that inadequately deters infringement.