2014

A Step in the Right Direction: Patent Damages and the Elimination of the Entire Market Value Rule

Jaimeson Fedell

Note

A Step in the Right Direction: Patent Damages and the Elimination of the Entire Market Value Rule

*Jaimeson Fedell**

Yasuo Kamatani is an immensely successful entrepreneur.[1] Mr. Kamatani is the sole inventor of patent '981, a device that automatically identifies the type of disc—either a CD or DVD—inserted in a computer's optical disc drive (ODD).[2] He founded LaserDynamics, Inc. for the sole purpose of licensing his '981 patent to computer manufacturers.[3] By 2003, ODDs with automatic disc discrimination had become the industry standard, making his '981 patent a valuable commodity.[4] As a result, from 1998 to 2010, LaserDynamics entered into 29 licensing agreements for the use of the '981 patent, the majority of which were less than $250,000 and all of which were less than $1 million.[5] The only licensing agreement to exceed $1 million was a $6 million settlement with BenQ Corporation after a two-year patent lawsuit.[6] It is therefore easy to imagine Mr. Kamatani's pleasant surprise when, in 2009, a jury awarded his corporation a verdict of $52 million in a patent infringement suit against Quanta Computer, Inc.[7] This figure, based on the entire market value rule, was more than fifty times greater than any

* J.D. Candidate 2014, University of Minnesota Law School. B.A. 2010, University of Wisconsin-Madison. I would like to thank Professor Cotter for his help in selecting a topic and his invaluable comments on my drafts. Many thanks to the members of the *Minnesota Law Review* for helping me publish this Note.

1. *See* LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 57 (Fed. Cir. 2012).
2. *Id.* at 56.
3. *Id.* at 57.
4. *Id.*
5. *Id.* at 57–58.
6. *Id.* at 58; *see also* Kamatani v. BenQ Corp., No. 2:03–CV–437, 2005 WL 2455825, *6–7 (E.D. Tex. Oct. 6, 2005).
7. *See LaserDynamics*, 694 F.3d at 63.

of LaserDynamics's previous licensing agreements and almost ten times what the company had received in previous infringement litigation.[8]

In a troubling development, corporations like LaserDynamics have been invoking the entire market value rule in calculating patent damages in an attempt to reap huge jury verdicts.[9] By statute, damages for patent infringement should be "in no event less than a reasonable royalty for the use made of the invention by the infringer."[10] In an attempt to clarify this somewhat ambiguous provision, the Supreme Court invented a concept commonly known as the entire market value rule: if the entire value of a device is properly and legally attributable to the patent, then the entire value of the product can be used to calculate royalties.[11] For example, if a jury determined that the automatic disc discrimination feature contained in Mr. Kamatani's patent was the overwhelming reason consumers purchased a laptop computer, then the revenue the infringer obtained from those laptops would be multiplied by a royalty rate to calculate damages.

Although this rule may have been sensible in 1884, at a time when inventions were far less complex, it seems antiquated today when new devices incorporate hundreds, if not thousands, of patents.[12] With Congressional silence on the issue of damages,[13] the Federal Circuit has recently become more proactive in limiting the application of the entire market value rule to only those instances where the patented features constitute the entire basis for customer demand.[14] However, even with a

8. *Id.* Quanta argued that the damages should be $500,000, a figure much more representative of the previous licensing agreements that LaserDynamics had obtained, but the jury accepted at face value the contention of LaserDynamics's damages expert that the award should be $52 million. *Id.* at 61–63.

9. *See, e.g.*, Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1301 (Fed. Cir. 2011); Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1323 (Fed. Cir. 2009).

10. 35 U.S.C. § 284 (2006).

11. Garretson v. Clark, 111 U.S. 120, 121 (1884) ("The patentee . . . must show . . . 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.").

12. *See* Brian J. Love, Note, *Patentee Overcompensation and the Entire Market Value Rule*, 60 STAN. L. REV. 263, 264 (2007).

13. Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2012).

14. *Lucent*, 580 F.3d at 1336.

more vigilant Federal Circuit, the entire market value rule still contains the potential to award companies' damages on value they did not create because of the extreme difficulty in determining which patent is actually driving the demand for a product.[15]

This Note argues that the entire market value rule is an obsolete conception because it can award companies for value they did not create. Accordingly, the rule should be abandoned entirely and replaced with reasonable royalty calculations that focus on past licensing agreements if they are available. Part I describes the background of the entire market value rule and how it has evolved over time, particularly with the recent decisions in *LaserDynamics* and *Uniloc*. Part II addresses the criticisms of the entire market value rule and how it can give rise to exorbitant damages calculations by using the entire value of a product as a base rate, as well as examines several potential alternatives to the entire market value rule. Finally, this Note concludes that the most appropriate solution is to abolish the entire market value rule and look toward the fifteen-factor test first identified in *Georgia-Pacific Corp. v. United States Plywood Corp*.[16]

I. THE ENTIRE MARKET VALUE RULE AND PATENT DAMAGES

Patent damages exist to compensate the patentee for infringement and to make him or her whole after the infringement.[17] The United States Patent Act states that upon finding for the claimant, a court shall award 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."[18] As the statute only provides a floor of "reasonable" royalties, the courts have stepped in to provide guidance as to what constitutes adequate compensation. Damages will be

15. Patricia Dyck, Note, *Beyond Confusion—Survey Evidence of Consumer Demand and the Entire Market Value Rule*, 4 HASTINGS SCI. & TECH. L.J. 209, 224 (2012) (arguing that it is impossible to give an absolute value to consumer demand for a feature).

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

17. Mark A. Lemley, *Distinguishing Lost Profits from Reasonable Royalties*, 51 WM. & MARY L. REV. 655, 657–61 (2009).

18. 35 U.S.C. § 284 (2006).

awarded based either on lost profits or on reasonable royalties.[19]

A. CALCULATING PATENT DAMAGES

1. Lost Profit

The general rule when calculating patent damages is to determine the sales and profits the patentee lost because of the infringement.[20] In order to receive lost profits as actual damages, the patentee must prove that there is a reasonable probability that, but for the infringement, it would have made the infringer's sales.[21] In *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, the Sixth Circuit announced a commonly accepted standard for proving lost profits.[22] The patent owner must prove: (1) demand for the patented product, (2) the absence of non-infringing substitutes, (3) his ability to manufacture and market the product to exploit the demand, and (4) the amount of profit he would have made.[23] The *Panduit* standard is demanding and fact-specific, making it difficult to satisfy.[24] Commentators have argued that the standard of proof is too high, and many patentees who should be entitled to receive lost profits are forced to seek lesser damages.[25]

2. Reasonable Royalties

Not all patent infringement cases involve a lost-profit analysis, however.[26] If a patentee cannot satisfy the requirements for proving lost profits, his damages must amount to at

19. *See infra* Parts I.A.1, I.A.2.

20. Del Mar Avionics, Inc. v. Quinton Instrument Co., 836 F.2d 1320, 1326 (Fed. Cir. 2009).

21. State Indus., Inc. v. Mor-Flo Indus., Inc., 883 F.2d 1573, 1577 (Fed. Cir. 1989).

22. *See id.* (describing the *Panduit* test as the "standard way of proving lost profits"); Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978).

23. *State Indus., Inc.*, 883 F.2d at 1577; *Panduit Corp.*, 575 F.2d at 1156.

24. Lemley, *supra* note 17, at 659–61.

25. *Id.*

26. *See, e.g.*, LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 57 (Fed. Cir. 2012). LaserDynamics existed solely to license patent '981 and had no ability to manufacture or market the product. *Id.* Therefore, LaserDynamics could not satisfy elements 3 or 4 of the *Panduit* test. *Id.*; *see also* PRICEWATERHOUSECOOPERS, 2012 PATENT LITIGATION STUDY 11 (2012), *available at* http://www.pwc.com/en_US/us/forensic-services/publications/assets/2012-patent-litigation-study.pdf (stating that lost profits accounted for 32.2% of damage awards in patent litigation from 2006 to 2011).

least a reasonable royalty.[27] Reasonable royalty calculations are an entirely different concept than the lost-profit approach: instead of looking at lost sales, reasonable royalty cases inquire into what the marketplace would set as a reasonable license for the intellectual property.[28] To arrive at a reasonable royalty, the royalty base is multiplied by the royalty rate.[29] Courts often look toward the fifteen-factor *Georgia-Pacific* test for guidance when making the difficult, and often highly technical, determination of the royalty rate.[30]

Despite this exhaustive list of considerations, the Federal Circuit appears to view the fifteenth factor—the hypothetical agreement between the parties had they chosen to negotiate

27. 35 U.S.C. § 284 (2006).

28. Lemley, *supra* note 17, at 661.

29. *See* RAYMOND T. NIMMER & JEFF C. DODD, MODERN LICENSING LAW § 7:5 (2012) ("All running royalties have at least two variables: the royalty base and the royalty rate."); Love, *supra* note 12, at 266.

30. *See* Georgia-Pac. Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970). The factors most important for the purpose of this Note are factors 1, 2, and 15. The fifteen factors are: (1) the royalties received by the patentee for the licensing of the patent; (2) the rates paid by the licensee for the use of comparable patents; (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; (5) the commercial relationship between the licensor and licensee, such as whether they are competitors in the same territory or 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 license; (8) the established profitability of the product made under the patent and its commercial success and popularity; (9) the utility and advantage of the patent property over any existing old modes or devices used for similar purposes; (10) the nature of the patented invention and the benefits to those who have used the invention; (11) the extent to which the infringer has made use of the invention; (12) the portion of the profit or selling price customary in the particular business or 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 improvements made by the infringer; (14) the testimony of experts; and (15) the amount that a licensor and licensee would have agreed upon (at the time infringement began) if both had been reasonably and voluntarily trying to reach an agreement, that is, the amount that a prudent licensee would have been willing to pay as a royalty and be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee. *Id.*

from the outset—as the central consideration.[31] When the court is contemplating this hypothetical negotiation between the parties, it presumes that the patent is valid and that the risk and expense of litigation is not taken into account.[32] This approach has been criticized, however, because it does not reflect the reality of license negotiations.[33]

From a theoretical standpoint, patent damages for reasonable royalties are generally lower than in lost profit cases because these patentees do not have the ability to sell the product on the open market.[34] Additionally, because reasonable royalty calculations take into account the possibility that the patentee will license the invention to several parties, the monopoly power is destroyed and each license becomes less valuable.[35] In reality, however, the difficult *Panduit* standard of proof means that many parties who lose profits because of infringement are forced to seek reasonable royalty damages because they cannot satisfy the *Panduit* requirements.[36] One reason courts might award relatively high reasonable royalty damages is a desire to compensate parties who had difficulty overcoming the *Panduit* standard.[37] These damages might not accurately reflect an *ex*

31. *See* Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009) (describing the hypothetical negotiations between the parties as the most common approach for calculating reasonable royalties).

32. Rite-Hite Corp. v. Kelley Co., 774 F. Supp. 1514, 1535 (E.D. Wis. 1991), *aff'd*, 56 F.3d 1538 (Fed. Cir. 1995).

33. *See* Love, *supra* note 12, at 267–68. Love also criticizes the fifteenth *Georgia-Pacific* factor because the very fact that the parties are currently in litigation speaks to how they could not reach an agreement. *Id. But see* Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. CORP. L. 1151, 1183–84 (2009) (identifying alternative approaches to calculating reasonable royalties).

34. *See* Lemley, *supra* note 17, at 661.

35. *See id.* at n.32 ("[A] patentee with market power will charge a profit-maximizing monopoly price. By contrast, two companies in competition will charge a price lower than the monopoly price, generating less profit to share between them and more consumer surplus."); Michael A. Greene, Note, *All Your Base Are Belong to Us: Towards an Appropriate Usage and Definition of the "Entire Market Value" Rule in Reasonable Royalties Calculations*, 53 B.C. L. REV. 233, 240 (2012).

36. *See* Lemley, *supra* note 17, at 667.

37. *See* ROBERT P. MERGES & JOHN F. DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 980 (4th ed. 2007) (arguing that high reasonable royalty awards serve as a way of compensating patentees for lost profits yet dispensing with the high standard of proof); Lemley, *supra* note 17, at 667–68. *But see* Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2024 (2007) (stating that one potential reason for inflated reasonable royalty damages is that the accused infringer is reluctant to in-

ante negotiation between the parties, but the Federal Circuit has rejected the argument that a reasonable royalty award could be so high that no prudent party would ever agree to such a figure in an *ex ante* negotiation.[38]

Because there is great potential for reasonable royalties to be skewed from a figure that parties would actually have agreed to *ex ante*, the courts have developed the concept of apportionment to reduce potential damages in some cases.[39] To illustrate, if a product is covered by a single patent, then the rate base will simply be the total sales value of the product.[40] However, in an age of increasing technological sophistication, products that end up the subject of infringement squabbles are likely to be covered by dozens, even hundreds, of patents. For example, Steve Jobs claimed that the patent portfolio for the iPhone was over 200 strong, and that figure does not include the patents Apple licensed from other companies to boost the capabilities of its product.[41] These multifaceted devices create a problem: it is not fair to allow them to use the entire sales value of the product as the royalty base because other patents contribute to the total value. The Supreme Court in *Seymour v. McCormick* stated that if a patentee could recover for damages on the whole product,

> then it follows that each one who has patented an improvement in any portion of a steam engine or other. . . complex machine may recover the whole profits arising from the . . . whole machine, and the unfortunate [infringer] may be compelled to pay treble his whole profits to each of a dozen or more several inventors of some small improvement in the engine . . . .[42]

To prevent patentees from receiving damages on patents they had no hand in creating, the *Seymour* Court developed the concept of apportionment.[43] Apportionment means that the same rule of damages cannot apply when a patent covers a

---

troduce evidence that other patented components contributed to a product's success out of fear that they might admit to infringing other patents).

38. Monsanto Co. v. Ralph, 382 F.3d 1374, 1383 (Fed. Cir. 2004).

39. *See* Love, *supra* note 12, at 268.

40. *Id.*

41. Lindsey Gilroy & Tammy D'Amato, *How Many Patents Does It Take to Build an iPhone?*, INTELL. PROP. TODAY (Nov. 2009), http://www.iptoday.com/issues/2009/11/articles/how-many-patents-take-build-iPhone.asp. This figure also does not include patents for iPhone features developed after 2009, such as facial recognition software. *See id.*

42. Seymour v. McCormick, 57 U.S. 480, 490 (1853).

43. *See id.* at 491.

whole product and when it only covers a portion of a product.[44] This results in the court forcing patentees to adjust reasonable royalty calculations based on the percentage value their patent actually created. For example, in *Lucent Technologies, Inc. v. Gateway, Inc.*, the court used apportionment to reject a jury verdict because the royalty rate was not low enough to reflect the true value that the patentee actually created.[45]

B. The Entire Market Value Rule

1. The Early History of the Entire Market Value Rule and the Apportionment Doctrine

Apportionment has its limits, however. As early as 1884, the Supreme Court ruled that no apportionment is required if the patentee can show that "the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature," then damages can be calculated on the value of the whole device.[46] *Garretson v. Clark* dealt with an improvement in the method of moving and securing the clamp of a mop head.[47] Because the entire value of the mop head could not be attributed to the patent, damages could not be calculated on the sale price of the entire mop.[48] Despite this ruling against the patentee, subsequent courts have allowed patentees to recover damages based on the sale of goods that are not part of the patented product at all, but merely sold in conjunction with the patented product.[49]

Garretson put forth the basic framework of the entire market value rule: when a patent constitutes the entire basis for consumer demand, then profits or damages can be calculated on the value of the entire device.[50] The court also required that in every case, the patentee must produce evidence apportioning value between profits flowing from their invention and those stemming from the unpatented features.[51] To prevent the injustice of a patentee being unable to recover because he could not produce evidence of apportionment when a clever infringer

44. *See id.*
45. Lucent Techs. Inc. v. Gateway, Inc., 580 F.3d 1301, 1338–39 (Fed. Cir. 2009).
46. Garretson v. Clark, 111 U.S. 120, 121 (1884).
47. *Id.*
48. *Id.* at 121–22.
49. Lemley, *supra* note 17, at 660.
50. *Garretson*, 111 U.S. at 121.
51. *Id.*

"smother[s] the patent with improvements belonging to themselves or to third persons," the Supreme Court in *Westinghouse Electricity & Manufacturing Co. v. Wagner Electric & Manufacturing Co.* relieved patentees of their burden to prove apportionment when the value of different patents are impossibly commingled.[52] In such cases, the burden of showing apportionment shifts to the defendant.[53] The *Westinghouse* decision soon proved to be problematic, however.

Westinghouse drew criticism from the bar because it supposedly awarded patent damages on the basis of procedural quibbles, such as the burden of proof, rather than on the actual merits of the case.[54] Further, apportionment proceedings were highly technical.[55] Not only did they require the appointment of a special master to preside over them, they sometimes could last ten or twenty years after a determination of infringement.[56] In 1946, Congress stepped in and eliminated the cumbersome apportionment proceedings and shifted patent damages from recovering the infringer's unjust enrichment to the current conception of providing compensation for the patentee.[57]

2. The Expansion of the Entire Market Value Rule

After Congress eliminated the tortuous *Westinghouse* requirement, the courts began slowly expanding the ambit of the entire market value rule. In *Tektronix v. United States*, the plaintiff sued for the infringement of several oscilloscopes and lost profits on related unpatented plug-ins, which were physically separate from the oscilloscopes yet functionally useless without them.[58] Because the plug-ins were financially dependent on the market created by the oscilloscopes, the court held that the scopes substantially created the value of the plug-ins,

52. *See* Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co., 225 U.S. 604, 615, 618–19 (1912).

53. *See id*. at 622. The Court justified this holding by declaring that the loss had to fall on the innocent or the guilty, and in such cases, the burden should be borne by the wrongdoer. *Id*. at 619.

54. *See* Amy L. Landers, *Let the Games Begin: Incentives to Innovation in the New Economy of Intellectual Property Law*, 46 SANTA CLARA L. REV. 307, 321–22 (2006).

55. *See id.* at 322.

56. *Id.*

57. *Id.* at 323.

58. Tektronix, Inc. v. United States, 552 F.2d 343, 351 (Ct. Cl. 1977), *opinion modified on denial of reh'g*, 557 F.2d 265 (Ct. Cl. 1977). Oscilloscopes are a type of device used to measure the wave shape of an electrical signal. *Id.*

and therefore the entire market value rule should apply, even though the two products were physically separate.[59] *Leesona Corp. v. United States* relied upon *Tektronix* when determining reasonable royalties for mechanically rechargeable batteries and the attendant boxes, covers, cathode envelopes, and zinc anodes.[60] The dispositive factor for application of the entire market value rule is not the physical joinder or separation of the contested items, but their financial and marketing dependence.[61] The court reasoned that because the very nature of the battery mandated that cathodes and anodes be replaced frequently, the products were financially dependent and the entire market value rule should apply.[62]

The modern test for the application of the entire market value rule first appeared in *Rite-Hite Corp. v. Kelley Co.*[63] In order to receive damages on unpatented components sold with a patented apparatus, the components taken together must be the parts of a complex machine, or they must be a single functional unit.[64] Additionally, the patented feature must be the "basis of consumer demand."[65] *Juicy Whip, Inc. v. Orange Bang, Inc.* shows this functional unit test in application[66] Juicy Whip owned a patent for a juice dispenser that simulated the appearance that the beverage is created in front of the customer, although it was in fact pre-mixed.[67] The court held that Juicy Whip could introduce testimony regarding lost profit on sales of syrup customers used in their machines because the syrup and

59. *See id.* at 352.

60. Leesona Corp. v. United States, 599 F.2d 958, 962, 974 (Ct. Cl. 1979).

61. *Id.* at 974.

62. *See id.* at 975.

63. Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1550 (Fed. Cir. 1995). *Rite-Hite* is also notable for being the first Federal Circuit case to mention the entire market value rule in the reasonable royalty context, although the case involved lost profits. *See* Landers, *supra* note 54, at 356.

64. *See Rite-Hite*, 56 F.3d at 1550. The patentee in this case sought to apply the entire market value rule to dock levelers used to bridge the gap between the loading dock and the vehicle, and vehicle restraints to secure the vehicle to the dock. *Id.* Because the products could be used independently of one another, the court concluded they did not constitute a single functioning unit. *Id.*

65. *Id.* at 1572. In *Minco, Inc. v. Combustion Eng'g, Inc.*, the Federal Circuit held that a rotary furnace used to produce fused silica constituted the basis of consumer demand for the end product of fused silica. 95 F.3d 1109, 1118–19 (Fed. Cir. 1996) (per curiam).

66. Juicy Whip, Inc. v. Orange Bang, Inc., 382 F.3d 1367 (Fed. Cir. 2004).

67. *Id.* at 1370.

the patented dispenser constituted a single functioning unit.[68] The district court had held that the items did not constitute a functional unit because Juicy Whip occasionally sold the syrup separately from the dispenser and because customers could use other syrups in the machine.[69] The court noted, however, because the "dispenser needs syrup and the syrup is mixed in a dispenser," the two constitute a single functioning unit.[70]

Despite the presence of legal standards limiting the application of the entire market value rule, without vigilant judges, juries continue to rely erroneously on the rule to award exorbitant damages to patentees.[71] For example, Lucent Technologies owned a patent for entering data into fields on a computer screen without using a keyboard.[72] Lucent filed suit, alleging that Microsoft Money, Windows Mobile, and Microsoft Outlook infringed on their patent.[73] Relying on Lucent's invocation of the entire market value rule, the jury used the *$8 billion* total sales of the three products as a royalty base, and arrived at damages of $358 million.[74] The Federal Circuit struck down the jury verdict, stating that it misapplied the entire market value rule.[75] However, the Chief Judge observed that "[t]here is nothing inherently wrong with using the market value of the entire product, especially when there is no established market value for the infringing component or feature, so long as the [royalty rate] accounts for the proportion of the base represented by the infringing component or feature."[76] Chief Judge Michel meant that so long as a large rate base is compensated by a comparatively low royalty rate, applying the entire market value rule will not result in excessive damages. However, the above excerpt from the *Lucent* decision seemingly opened the door a fraction for patentees to seek huge damage awards by making it easier for them to use the entire market value of a

68. *Id.* at 1372–73.
69. *Id.* at 1372.
70. *Id.*
71. *See* Love, *supra* note 12, at 272.
72. Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1308 (Fed. Cir. 2009).
73. *Id.*
74. *Id.* at 1323–24.
75. *Id.* at 1337 (holding that the patent at issue was only a very small component of a much larger software program and Lucent did not carry its evidentiary burden of proving that anyone purchased Outlook because of the patented method).
76. *Id.* at 1339.

product as a rate base.[77] Even if a royalty rate is very low, perhaps below 1%, if the rate base is in the billions of dollars, the resultant damages will be quite high. *Lucent* is not the only example of a case where a court has had to strike down an unreasonable jury verdict based upon the entire market rule.

Cornell University v. Hewlett-Packard, Co. exemplifies how a low royalty rate can still lead to huge damage awards. Cornell University owned a patent for a technology that issues multiple and out-of-order process instructions in a single clock cycle.[78] Cornell had previously entered into licensing agreements for the technology with Intel and IBM, but not Hewlett-Packard.[79] Although this technology is only one small component of an entire computing system comprising large components called 'CPU bricks,' the jury used Hewlett-Packard's entire revenue on these CPU bricks as a rate base.[80] The jury applied a royalty rate of only 0.8%, but because the rate base exceeded $23 billion, the damages totaled $184 million.[81] Judge Rader of the Federal Circuit, sitting by designation, overturned the jury verdict ruling that Cornell was not entitled to use the entire market value rule in order to obtain the entire value of the CPU bricks as a rate base.[82] "Simply put, Cornell's failure to connect consumer demand for Hewlett-Packard machine 'performance' to the claimed invention . . . undermined any argument for the applicability of the entire market value rule . . . ."[83]

3. Reigning in the Entire Market Value Rule

Just as soon as the Federal Circuit seemed to be opening the floodgates in *Lucent*, it shut them again in *Uniloc USA, Inc. v. Microsoft Corp.* Uniloc owned a patent to deter the illegal copying of software.[84] Microsoft infringed upon the technology

77. *See* Peter E. Strand, *Stuff That Genie Back in the Bottle: Stop Wishful Thinking About Royalty Base, Rate, and the EMVR*, 24 INTELL. PROP. & TECH. L.J. 25, 25 (2012).

78. Cornell Univ. v. Hewlett-Packard, Co., 609 F. Supp. 2d 279, 283 (N.D.N.Y. 2009).

79. *Id.* at 291–92.

80. *Id.* at 287. Cornell had previously asked the jury to use HP's *entire revenue from servers and workstation* as a rate base, but was forced to settle on CPU bricks when the court rejected its proposal. *Id.* at 287–88.

81. *Id.* at 282.

82. *See id.* at 289.

83. *Id.*

84. Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1296 (Fed. Cir.

in their Product Activation feature, which controlled access to XP, Word, and other Microsoft programs.[85] This feature only represented a small fraction of the total capabilities of Word and Office, but Uniloc nevertheless applied the entire market value rule and used a royalty rate of 2.9% against the entire revenue of Windows and Microsoft Office.[86] The jury awarded Uniloc $388 million.[87]

On appeal, Uniloc relied upon the statement of Chief Judge Michel that it is perfectly acceptable to use the entire value of a product as the rate base so long as the royalty rate is low to justify their use of the entire market value rule.[88] The Federal Circuit ruled that this statement was taken out of context, however, and the entire market value rule is a dangerous tool and must be limited.[89] This danger flows from the fact that once a jury sees that the infringer obtained $19 billion in revenue from products containing the infringing patent, their concept of just damages will be irrevocably skewed.[90] Uniloc was not correct in relying upon the entire market value rule because consumers did not buy Windows or Office because of the Product Activation feature, and therefore it was not the basis for consumer demand.[91] *Uniloc* appears to have set a new tone in the Federal Circuit's approach to the entire market value rule and has been closely followed by subsequent decisions.

LaserDynamics, Inc. v. Quanta Computer, Inc. is the most recent Federal Circuit case involving the entire market value rule.[92] LaserDynamics received a $52,000,000 verdict because their damages expert used the entire market value rule to get to a royalty rate totaling Quanta's revenues from all of their laptops sold in the United States, and the jury accepted his tes-

2011).

85. *Id.* at 1297–98.

86. *Id.* at 1311–12. Uniloc damages experts utilized the 25% rule of thumb to justify seeking such a significant award. *Id.* They estimated that the isolated value of the Product Activation was $10 and took 25% of that figure, hypothesizing that 25% of the value goes to the patent owner and 75% to Microsoft. *Id.* They then multiplied the 225 million new Windows and Office products on the market by $2.50, arriving at a sum exceeding $564 million. *Id.* The Federal Circuit effectively ended the 25% rule of thumb in *Uniloc*. *Id.* at 1315.

87. *Id.* at 1312.

88. *Id.* at 1319.

89. *Id.* at 1320.

90. *Id.*

91. *Id.* at 1319.

92. *See supra* text accompanying notes 1–8 for a discussion of the case.

timony at face value.[93] Because LaserDynamics failed to produce any evidence that their automatic disc discrimination feature drove consumer demand for laptops, the court held that the entire market value rule could not apply.[94] The court emphasized that the entire market value rule is a "narrow exception to [the] general rule" and that simply using a very low royalty rate does not relieve the patentee of the burden of demonstrating consumer demand for the patent.[95] The recent decisions in *Uniloc* and *LaserDynamics* make clear that the Federal Circuit is taking a much more vigilant approach to containing the entire market value rule.

II. THE FLAWED ENTIRE MARKET VALUE RULE

A. THE ENTIRE MARKET VALUE RULE HAS NO PLACE IN MODERN PATENT LAW

Although the Federal Circuit[96] has signaled the end of the expansion of the entire market value rule, the rule still has potential to allow patentees to receive undeserved damage awards and is out of touch with the reality of modern technology.[97] This Part argues that the entire market value rule can lead to unreasonable jury verdicts. Further, a rule stemming from a case involving a rotating mop head should not be applied to modern devices potentially containing hundreds of patents. Additionally, this Note argues that it is not possible for a manufacturer to truly show that a particular patent is actually driving the entire basis for consumer demand.

93. *See* LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 68 (Fed. Cir. 2012).

94. *Id.* ("It is not enough to merely show that the disc discrimination method is viewed as valuable, important, or even essential to the use of the laptop computer. Nor is it enough to show that a laptop computer without an ODD practicing the disc discrimination method would be commercially unviable.").

95. *See id.* at 67.

96. 28 U.S.C. § 1295 gives the Court of Appeals for the Federal Circuit exclusive jurisdiction over final decisions of a district court of the United States arising under an Act of Congress relating to patents. 28 U.S.C. § 1295 (2012). The court provides a uniform interpretation of federal patent law throughout the nation. *See* Joseph R. Re, *Brief Overview of the Jurisdiction of the U.S. Court of Appeals for the Federal Circuit Under § 1295(a)(1)*, 11 FED. CIR. B.J. 651, 652 (2002).

97. *See* Greene, *supra* note 35, at 233; Love, *supra* note 12, at 264.

1. The Vagaries of Consumer Demand

Garretson requires that for the entire market value rule to apply, the patent in question must provide the entire basis for consumer demand.[98] But how can a patentee show her invention is truly driving the *entire* basis for consumer demand? One suggestion is to use survey evidence to provide insight into the minds of consumers.[99] Theoretically, if a survey of a representative sample of consumers said that 100% of them would buy a product because of the patented feature, then the patentee has demonstrated that his product is driving the entire basis of consumer demand. But there are several problems with this approach. First, the question of why consumers buy what they buy is a particularly complex question: so complex in fact that consumer psychology is its own interdisciplinary field of study.[100] Factors such as advertising, cost, product availability, consumer emotion, and the cultural background of the consumer all come into play when a consumer decides to buy a product.[101] The second problem is that surveys of consumer demand must include a control in order to avoid bias.[102] The control typically constitutes another feature of the product in question, i.e., the survey will ask the consumer to rate the relative value of one feature as compared to another feature of the same product.[103] Due to the presence of this control, consumer demand for a product will always be measured relative to another feature of the product, not as an absolute value.[104]

Because of the multitude of factors that enter a consumer's mind before they buy a product and the inherent limitations of the surveys themselves, a survey that showed a patented feature being responsible for 100% of consumer demand would be

98. Garretson v. Clark, 111 U.S. 120, 121 (1884).

99. *See* Dyck, *supra* note 15, at 218. Survey evidence must be presented in accordance with the Federal Rule of Evidence 703, which provides that "[a]n expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed." FED. R. EVID. 703. Courts have interpreted this to mean that an expert must conduct the survey, the expert must draw a representative sample, and the overall interviews must be performed in accordance with objective statistics in the applicable field. Ways & Means, Inc. v. IVAC Corp., 506 F. Supp. 697, 704 (N.D. Cal. 1979), *aff'd*, 638 F.2d 143 (9th Cir. 1981).

100. Dyck, *supra* note 15, at 220–21.

101. *Id.* at 221.

102. *Id.* at 224.

103. *Id.*

104. *Id.*

"highly suspicious."[105] Conceptually, it is difficult to see how a patented feature in a multifaceted device could ever actually be responsible for all consumer demand. If a device contained two patents, and one of the patents was the sole reason for consumers buying the device, then the other patent would serve very little purpose. Such a device is unlikely to exist, as the licensing of a useless patent would essentially be throwing money away,[106] and even if it did, its occurrence would be too rare to justify the existence of the entire market value rule.

The theoretical limitations of the entire market value do not seem to matter, however, as juries have shown repeatedly that they will accept the contention of patentees at face value that the patent is driving consumer demand. When consumers purchase a new laptop, they look to such features as processing power, the size of the screen, aesthetics, and battery life.[107] But the jury in *LaserDynamics* determined that the ODD device, a device that most jurors probably did not even know existed until trial, was the sole reason that consumers decided to purchase a laptop.[108] The jury in *Uniloc* went even further than its counterpart in *LaserDynamics* by deciding that a product actively reviled by many consumers was in fact driving demand.[109] The product activation feature that Microsoft infringed was so unpopular in fact, that when they released the technology, a senior company official acknowledged that the product would "tick off a lot of users."[110] If a jury can apply the entire market value rule to a patent that drives some consum-

105. *Id.* at 224 n.81.

106. *Cf.* John R. Allison & Mark A. Lemley, *The Growing Complexity of the United States Patent System*, 82 B.U. L. REV. 77, 78 (2002) (stating that intellectual property is becoming more central to a company's value).

107. *See* Dave Oliver, *Samsung Chromebook Review (2012 Model)*, WIRED UK, Oct. 31, 2012, http://www.wired.co.uk/reviews/laptops/2012-10/samsung-chromebook-review (reviewing the screen, speakers, battery, look, and weight of the computer, among other features).

108. *See* LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 63 (Fed. Cir. 2012).

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

110. Dave Wilson, *Safeguards Punish Consumers, Not Pirates*, L.A. TIMES, Oct. 25, 2011, http://articles.latimes.com/2001/oct/25/news/tt-61351. Microsoft used the product activation feature not to prevent piracy, as commonly believed, but to force users with multiple computers to buy a new copy of Windows XP and Microsoft Office for each computer. Some went so far as to describe the feature as a "rapacious monopolist abusing computer users who are helpless to do anything about it." *Id.*

ers *not* to purchase a product, then it is apparent that they do not understand the law correctly.

The Federal Circuit has not provided sufficient clarity to the issue. Although in *Uniloc* and *LaserDynamics* the court tightened the application of the entire market value rule, in those cases it was clear that the patents did not even substantially drive consumer demand.[111] In a more borderline case, *Juicy Whip, Inc. v. Orange Bang, Inc.*, the court allowed the application of the entire market value rule even though it acknowledged that the patented feature was not the *entire* basis for consumer demand.[112] Without the unpatented syrup, the pre-mix dispenser would be useless, regardless of whether the two products constituted a single functioning unit.[113] By stating that the dispenser "needs" syrup to function,[114] but then allowing the patentee to utilize the entire market value rule to recover lost profits on the sale of syrup, the court ignored the question of whether the dispenser constituted the entire basis for consumer demand.

2. The Changing Face of Technology

In 1884, the year the Supreme Court decided *Garretson v. Clark*, the United States Patent and Trademark Office (PTO) received 35,422 applications and granted 20,272 patents.[115] In 2011, the Patent and Trademark Office considered 535,188 applications and granted 246,684.[116] Not only has the volume of patent applications increased dramatically since *Garretson v. Clark*, but the entire nature of these patents has changed as

111. *See supra* notes 107–10 and accompanying text.

112. 382 F.3d 1367, 1372 (Fed. Cir. 2004).

113. *Id.*

114. *Id.*

115. U.S. PATENT & TRADEMARK OFFICE, U.S. PATENT ACTIVITY, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/h_counts.htm (last visited Nov. 25, 2013).

116. *Id.* According to the 1890 census, the U.S. population in 1890 was almost 63 million, while the 2010 census counted nearly 309 million Americans. U.S. CENSUS BUREAU, TABLE 1. UNITED STATES - RACE AND HISPANIC ORIGIN: 1790 TO 1990 (2002), *available at* http://www.census.gov/population/www/documentation/twps0056/tab01.pdf; U.S. CENSUS BUREAU, *Resident Population Data (Text Version),* http://www.census.gov/2010census/data/apportionment-pop-text.php (last visited Nov. 25, 2013). Population growth is not the only factor responsible for the increase in patent applications. Scholars have cited technological change, the increased economic value of patents, and the development of the Federal Circuit for the recent explosion in patent applications. *See* Allison & Lemley, *supra* note 106, at 78–79.

well.[117] Historically, the bulk of patents seen by the PTO were mechanical patents, defined as "a process or product that consists solely of the use of mechanical parts."[118] But the percentage of patents defined as mechanical is rapidly shrinking: a study of patents from 1976–78 found that around half of patents during this time were considered mechanical, yet from 1996–98 less than a third of patents were for mechanical inventions.[119] Patents are also shifting away from traditional electronics. The bulk of the increase is seen in the fields of software, biotechnology, and pharmaceuticals.[120] The trend is clearly towards high-tech patents in the computing and biotechnology industries where products consist of numerous patented inventions working together.[121]

This change is also evident in the profile of the inventors themselves.[122] Although there is a romanticized view in American culture of a solo inventor tinkering in his garage, the majority of inventions in the United States today are made by corporations.[123] In the 1996–98 sample, the median number of inventors per patent was 2.26, and 85% of all patentees assigned their invention to a corporate entity, typically an employer.[124] Today's popular consumer devices can illustrate the changing dynamics of patents. As previously discussed, a smartphone, such as the iPhone can contain hundreds of patents.[125] Apple has even been successful in patenting features completely incidental to the main product, such as the wedge shape of its laptop computers.[126] Google is widely believed to

117. *See* Allison & Lemley, *supra* note 106, at 79. Although this article focuses on the changes in the patent system from the 1970s to the 90s, it follows that the changes would be even more dramatic from the 1880s to today.

118. *See id.* at 89. Naturally, because electrical technology was only just developing in 1884, and computers and biotechnology were decades away, the PTO at the time of *Garretson* dealt almost exclusively in mechanical patents. *Id.*

119. *See id.* at 91–92.

120. *Id.* at 93–94.

121. *See* Love, *supra* note 12, at 264.

122. *See* Allison & Lemley, *supra* note 106, at 96.

123. *See id.* Nor is this even a particularly recent development. Allison & Lemley point out that from 1976–78, corporations owned more than three-quarters of patents in their study. *Id.* at 97.

124. *Id.*

125. *See supra* note 41 and accompanying text.

126. Roberto Baldwin, *Apple Patents the Macbook Air's Wedge Design—Bad News for Ultrabook Makers*, WIRED, June 8, 2012, http://www.wired.com/gadgetlab/2012/06/apple-patents-the-macbook-airs-wedge-design-bad-news-for-ultrabook-makers/.

have purchased Motorola Mobility because the company owned a portfolio of 17,000 patents covering its smartphones and other technologies.[127] The paradigm that existed when the Supreme Court formulated the entire market value rule has shifted drastically over 128 years. Technological devices today are much more complicated and the use of multiple patents is the norm, rather than the exception, yet juries are asked to apply a rule that is over 100 years old from a simpler era. Indeed, juries applied the entire market value rule in *Lucent*, *Cornell University*, *Uniloc*, and *LaserDynamics*: all cases involving highly complicated devices with dozens of patents.[128] The nature of innovation has progressed since *Garretson v. Clark*; the law should follow suit.

3. The Consequences of the Entire Market Value Rule

Because it is almost never the case that a single patent is responsible for the entire value of a multifaceted device, the entire market value rule overcompensates patentees by awarding damages on value they did not create.[129] If patentees are allowed to recover large, undeserved damage awards because of their patents, it will incentivize litigation and clog up the courts, as patentees may rush to the courthouse seeking huge jury verdicts.[130] Patent litigation is expensive—even when less than $1,000,000 is at risk in patent litigation, the average total cost of litigation is $916,000[131]—and this cost may eventually be borne by consumers. The cost of litigation will be added to the high damage awards and the consumers will end up footing the bill.[132]

The potential for high damage awards through the entire market value rule also creates an incentive for patent trolling.[133] Patent trolling is a business model wherein a com-

127. David Goldman, *Google Seals $13 Billion Motorola Buy*, CNNMONEY (May 22, 2012), http://money.cnn.com/2012/05/22/technology/google-motorola/index.htm.

128. *See supra* Part I.B.

129. Lemley, *supra* note 17, at 663–64.

130. *See* Strand, *supra* note 77, at 25.

131. David E. Sosnowski, *Resolving Patent Disputes via Mediation: The Federal Circuit and the ITC Find Success*, 45 MD. B.J. 24, 26 (2012).

132. Daniel A. Crane, *Exit Payments in Settlement of Patent Infringement Lawsuits: Antitrust Rules and Economic Implications*, 54 FLA. L. REV. 747, 749 (2002) (stating that in patent litigation, the cost of litigation "will be passed on to consumers like any other cost").

133. *See* Love, *supra* note 12, at 281.

pany acquires the rights to patents, not to manufacture a product, but for the sole purpose of obtaining money through infringement damages and licensing fees.[134] If a patentee can obtain damages not just on his own patent, but an entire multimultifaceted device, then engaging in patent trolling becomes even more lucrative. Although some consider patent trolling to be a legitimate enterprise,[135] if litigation is more profitable for patent owners than producing and marketing a product, innovation will be stifled.[136]

B. SUGGESTED REMEDIES DO NOT SUFFICIENTLY ADDRESS THE PROBLEMS OF THE ENTIRE MARKET VALUE RULE

The entire market value rule has been the subject of academic criticism, although few commentators have argued that the rule should be abolished.[137] Suggested solutions to the problems created by the rule include a greater focus on the apportionment of damages and limiting the rule to the realm of lost profits, but these remedies contain their own problems.[138]

1. Apportionment

Although there is some consensus that the entire market value rule should be scaled back, such consensus does not exist on the proper way to do so. One suggestion is to return the entire market value rule to its original role as a limited exception of the apportionment requirement.[139] The entire market value rule should only apply when a product *truly* constitutes the entire basis for consumer demand, and the alleged infringer should be allowed to present evidence of consumer demand for the unpatented components.[140] If a patentee cannot show that the invention was the sole basis for consumer demand, then damages should be apportioned between the patented and unpatented components.[141]

134. *Id.*

135. *See* Landers, *supra* note 54, at 345.

136. *See* Love, *supra* note 12, at 281.

137. *See, e.g.*, Landers, *supra* note 54, at 373–74; Lemley, *supra* note 17, at 661–65. *But see* Thomas F. Cotter, *Four Principles for Calculating Reasonable Royalties in Patent Infringement Litigation*, 27 SANTA CLARA COMPUTER & HIGH TECH. L.J. 725, 735 (arguing that the entire market value rule should probably be done away with altogether).

138. *See* Cotter, *supra* note 137, at 736–39.

139. Love, *supra* note 12, at 272.

140. *Id.* at 292.

141. *See id.* at 268–69.

This approach has three problems, however. First, alleged infringers currently may be allowed to present evidence of consumer demand, but often fail to do so.[142] For example, in *LaserDynamics*, the court noted that Quanta's motion for summary judgment neglected to challenge the use of a laptop computer as a royalty base, nor did its damages expert give any testimony on the issue of consumer demand.[143] It is true that sometimes courts reject the introduction of such evidence because it requires collateral litigation over the existence and value of components not covered by the patent at trial.[144] However, the accused infringer is often hesitant to introduce the evidence at trial because they could potentially be admitting to infringing upon other patents.[145] Because the infringer is hesitant to introduce evidence of consumer demand, the use of the entire market value rule may often not be challenged at trial, meaning that the rule would continue to be misapplied.

Second, this solution does not address one of the core problems of the entire market value rule: a multifaceted device where a single patent constitutes the entire basis for consumer demand is unlikely to exist.[146] The benefits of retaining the entire market value for that exceedingly rare circumstance are outweighed by its potentiality for abuse, particularly because the infringer is unlikely to challenge the application of the rule.[147]

Third, the apportionment of damages between the unpatented components and the patented components is problematic for one of the same reasons as the entire market value rule. The proper apportionment of damages in the reasonable royalties context requires a calculation of what value can be attributed to the patented feature and what value can be attributed to the unpatented features.[148] Just as consumer

142. Lemley & Shapiro, *supra* note 37, at 2024.

143. LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 57 (Fed. Cir. 2012).

144. *Cf.* Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1358, 1556 (Fed. Cir. 1995) (Nies, J., dissenting) ("A reasonable royalty must be based on the value of the patented [components], not on other features in the infringing device.").

145. Lemley & Shapiro, *supra* note 37, at 2024–25.

146. *See supra* Part II.A.2.

147. *Cf.* Josh Friedman, Note, *Apportionment: Shining the Light of Day on Patent Damages*, 63 CASE W. RES. L. REV. 147, 162 (2012) (noting opinions that current damages law, including the entire market value rule, encourages predatory litigation abuse).

148. *See* Love, *supra* note 12, at 268.

demand is difficult, if not impossible to quantify, the question of what value can be assigned to each patent would require byzantine and time-consuming calculations sure to bog the courts down in unnecessary procedure.[149] Apportionment proceedings were an integral part of patent law after the *Westinghouse* decision, and the results were so negative that one member of Congress described them as a "complete failure of justice in almost every case."[150] A return to such a method might result in fairer damage awards, but the procedure is too complicated to be justified.

2. Limiting the Entire Market Value Rule to Lost Profits

Another suggested method to limit the entire market value rule is to apply it only to lost profits cases.[151] It has been argued that the rule makes more sense in the lost profits context because if the majority of the value of a device is attributable to the patentee's technology, then it is reasonable to conclude that the patentee would have sold the product but for the defendant's infringement.[152] Proponents of retaining the rule for lost profits acknowledge that it is almost never the case where a patent is responsible for the entire value of a multi-faceted product, but argue that this is immaterial because the infringer is still usurping sales of the patentee.[153] But this argument fails to explain why the patentee should be allowed to recover lost profits on value they did not create. Consider a product where the patent contributes the majority, but not all, of the value of the product and the defendant's infringement deprives the patentee of the sale of that product. If the patentee had made the sale, they would have had to pay licenses to the holders of other patents in the device.[154] Therefore, any calculation of lost profits as a but-for cause of the infringement should take into account such licenses. If a patent is not creating the entire market value of a product, then the patentee should not be compensated as if it were. Because the entire market value rule is still

149. Landers, *supra* note 54, at 313.

150. *Id.* at 313 n.25.

151. *See* Lemley, *supra* note 17, at 662–63.

152. *Id.* at 663.

153. *Id.*

154. *Cf.* Georgia-Pac. Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (indicating that such contracts between licensors and licensees generally exist in a product containing patented components from multiple patentees).

fraught with numerous problems despite the *Uniloc* and *LaserDynamics* decisions, it should be eliminated entirely.

III. ELIMINATING THE ENTIRE MARKET VALUE RULE AND RECONSTRUCTING HYPOTHETICAL NEGOTIATIONS

A. HOW THE ENTIRE MARKET VALUE RULE COULD BE ELIMINATED

Discarding the entire market value rule completely is the surest way to prevent its misapplication in the future. The Federal Circuit has limited the rule's scope in the past several years, but it was only recently that the Court expanded the entire market value rule to reasonable royalty cases in *Rite-Hite*.[155] The composition of courts change, and future judges might be less vigilant in policing the use of the entire market value rule.

In terms of lost profits, the entire market value rule can easily be eliminated by ensuring that the damage award is an accurate reflection of the profits the patentee would have received but for the infringement.[156] This means that damages should take into account the licensing arrangements that the patentee made for the use of other patents in the product. There is evidence that the Federal Circuit already endorses this approach and applies the entire market value rule only rarely in the realm of lost profits.[157]

The framework already exists for removing the entire market value rule for reasonable royalties and ensuring that patentees do not receive damages for value they did not create.[158] Many courts treat the fifteenth *Georgia-Pacific* factor, i.e., reconstructing hypothetical negotiations between the parties before the infringement, as the proper method for determining reasonable royalties.[159] At least one scholar has advocated this approach,[160] although it has been criticized as purely speculative[161] given that the very fact of infringement suggests

155. Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1550 (Fed. Cir. 1995).
156. *See* Cotter, *supra* note 137, at 749.
157. *Id.*
158. *Georgia-Pac. Corp*, 318 F. Supp. at 1120.
159. Lucent Techs., Inc. v. Gateway, Inc. 580 F.3d 1301, 1324 (Fed. Cir. 2009).
160. *See* Cotter, *supra* note 137, at 751.
161. *See* Love, *supra* note 12, at 267.

that the two parties were quite unwilling to negotiate ex ante.[162] But *Georgia-Pacific* factors one and two—previous royalties received by the patentee and the rates paid by the licensee in the past for comparable patents—are often available to obviate the court's need to attempt to reconstruct a fictitious negotiation process.[163]

If a sufficient licensing history for a multi-faceted device exists, this licensing history should be the foremost consideration for the trier fact when calculating damages. Instead of relying on an immensely complicated fifteen-factor test or trying to step into the minds of the parties and speculate as to what they *might* have done, a jury would look at the licensing history and arrive at a reasonable damages calculation. The Federal Circuit should continue the trend they started in *Uniloc* and *LaserDynamics* and eliminate the entire market value rule the next time it is an issue on appeal. By eliminating the rule and explicitly stating that *Georgia-Pacific* factors one and two should be the foremost consideration of the trier of fact, the Federal Circuit can lessen the risk that patentees are overcompensated and provide an easier method for juries to calculate damages.

There have been calls to eliminate or severely limit the entire market rule in the past,[164] but the solution proposed by this Note is novel because it would make prior licensing history the most important factor when calculating damages. Professor Cotter argues that the prior licensing history should only be one factor that the trier of fact considers when awarding reasonable royalties.[165] Other factors that he argues should play a role are the expected value of the patented invention in comparison with the next-best alternative, the existence and strength of other patented inventions incorporated into the end product, and the use of realistic royalty rates and bases.[166] But Professor Cotter's proposal still forces the trier of fact to speculate as to what the parties *would* have agreed to had they decided to negotiate before the infringement.[167] Focusing instead on prior licensing agreements means that damages are tied to

162. Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1158 (6th Cir. 1978).

163. *See, e.g.*, *Georgia-Pac. Corp.*, 318 F. Supp. at 1120.

164. *See, e.g.*, Cotter, *supra* note 137, at 735; Love, *supra* note 12 at 264.

165. Cotter, *supra* note 137, at 741.

166. *Id.*

167. *Id.* at 741–42.

reality: what the patentee has actually agreed the patent was worth in the past. Tying damages to prior licenses also eliminates the problematic royalty rates and royalty bases, which the patentee can manipulate into receiving undeserved damage awards.

If there is ample evidence available of previous royalties received by the patentee or of previous licenses paid by the infringer for similar products, then the courts do not need to look to *Georgia-Pacific* factor 15. Both the patentee and the alleged infringer can proffer evidence of what sums had been paid previously and present to the jury a figure that they believe is reasonable in light of these past arrangements. Of course, the jury must adjust the figure upwards to provide compensation for the infringement; otherwise there would be no incentive for a product manufacturer to ever pay for a license.[168]

B. APPLYING *GEORGIA-PACIFIC* FACTORS ONE AND TWO TO PRIOR CASES AND POSSIBLE DRAWBACKS OF THE SOLUTION

The effectiveness of using *Georgia-Pacific* factors one and two when calculating damages can be seen by examining several of the cases previously discussed. For example, in *LaserDynamics*, the company had entered into 29 licensing agreements all for lump sum payments of less than $1 million.[169] If there is evidence of such lump sum payments available, there is little need to engage in difficult mathematic calculations involving rate bases and royalty rates. As demonstrated above,[170] the very concept of royalty rates can be used to confuse juries into thinking they are awarding reasonable damages when a high rate base is multiplied by a very low royalty rate.[171]

This solution could also have been applied effectively in *Cornell University v. Hewlett-Packard, Co.* Cornell had reached licensing agreements for the use of its technology with IBM and Intel, meaning evidence existed on the record of what value Cornell and third parties attributed to use of the invention.[172]

168. Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1158 (6th Cir. 1978) (stating that if the court did not compensate for infringement, the infringer will be in a "heads-I-win, tails-you-lose position").

169. LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 58 (Fed. Cir. 2012).

170. *See supra* text accompanying note 80.

171. *See* Strand, *supra* note 77, at 25.

172. *See* Cornell Univ. v. Hewlett-Packard Co., 609 F. Supp. 2d 279, 291–92 (N.D.N.Y. 2009); *see also supra* text accompanying note 80. In fact, because

In order to calculate damages, the jury could merely have examined these prior licensing agreements, made appropriate adjustments for inflation, penalized Hewlett-Packard for the infringement, and arrived at a reasonable figure. Instead, *Cornell* muddied the waters by introducing the inapposite entire market value and disguised an enormous royalty base through a seemingly low royalty rate of 0.8%.[173]

Although Judge Rader in *Cornell* greatly reduced the damages awarded, he did so by applying the 0.8% royalty rate on a much smaller royalty base.[174] But this approach is potentially problematic because it can be inconsistent with patent licensing agreements. Often prior licensing agreements are lump sum payments and make no mention of royalties. For example, in *Mirror Worlds, LLC v. Apple, Inc.* the judge rejected Mirror World's proposed royalty rate because none of Apple's previous licensing agreements for the technology in question involved royalties, but were instead lump sum payments.[175] If previous licensing agreements involved lump sum payments, then juries (and judges) should have no need to engage in complicated discussions over what the proper royalty base and rate should be.

In *LaserDynamics*, the damages expert for Quanta Computer essentially relied upon the proposed solution.[176] He examined the previous licenses and testified that a $500,000 lump sum payment would be a reasonable royalty.[177] LaserDynamics contended that this figure was too low because the growth in the DVD market had made their patent more valuable since they had entered into those licensing agreements.[178] But instead of using these licenses as a baseline figure and increasing this figure based on the rise in value of their patent and to punish the infringer, they applied a royalty rate of 2% to a rate base consisting of Quanta's total sales of laptop computers.[179]

Intel's licensing agreement allowed Intel to sell the processors to third parties, and HP then bought the processors, HP had an implied license with Cornell and was not liable for infringement with regards to processors bought from Intel. *Cornell*, 609 F. Supp. 2d at 291.

173. *Cornell*, 609 F. Supp. 2d at 292.

174. *Id.*

175. Mirror Worlds, LLC v. Apple, Inc., 784 F. Supp. 2d 703, 727 (E.D. Tex. 2011).

176. *See* LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 62 (Fed. Cir. 2012).

177. *Id.*

178. *Id.* at 61.

179. *Id.* at 60.

This method of calculation, out-of-touch with any of their previous licensing agreements and inappropriately relying upon the entire market value rule, resulted in an exorbitant jury verdict.[180]

A drawback to this solution is that prior licensing agreements will not always exist for juries to rely upon when calculating damages. If the patent is very new, or if the patentee produced the product himself and did not license the invention, then no licensing history will exist to aid decision makers. But there are many incentives for patentees to license a product, meaning if a technology is involved in a licensing dispute, it is likely that prior licensing agreements will exist for similar technologies. Smaller firms may lack the resources to successfully take a product to market, and will thus need to rely on licensing agreements with firms with greater resources to market the technology.[181] Larger firms see licensing as a way to cheaply acquire new technology without the costs of research and development.[182] And if a licensing history truly does not exist, then courts can utilize the fifteenth Georgia-Pacific factor and reconstruct ex ante negotiations between the parties without ever having to invoke the entire market value rule.

If there is evidence on the record of previous lump sum royalty payments, the reasonable royalty award should reflect these previous payments, adjusted upwards to compensate for the infringement. If, however, the previous royalty payments were not lump sums but percentage royalties, then the reasonable royalty award should reflect the previous agreements, with a similar royalty rate and royalty base. The first two *Georgia-Pacific* factors, not the fifteenth, should be given the highest importance. With the entire market value rule eliminated and reasonable royalty awards based off of previous licensing agreements, patentees will receive fairer verdicts on value they actually had a hand in creating.

CONCLUSION

Patentees should not be allowed to use their patents as tools for seeking out infringers and slapping them with huge damage awards in litigation. Allowing this will only encourage unnecessary litigation and lessen incentives for companies to

180. *Id.* at 80.

181. Harold J. Evans, *Introduction to Technology Licensing*, 35 ARK. LAW., Winter 2000, at 16, 16.

182. *Id.*

actually manufacture and market products for sale. The entire market value rule is one such way that patentees can use their patent as a sword to reap undeserved damages. This note has examined the history of the entire market value rule and criticized the rule for being anachronistic and resting on unsound theoretical footing. By abandoning the entire market value rule and using previous licensing agreements as a guideline for damages, patentees will be reasonably compensated for inappropriate use of their inventions, but not more than they deserve. The Constitution states that patents should be protected "in order to promote the progress of science and useful arts,"[183] and a revocation of the entire market value rule and a more reasonable method of calculating damages will help ensure that the patent system fulfills its function of promoting innovation.

183. U.S. CONST. art. I, § 8, cl. 8.