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RETOOLING PATENT DAMAGES LAW FOR NPE CASES*

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I. Introduction

Since creation of the Federal Circuit in 1982, patent litigation has become increasingly more common. The bulk of reported cases in the 1980s and 1990s were between competitors; that is, the plaintiff practiced its own patented invention and sued a defendant whose accused product competed with the plaintiff's. (We will refer to these plaintiffs as "practicing entities" or "PEs".) The remedy of choice for PEs was lost profits damages, which were considered more lucrative than reasonable royalty damages. Non-practicing entities ("NPEs") – plaintiffs that do not practice the patent – also sued for infringement during the 1980s and 1990s, but an NPE cannot recover lost profits damages because it does not compete with the defendant and thus does not lose profits due to infringement. NPEs are relegated to reasonable royalty damages. A recent patent litigation study found during the period from 1995 to 2000 that PE cases yielded 23% higher damages awards than NPE cases.¹

The turn of the century ushered in a striking increase in NPE litigation. NPEs focused on ways to maximize reasonable royalty damages, but their focus was not singular since they also wielded the remedy of a permanent injunction. However, in 2006, the Supreme Court handed down its *eBay* decision, making it more difficult to obtain a permanent injunction, especially for NPEs.² Lacking the threat of injunction, NPEs constructed more creative and lucrative reasonable royalty theories, resulting in handsome payoffs in many cases. Juries handed NPEs verdicts of eight, nine, and even ten figures.

^{*} The purpose of this paper is to serve as a starting point for academic discussion at the 2012 Sedona Conference concerning the future of the law surrounding patent damages. The discussion herein does not necessarily reflect the views of the authors, or of Fish & Richardson P.C. as to what the law currently is or should be in the future.

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PricewaterhouseCoopers, 2012 Patent Litigation Study: Patent Litigation Continues to Rise Amid Growing Awareness of Patent Value, at page 7 (September 2012) (finding from 1995 to 2000 that the median award for PEs was \$5.5M versus \$4.5M for NPEs).

^{\$4.5}M for NPEs).
2 eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006). Justice Kennedy filed a concurring opinion in which he commented on the problem with giving NPEs the power of injunctive relief: "In cases now arising trial courts should bear in mind that in many instances the nature of the patent being enforced and the economic function of the patent holder present considerations quite unlike earlier cases. An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest." Id. at 396-97 (citations omitted).

The data on recoveries for PEs versus NPEs swung to the other side – the same patent study determined from 2006 to 2011 that NPE median damages awards were nearly double that of PEs.3

This trend has continued into the current decade. Juries have awarded enormous sums in patent cases, including to NPEs. Many of these verdicts have been overturned, however, on post-trial motions or appeal. Some examples are:

- LaserDynamics v. Quanta Computer (E.D. Tex. 2010, 2011; Fed. Cir. 2012): \$52M verdict in first trial overturned on motion for new trial; \$8.5M verdict in second trial vacated on appeal by the Federal Circuit.4
- Lucent v. Microsoft (Fed. Cir. 2009; S.D. Cal. 2011): Original \$358M verdict vacated by Federal Circuit and remanded for new trial on damages. Lucent awarded \$70M verdict in second trial, but district court vacated on IMOL. Final judgment of \$26M in reasonable royalty damages.⁵
- Mirror Worlds v. Apple (E.D. Tex. 2011; Fed. Cir. 2012): \$625M verdict vacated on JMOL; affirmed on other grounds by the Federal Circuit.⁶
- Cornell v. HP (N.D.N.Y. 2009) (Rader, J., sitting by designation): \$184M verdict overturned on JMOL; remittitur of \$53.5M offered to Cornell.⁷
- Mformation v. RIM (N.D. Cal. 2012): \$147M verdict vacated on JMOL (currently on appeal to the Federal Circuit).8

The problem of excessive NPE verdicts stems at least in part from the lack of guidance in the damages statute and the relatively unbridled nature of the Georgia-Pacific reasonable royalty methodology.9 The patent statute (35 U.S.C. § 284) provides only that courts must award damages adequate to compensate for infringement, "but in no event less than a reasonable royalty." Georgia-Pacific lays the groundwork for computing reasonable royalties, envisioning a hypothetical negotiation between a willing licensor (patentee) and a willing licensee (defendant) occurring at the time infringement began, including a list of 15 factors that influence this negotiation. Georgia-Pacific has given NPEs enormous leeway in crafting damages theories and opens the door to nearly limitless supporting evidence, resulting in many damages awards that have far exceeded the value of the patented invention. While the Federal Circuit and district courts have made a strong effort in recent years to rein-in NPE damages awards, perhaps more drastic measures are warranted.

²⁰¹² Patent Litigation Study, supra note 1, at page 7 (finding from 2006 to 2011 that the median award for NPEs was \$6.9M versus \$3.7M for PEs; finding between 2001 and 2005 that the median award for NPEs was \$10.9M versus \$5.6M

for PEs). LaserDynamics, Inc. v. Quanta Computer, Inc., No. 2:06-CV-348-TJW (E.D. Tex., June 9, 2010) (vacating award of \$52M because there was "no basis" for application of the entire market value rule), subsequent opinion, 2011 WL 7563818 (E.D. Tex., Jan. 7, 2011) (before second trial, ruling on defendant's Daubert motion and excluding expert testimony on entire market value rule and royalty rates, but allowing plaintiff's expert to testify on remaining damages theory), aff'd in part on other grounds, rev'd in part on damages issues, and remanded, Nos. 2011-1440, -1470, 2012 WL 3758093 (Fed. Cir., Aug. 30, 2012) (holding that LaserDynamics' theory of damages was legally unsupportable). Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301 (Fed. Cir. 2009) (vacating \$358M damages verdict), after remand, 837 E. Supp. 2d 1107 (S.D. Cal. 2011) (granting JMOL regarding \$70M damages verdict and entering judgment of \$26.3M in reasonable royalty damages and \$14M in prejudgment interest).

Mirror Worlds, LLC v. Apple, Inc., 784 F. Supp. 2d 703 (E.D. Tex. 2011) (granting JMOL and vacating damages verdict because Mirror Worlds had failed to provide substantial evidence to support the damages verdict), aff d on other grounds, 692 F.3d 1351 (Fed. Cir. 2012).

F.3d 1351 (Fed. Cir. 2012).

Cornell Univ. v. Hewlett-Packard Co., 609 F. Supp. 2d 279 (N.D.N.Y. 2009). Mformation Techs., Inc. v. Research in Motion Ltd., Case No. C 08-04990 JW (N.D. Cal., Aug. 8, 2012) (granting RIM's

JMOL on grounds of no infringement; not reaching damages issue).

Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970), modified, 446 F.2d 295 (2d Cir.), cert. denied, 404 U.S. 870 (1971).

II. THE PROPOSAL

This article proposes a specific reform of damages law applied in NPE cases. The proposal would modify the current approach to reasonable royalties as follows:

- 1) Abolish the Georgia-Pacific hypothetical negotiation in NPE cases.
 - A limited exception would permit NPEs to prove an established royalty.
 - The established royalty could be a running royalty or fully paid-up lump sum, depending on the circumstances.
- 2) If an NPE cannot demonstrate an established royalty, the NPE is relegated to a fully paid-up lump sum award of reasonable royalty damages.
 - This award is based on the value of the patented invention over the next best noninfringing alternative (NBNA) at the time the defendant adopted the patented invention.
 - Value = incremental profit due to the patented invention.
 - The NPE and defendant split the value/incremental profit.
 - This is what they would have done at the time the defendant adopted the patented invention if they had negotiated at arms-length.
 - The split may be determined, for example, using negotiation theory.
 - The NPE and defendant each offers its own proposed value/profit split, and the jury decides which is correct.
 - The fully paid-up lump sum award precludes an injunction or ongoing (post-verdict) royalties. The NPE receives full value for its patented technology from the lump sum award.
 - The only exception if the NPE can prove an absence of acceptable and available noninfringing substitutes (similar to *Panduit* lost profits approach), and the defendant is unable to prove otherwise.
 - In such cases, the NPE can seek damages under a different approach – i.e., the NPE is not relegated to a fully paid-up lump sum award.

- This exception will arise only in very limited situations.
- 3) If the NPE believes the fully paid-up lump sum award is insufficient, it may argue that damages should be enhanced under 35 U.S.C. § 284, which does not recite preconditions for the judge to enhance damages and thus could be utilized in this new damages

Although this proposal is a major departure from existing reasonable royalty law, it is not without relevant precedent in congressional patent reform. Prior to enactment of the America Invents Act ("AIA"), both the Senate and House considered various options for reforming the patent damages statute in 35 U.S.C. § 284. Congressional damages reform sprung largely from the soaring damages verdicts in NPE cases. The effort began in 2007 and would have modified the damages statute to recite a gatekeeping function for district courts. Indeed, one of the proposed amendments would have included specific language codifying apportionment. The apportionment language provided that the royalty rate would apply "only to the portion of the economic value of the infringing products or process properly attributable to the claimed invention's specific contribution over the prior art." In other words, the royalty award would reflect the incremental value of the patented technology over the NBNA. Damages reform became one of the most controversial aspects of the Congressional effort – specifically inclusion of apportionment – and ultimately, when the AIA became law, Section 284 remained unchanged in this key respect.¹⁰ Thus, even though Congress did not adopt apportionment, a central component of this article's proposal has previously gained traction in Congress.

In addition, numerous commentators have advocated aspects of this proposal, though it does not appear that anyone has assembled all the pieces articulated here. For example, some commentators have criticized the Georgia-Pacific methodology and have proposed its elimination or a modification. Some have advocated using the incremental value of the patented technology over the NBNA as a valid measure of damages.¹² According to one commentator, NPEs ignore this kind of apportionment and rely instead

Senator Leahy stated that damages reform was a compromise and that he would have done more, opting for inclusion of apportionment: "It is true that I would have gone farther. One of the problems with patent litigation today is the lack of

apportionment: "It is true that I would have gone farther. One of the problems with patent litigation today is the lack of guidance given to juries. But another is that courts simply are not focusing on the senence of the invention. ... I hope [the new cases] move the law toward compensation for what the actual invention is." Statement by Senator Leahy introducing April 2, 2009 Manager's Amendment to S.515 (amendment deleting entire market value rule and apportionment provisions). See, e.g., Christopher B. Seaman, Reconsidering the Georgia-Pacific Standard for Reasonable Royalty Patent Awards, 2010 BYU L. Rev. 1661 (2010); Daralyn J. Durie & Mark J. Lemley, A Structured Approach to Calculating Reasonable Royalties, 14 Lewis & Clark L. Rev. 627 (2010) (criticizing Georgia-Pacific); Mark A. Lemley, Distinguishing Lost Profits from Reasonable Royalties, 51 Wm. & Mary L. Rev. 655 (2009) (concluding that Georgia-Pacific has resulted in a systematic overcompensation of patent owners in some industries); Brian J. Love, The Misuse of Reasonable Royalty Damages as a Patent Infringement Deterrent, 74 Mo L. Rev. 909 (2009) Mo. L. Rev. 909 (2009).

<sup>Mo. L. Rev. 909 (2009).
See, e.g., Brian J. Love, Patentee Overcompensation and the Entire Market Value Rule, 60 Stan. L. Rev. 263 (2007) (stating that when calculating reasonable royalty damages the rate should be applied to the incremental value added by the patented invention); Seaman supra note 11 at 1711 ("In lieu of Georgia-Pacific, this Article proposes that courts should adopt an alternative standard for imposing a reasonable royalty: when an acceptable noninfringing substitute for the patented technology exists, the cost of that substitute should serve as a 'ceiling' on a reasonable royalty."); Roger D. Blair & Thomas F. Cotter, Rethinking Patent Damages, 10 Tex. Intell. Prop. L.J. 1, 59 (2001) (stating that an infringer in a real negotiation "would have agreed to a royalty equal to or no more than the amount he could have expected to earn from using a non-infringing alternative"); Elizabeth M. Bailey, et al., Making Sense of Apportionment, 12 Colum. Sci. & Tech. L. Rev. 255 (2011) (advocating an economic approach to patent damages, but recogniting that in the absence of synergies between the patented technology over a noninfringing alternative); Eric E. Bensen & Danielle M. White, Using Apportionment to Rein in the Georgia-Pacific Factors, 9 Colum. Sci & Tech. L. Rev. 1 (2008) (arguing that "(i) apportionment to Rein in the Georgia-Pacific Factors, 9 Colum. Sci & Tech. L. Rev. 1 (2008) (arguing that "(i) apportionment to Rein in the reasonable royalty analysis, and (ii) only factors relevant to approximating a fair market price for the patent should be used to determine the 'reasonable' royalty.") (emphasis in original). Judge Posner, sitting by designation, recently espoused this approach in a Daubert ruling: "(Defendant) Keebler would not have paid a royalty higher than the cost to it of switching to a noninfringing substitute for the plaintiffs' margarine in its cookies or otherwise reworking its manufacturing process to avoid making the infringing margarine." Brandeis Univ. v. Ke</sup>

on allegedly comparable licenses because they are "easy to obtain and summarize," resulting in damages that better reflect the "hold up" value of patent litigation rather than the negotiation of a reasonable license.¹³ Courts and at least one commentator have recognized that, in the right circumstances, and with the proper jury instructions, a fully paid-up lump sum royalty can completely compensate a patentee and obviate the need for considering injunctive relief or ongoing royalties.¹⁴ In addition, even the Georgia-Pacific case recognized the concept of profit splitting - factor 15 states that the amount awarded should allow the licensee "to make a reasonable profit." 15

III. ADVANTAGES OF THE PROPOSAL

This article's proposal has several advantages over the existing reasonable royalty framework, and in particular Georgia-Pacific.

• The proposal leaves intact the remedy of established royalty

The proposal allows an NPE to prove that an established royalty – either running royalty or lump sum - is the proper remedy, rather than a fully paid-up lump sum award based on incremental profit over the NBNA. Thus, in the right circumstances, an NPE with an established licensing program may be able to obtain a damages award consistent with its program. If the NPE believes it should receive its established rate plus an additional kicker for being forced to litigate (or for some other reason), the NPE can seek enhanced treble damages under 35 U.S.C. § 284.

Unlike the Georgia-Pacific methodology, the requirements for proving an established royalty are structured and predictable. The Supreme Court in Rude v. Westcott¹⁶ articulated a five-part test that a patentee must satisfy to prove an established royalty:

- (1) prior royalties must have been paid or set before commencement of the infringement at issue;
- (2) prior royalties paid (i.e., prior licenses) must be sufficient in number to demonstrate acquiescence in the industry that the allegedly "established" rate is reasonable;
- (3) the allegedly "established" rate must have been substantially uniform;
- (4) prior licensees must have agreed to the rate while they were not under a threat of suit or in settlement of pending litigation; and
- (5) the infringing activity at issue must be commensurate with the activity contemplated under the prior licenses.

This test will only be satisfied in rare cases, and in those circumstances the NPE will be entitled to its established royalty rate and its established license structure.

Paul H. Roeder, Challenging Inflated Damages Claims by NPEs, Law360 (Sept. 4, 2012).
 Barbara A. Parvis, Does a Lump Sum Payment Cover All Future Patent Use?, Law360 (June 6, 2012); Personal Audio LLC v. Apple Inc., No. 9:09CV111, 2011 WL 3269330 (E.D. Tex. July 29, 2011); Lighting Ballast Control LLC v. Philips Elecs. North Am. Corp., 814 F. Supp. 2d 655, 693 (N.D. Tex. 2011), revid on other grounds, 498 Fed. Appx. 985 (Fed. Cir. Jan. 2, 2013) (unpublished opinion), pet. en banc granted, 2013 WL 1035092 (Fed. Cir. March 15, 2013) (issue concerning deference to district courts on claim construction). But see DataTreasury Corp. v. Wells Fargo & Co., No. 2:06-cv-72, Docket No. 2463 (E.D. Tex., Jan. 12, 2011) (holding that based on jury instructions, the verdict form's reference to lump sum paid-up royalty

was not sufficient to foreclose an ongoing royalty on post-verdict sales).

15 318 F. Supp. at 1120. In the appeal of *Georgia-Pacific*, the Second Circuit actually held the district court had erred because the awarded royalty "gobbled up" all the defendant's expected profit and stated that the "reasonable 'royalty must be fixed so as to leave the infringer, or suppositious licensee, a reasonable profit." 446 F.2d 295, 299 (2d Cir. 1971) (quoting district court, 318 F. Supp. at 1122). 16 130 U.S. 152 (1889).

• The proposal eliminates the unrealistic, unstructured approach of *Georgia-Pacific* and its potential for mischief

The *Georgia-Pacific* approach to reasonable royalty damages assumes a hypothetical negotiation between a willing licensor and willing licensee. It also assumes the parties are bargaining over a patent they both agree is valid and infringed. But a plaintiff and defendant in litigation are anything but willing negotiators. Moreover, even the most seasoned licensing professional would be hard pressed to recall an actual negotiation in which the parties agreed the patent was valid and infringed – quite the contrary, in an actual negotiation the parties will take opposite views on the patent's merits. However, *Georgia-Pacific* asks a lay jury, with little to no experience in the patent licensing world, to indulge this fiction and thereby derive an award of damages.

Another issue undermining the *Georgia-Pacific* approach is its timing. The hypothetical negotiation takes place when the defendant begins infringement, but then *Georgia-Pacific* allows consideration of evidence that arises after this date¹⁷ – and the courts have condoned this practice.¹⁸ Indeed, in many NPE cases, the most important evidence presented to the jury is license or settlement agreements that were entered into *after* the hypothetical negotiation date. Depending on which party urges their relevance, either the NPE or defendant will assert that these agreements are "comparable" to the hypothetical license and attempt to convince the jury that it should base the hypothetical license on them, even though they *did not exist* when the supposed negotiation occurred. The paradox is evident – how could a licensor and licensee conduct a negotiation on facts that did not exist at the time of the negotiation?

Furthermore, as stated above, the *Georgia-Pacific* case itself propounds a laundry list of factors that may be used in computing a reasonable royalty. These factors are so malleable they create an open season on damages theories and supporting evidence. One may argue they give litigants, especially NPEs, too much leeway in concocting damages theories and are susceptible to abuse. And now that NPEs can no longer obtain an injunction, they are motivated to exaggerate their damages and seek reasonable royalty awards that far exceed the value of their inventions. Once the jury hands down its verdict, the defendant is left with only one expensive and relatively unpredictable course of action – post-trial motions followed by appeal. If the verdict is affirmed, the defendant faces the likelihood that the NPE will receive an award of ongoing royalties that are even greater than the royalty rate awarded at trial.

The current proposal would eliminate *Georgia-Pacific* and its potential for mischief. There would be no need to assume a willing licensor-willing license or a patent that is valid and infringed. License agreements dated after infringement began would be irrelevant. The bulk of the *Georgia-Pacific* factors would be eliminated.¹⁹ Instead, assuming the NPE cannot prove an established royalty – and this will hold true in nearly every case – the NPE will be relegated to an award of damages based on the actual value of the patented invention over the NBNA. This approach more closely approximates a *real* negotiation the parties would have conducted outside of litigation.

¹⁷ See, e.g., Georgia-Pacific factor #11: "The extent to which the infringer has made use of the invention; and any evidence

probative of the value of that use."

See, e.g., Lucent Techs., Inc. v. Gateway, Inc., 580 E3d 1301, 1333 (Fed. Cir. 2009) ("[F]actual developments occurring after the date of the hypothetical negotiation can inform the damages calculation.").

Two factors would remain in play in connection with determining incremental value over the NBNA: Factor #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"; Factor #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." 318 F. Supp. at 1120.

• The proposal ties damages to the value of the NPE's patented invention

In ResONet, the Federal Circuit cautioned that "the trial court must carefully tie proof of damages to the claimed inventions' footprint in the marketplace."20 The Federal Circuit has spent considerable effort over the past few years clarifying and refining damages law to help trial courts realize this goal. It has published opinions addressing the entire market value rule, apportionment, and comparable licenses. A focus in many of these cases has been tying damages to the actual value of the invention.

But the pace of excessive NPE awards does not appear to be slowing. The cases cited in the introduction are only a few examples of enormous verdicts in NPE cases that were overturned on JMOL or appeal. It seems likely, however, that many such verdicts are not undone - post-trial motions are denied, appeal is not pursued, the parties settle. It would not be a stretch to conclude that many of these problem verdicts, at least in part, suffer from a failure to identify the actual value of the patented invention relative to the state of the prior art and in particular the NBNA.

The proposal in this article would do just that – tie the damages to the claimed invention's actual footprint. An NPE would be required to prove the incremental value of its patented invention over the NBNA. This inquiry inherently incorporates apportionment, which is arguably the most problematic issue in damages law today.²¹ Perhaps more important, this aspect of the proposal is closer to a real-world license negotiation in which the potential licensee would not pay more for the patented invention than its incremental value over the NBNA.²² Instead, the potential licensee would simply reject the proposed license and use the NBNA rather than the patented invention.²³ In other words, it would trade the loss in profits from *not* licensing the patented invention for the decrease in costs it would have incurred by taking a license – assuming those costs exceed the profits.²⁴ Of course, this also assumes the NBNA would have been acceptable and available to the potential licensee (i.e., defendant).

avoid the cost of implementing the NBNA, but nothing more. Here, the only advantage of the patented feature is the

<sup>ResQNet.com, Inc. v. Lansa, Inc., 594 E.3d 860, 869 (Fed. Cir. 2010).
See LaserDynamics, 2012 WL 3758093, at *13 (Fed. Cir. Aug. 30, 2012) (rejecting plaintiff's expert's one-third apportionment because it appeared "to have been plucked out of thin air"; "This complete lack of economic analysis to quantitatively support the one-third apportionment echoes the kind of arbitrariness of the '25% Rule' that we recently and emphatically rejected from damages experts, and would alone justify excluding Mr. Murtha's opinions in the first trial."); Mirror Worlds, 784 F. Supp. 2d 703, 727 (E.D. Tex. 2011) (vacating \$625M damages award and stating that "Mirror Worlds cannot simply apply haircuts' adjusting the royalty rate to apportion damages" where entire market value rule not satisfied), aff'd on other grounds, 692 E.3d 1351 (Fed. Cir. 2012). Apportionment has its origins in the Supreme Court. See Garretson v. Clark, 111 U.S. 120, 121 (1884) (stating that the patentee must "give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patentee 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.").
See Brandeis Univ. v. Keebler Co., Case No. 1:12-cv-01508, slip op. at 9 (N.D. Ill. January 18, 2013) (Posner, J., sitting by designation) ("Keebler would not have paid a royalty higher than the cost to it of switching to a noninfringing substitute for the plaintiffs' margarine in its cookies or otherwise reworking its manufacturing process to avoid making the infringing margarine.").
In some cases the surplus value created by the patented invention may be zero when compared to the NBNA. For example,</sup>

avoid the cost of implementing the NBNA, but nothing more. Here, the only advantage of the patented feature is the avoidance of all the costs associated with a redesign (e.g., labor costs, manufacturing costs, downtime costs). These costs would include the royalties (or lump sum) payable under the license and the costs to switch to and implement the patented invention. This concept is probably easier to visualize with a real-world example. Imagine purchasing a new car, with an option to purchase an in-dash navigation system that is easy to see, convenient to use, and highly functional. This option will add \$1500 to the cost of the car. But there are alternatives: use navigation features on your smartphone and mount the phone to your dash, or revert to a paper map or directions printed from the Internet. As much as the in-dash system would be nice to have, the price tag may simply be too steep considering that alternatives exist, and some may decide against the option based on the cost. In this case, the "profit" (or increased convenience value) does not exceed the "cost" (the \$1500 option fee). For others, the profit may outweigh the cost, and the car's new owner will drive off the lot with the \$1500 navierion system For others, the profit may outweigh the cost, and the car's new owner will drive off the lot with the \$1500 navigation system. The same calculus, through likely more complex, may be undertaken when deciding to license a patented technology.

Surveys are becoming more common in patent damages and could be used to establish the incremental value of the patented invention. In i4i v. Microsoft, the Federal Circuit accepted the use of surveys to estimate the amount of infringing use by consumers and hence, in part, the value of the patented invention.²⁵ Judge Posner in Apple v. Motorola²⁶ recognized the utility of surveys to apportion the value of a patented invention over the NBNA, despite holding that the actual surveys used in the case were flawed for the purpose of valuing the patented features: "[C]onsumer surveys designed to determine the value of a particular feature or property of a consumer product are a common and acceptable form of evidence in patent cases."27 For purposes of this article's proposal, either the patentee or defendant could use surveys to establish their respective positions on incremental value of the patented invention.

• The proposal avoids complex, expensive litigation over injunctions and ongoing royalties

Under the current proposal, an NPE may only obtain a fully paid-up lump sum award. In other words, the jury's verdict would provide the NPE with complete compensation from the infringement. As a consequence, there would be no complex and costly litigation over whether an injunction should be awarded,28 or the amount of ongoing royalties in lieu of an injunction. The verdict would make the NPE whole. This is consistent with most real-world licensing negotiations involving NPEs, in which an accused infringer will insist on buying peace with the NPE for the remaining life of the asserted patent. Contrary to this reality, imposition of an ongoing royalty creates two hypothetical negotiations between the NPE and defendant - one when the infringement begins, and one after the verdict in which the court sets the ongoing royalty rate.

• The proposal eliminates the risk of prejudicial license agreements reaching the jury

NPEs frequently rely on license and settlement agreements to drive up the royalty rate. The Federal Circuit has cracked down on this practice in recent cases, requiring that such agreements be "comparable" to the hypothetical license.²⁹ Despite this tightening of the law, license agreements that are arguably not comparable, and that ultimately may sway a jury to hand down an unjustified damages verdict, continue to be admitted into evidence.

i4i Ltd. Partnership v. Microsoft Corp., 598 F.3d 831, 855-56 (Fed. Cir. 2010). The Supreme Court recognized that the use made of a patented feature may aid appraisal of the patent's value. Sinclair Refining Co. v. Jenkins Petroleum Process Co., 289 U.S. 689, 697 (1933); see also Lucent, 580 F.3d at 1333-34 (citing Sinclair for this proposition). Apple, Inc. v. Motorola, Inc., No. 1:11-cv-08450, 2012 WL 1959560 (N.D. Ill., May 22, 2012) (Posner, J., sitting by

designation).

Id. at *5 (citing i4i and Lucent). See also id. at *7: "The value of [the patented] feature to the consumer is again a question the answer to which could be elicited, within a permissible (because unavoidable) range of uncertainty, by a properly designed and executed consumer survey.'

and executed consumer survey."

28 Where the alleged NPE argues that it does compete with the defendant, parties have litigated over the propriety of an injunction, and in some post-eBay cases the NPE has won. See, e.g., Harris Corp. v. Federal Express Corp., No. 6:07-cv-1819 (M.D. Fla., Feb. 28, 2011) (imposing a permanent injunction where NPE (Harris) did not compete with FedEx, because Harris had licensed the patent to companies that did compete with FedEx and continuing to permit FedEx's infringing systems to remain in the market created a risk of irreparable harm to Harris' licensing opportunities), aff'd in part, veated in part, and remanded, all on other grounds, 2013 WL 174185 (Fed. Cir. January 17, 2013) (unpublished opinion); Commonwealth Scientific & Indus. Research Organization v. Buffalo Tech. (USA), Inc., No. 6:06-CV-324, 2007 U.S. Dist. LEXIS 43832 (E.D. Tex., June 15, 2007) (granting injunction to NPE (CSIRO) essentially because CSIRO is a research institution whose revenues are based on its reputation and because the patented technology was the "core technology" embodied in the accused products; distinguishing Justice Kennedy's eBay concurrence quoted above in footnote 2), aff'd in part, vacated in part, and remanded, all on other grounds, 542 F.3d 1363 (Fed. Cir. 2008).

29 See, e.g., Lucent, 580 F.3d at 1325, 1327-28; ResQNet, 594 F.3d at 870; LaserDynamics, Nos. 2011-1440, -1470, slip op. at 42-45.

Under the current proposal, comparable license agreements would only be relevant if the NPE attempts to prove an established royalty. They would be excluded from the calculus in determining the incremental value of the patented technology over the NBNA.

IV. CRITICISMS OF THE PROPOSAL

This proposal is vulnerable in several aspects. This section identifies a number of criticisms and attempts to rebut them.

• How do we define NPE?

It is a safe bet that litigation will ensue over the definition of "NPE." Paradigm examples are, of course, easily identified: patent holding companies that make no products; limited liability companies that are established solely to assert patents; an inventor enforcing her own patent. Similar to Justice Potter's observation about obscenity in *Jacobellis v. Ohio* 30 – "I know it when I see it" – we see these companies or individuals and know they are NPEs. The lines become more blurred, however, when we step away from the paradigm:

- Universities
- Spin-outs from PEs
- Former PEs that no longer make products
- Companies that are PEs for some products but an NPE in the market for the patented technology

These types of entities will test the limits of "NPE." Any patentee who falls into one of these categories will likely litigate the question of whether it should be considered an NPE for purposes of damages, attempting to avoid the damages methodology set out in this article. This could lead to significant litigation costs and uncertainty and could place a burden on the judicial system.

In response, it is the clear-cut NPEs who arguably place the greatest burden on the patent system and who are the beneficiaries of some of the most astonishing and unjustified damages verdicts. Moreover, just like any issue in litigation, the gray areas may be navigated via statutory guidelines and judicial precedent.

• Courts are ill-equipped to determine the value of the patented invention over the NBNA

Two criticisms stem from this point. First, how do you identify the NBNA when the universe of prior art may be vast? It is difficult enough to identify noninfringing substitutes, let alone the best of those, i.e., the NBNA. Second, how do you quantify the differential value between the NBNA (e.g., the best prior art) and the patented invention?

These points were raised by former Chief Judge Michel of the Federal Circuit in connection with Congressional patent reform. On May 3, 2007, Judge Michel wrote an open letter to Congress imploring it not to codify apportionment:

[T]he provision on apportioning damages would require courts to adjudicate the economic value of the entire prior art, the asserted patent

claims, and also all other features of the accused product or process whether or not patented. This is a massive undertaking for which courts are ill-prepared. For one thing, generalist judges lack experience and expertise in making such extensive, complex economic valuations, as do lay jurors. For another, courts would be inundated with massive amounts of data, requiring extra weeks of trial in nearly every case. Resolving the meaning of this novel language could take years, as could the mandating of proper methods. The provision also invites an unseemly battle of "hired-gun" experts opining on the basis of indigestible quantities of economic data. Such an exercise might be successfully executed by an economic institution with massive resources and unlimited time, but hardly seems within the capability of already overburdened district courts.31

The response to this criticism is that much of apportionment is already part of patent litigation. In lost profits, the patentee must prove an absence of acceptable noninfringing substitutes. The NBNA would be one of these substitutes. A defendant arguing for invalidity will almost certainly assert the patent is obvious under 35 U.S.C. § 103. The Supreme Court's decision in Graham v. John Deere 32 states guidelines for the obviousness inquiry: The scope and content of the prior art must be determined, and any differences between the patented invention and the prior art must be ascertained. The Supreme Court recognized that there would be difficulties in applying the nonobviousness test, but that they would be "comparable to those encountered daily by the courts in such frames of reference as negligence and scienter, and should be amenable to a case-by-case development."33 The same is true for this damages proposal. Finally, damages experts are routinely called upon to determine the incremental value of a patented invention over alleged substitutes. Thus, while this criticism is not unfounded, this article's proposal is well within the capabilities of the judicial system.

• The use of surveys to establish incremental value would simply replace inflated Georgia-Pacific theories with inflated survey estimates

The section above on advantages identifies surveys as a mechanism for apportioning the value of the patented invention over the NBNA. One could argue, however, that surveys are fraught with imprecision and susceptible to same type of mischief as Georgia-Pacific theories. That is, NPEs could manipulate surveys to inflate the value of their patents, and defendants could do the same to drive down value. Accordingly, the criticism is that the proposal in this article, to the extent it relies on surveys, is no better than Georgia-Pacific.

Though not perfect, surveys do not offer the same potential for abuse inherent in the Georgia-Pacific framework. Surveys can be effectively designed to answer the precise question of a patented feature's value over the NBNA – consumers can be asked questions that isolate the feature and its value. For example, in Apple v. Motorola, Judge Posner posited that competently designed and administered surveys could have been used to determine, "within the limits of tolerable uncertainty," just how much consumers would have paid for the patented smartphone features at issue.³⁴

³¹ See http://www.fr.com/files/uploads/attachments/patentdamages/05-03-07Michelletter.pdf.

^{32 383} U.S. 1 (1966). 33 *Id.* at 18.

Apple v. Motorola, 2012 WL 1959560, at *10.

One remaining criticism of using surveys to isolate and estimate value is that *isolation* fails to account for the synergistic value of a patented feature working together with or enabling other features. For example, if the patent were directed to improving the display on a smartphone (e.g., by making it brighter and more brilliant and/or less power hungry), the patented feature may contribute value to consumers by allowing *other features* to be implemented on the smartphone that could not be achieved with prior art displays (e.g., allowing consumers to play games that require a brighter and finer display). If the survey isolated the value of the patented display over the NBNA display, the survey would fail to account for the combined value of the improved display and its enablement of desirable games for consumers.³⁵ Surveys can be designed, however, to focus not only on the isolated value of the patented feature, but also on the synergistic value achieved by combining the patented feature with other unpatented features.³⁶

The profit split leads to Nash Bargaining, game theory, and other damages theories that have no place in a patent trial

As part of this proposal, once the incremental value of the patented invention is determined, that value must be split between the NPE and defendant. Many profit splitting approaches have been developed through negotiation theory, but they are relatively new to patent law and not without controversy. Perhaps the most famous negotiation theory was developed by Princeton Professor John Nash – he won a Nobel Prize for his work and was the subject of the feature film, "A Beautiful Mind," starring Russell Crowe. In its essence, Nash's theory (known as the Nash Bargaining Solution, or "NBS") holds that two negotiating parties would in most cases settle for an *equal split* of the surplus created by their cooperation in reaching a deal. In other words, if a purchaser wanted to spend \$X for a product, and the seller wanted to receive \$X+Y for the product, the parties would agree to a selling price of \$X+1/2Y (assuming \$1/2Y is within the range of compromise for each party).³⁷

At least one court has criticized the NBS for use in determining patent damages. Judge Alsup of the Northern District of California, presiding over the litigation between Oracle and Google, was faced with the NBS. At least on the facts in that case, Judge Alsup concluded that the NBS was unacceptable: "It is no wonder that a patent plaintiff would love the [NBS] because it awards fully half of the surplus to the patent owner, which in most cases will amount to half of the infringer's profit, which will be many times the amount of real-world royalty rates. There is no anchor for this fifty-percent assumption in the record of actual transactions."³⁸ Judge Alsup also criticized the mathematical complexity

³⁵ See Elizabeth M. Bailey, et al., supra note 12 (referring to synergistic features as "complementaries"; "When there are complementaries between assets, such that the combined use of two or more assets is worth more than their individual use, no unique way exists to apportion the overall value of the product among the assets (including the parented technology at issue)."). Cf. Oracle America, Inc. v. Google Inc., No. C 10-03561 WHA, 2012 WL 850705, at *10 (N.D. Cal., March 13, 2012) ("Google argues that [the expert's] conjoint survey results are unreliable because the features selected to be surveyed, only seven in total, were purposely few in number and omitted important features that would have played an important role in real-world consumers' preferences. Google argues that this inappropriately focused consumers on artificially-selected features and did not reliably determine real-world behavior. This order agrees – on this record for this application.").
36 Cf. Oracle v. Google, 2012 WL 850705, at *11-12 ("The above-described flaw, however, is not fatal to the conjoint analysis' collection of the adaptive professors between 'confliction or to real to the conjoint analysis' collection of the adaptive professors between 'confliction or to real to the conjoint analysis'

³⁶ Cf. Oracle v. Google, 2012 WL 850705, at *11-12 ("The above-described flaw, however, is not fatal to the conjoint analysis' calculation of the relative preference between 'application startup time' and 'availability of applications.' The study participants were unlikely to infer implicit attributes onto these two features. The calculated relative preference between these two features is sufficiently reliable for the purposes of Daubert. Thus, [the expert's] use of this relative preference for his applications and control or the superior preference for his proposes of Daubert.

apportionment calculation is not stricken.").
 The NBS does not compel a 50/50 profit split. If one party has more bargaining power – for example, if the patentee-licensor could produce the patented technology or the defendant-licensee could turn to reasonable noninfringing alternatives – the result of the NBS could be something other than 50/50. See VirnetX Inc. v. Cisco Sys., Inc., Case No. 6:10-cv-00417-LED (E.D. Tex. March 1, 2013) (Doc. No. 745) (denying motion to exclude expert's use of NBS with 45/55 split because the expert proffered some explanation for deviation from the traditional 50/50 split).

expert proffered some explanation for deviation from the traditional 50/50 split).

38 Oracle America, Inc. v. Google Inc., 798 F. Supp. 2d 1111, 1119 (N.D. Cal. 2011). See also id. (observing that NBS "has never been approved by a judge to calculate reasonable royalties in litigation, at least in the face of an objection. This is despite the fact that for decades it has been lurking in the field of economics.").

of the NBS, observing that it "would invite a miscarriage of justice by clothing a fiftypercent assumption in an impenetrable façade of mathematics."39 One could also argue that the NBS - or any profit splitting model - contradicts Congress' elimination in 1946 of patent damages based on the defendant's profits. 40 A patentee can seek its *lost* profits, but not the defendant's profits.

In response, the NBS and negotiation game theory are well-accepted economic models for calculating the outcome of a negotiation.⁴¹ They are recognized as a scientific method in determining patent licensing royalty rates.⁴² Moreover, despite the critical language from Judge Alsup, other courts have been more charitable when faced with profit splitting theories. 43 For years, courts and juries have heard experts testify on economic concepts such as supply and demand, demand elasticity, and fixed and variable costs. Assuming a trial court properly exercises its gatekeeping authority, there is no reason to believe a jury cannot process a damages theory in which the profit split is reliably based on the NBS or other negotiation game theory.

• This proposal is at odds with Federal Circuit precedent holding that design-around costs cannot cap reasonable royalty damages

In Mars v. Coinco, 44 the Federal Circuit was faced with the defendant's argument that its cost to design-around the patented invention should cap its liability for reasonable royalty damages. In other words, it was the defendant's position that an infringer could not be forced to pay more than it would have paid for the cheapest noninfringing substitute at the time infringement began (i.e., the date of the hypothetical negotiation). The Federal Circuit flatly rejected this argument: "[E]ven if [the defendant] had shown that it had an acceptable noninfringing alternative at the time of the hypothetical negotiation, [it] is wrong as a matter of law to claim that reasonable royalty damages are capped at the cost of implementing the cheapest available, acceptable, noninfringing alternative. ... To the contrary, an infringer may be liable for damages, including reasonable royalty damages, that exceed the amount that the infringer could have paid to avoid infringement."45

Id. at 1120.

<sup>Id. at 1120.
The 1946 Patent Act abolished the infringer's profits as a remedy for utility patents, Patent Act of August 1, 1946, though the remedy remains intact for design patents, 35 U.S.C.§ 284.
See, e.g., Ken Binmore, et al., An Outside Option Experiment, The Quarterly Journal of Economics (Nov. 1989) ("The Nash bargaining solution has been widely used as a modeling tool for wage negotiations in applied economics.").
See, e.g., Toshihiro Matsumura & Noriaki Matsushima, Patent Licensing, Bargaining, and Product Positioning, Institute of Social and Economic Research Osaka Univ., Discussion Paper No. 775 (May 2010); Roy Weinstein, et al., Taming Complex Intellectual Property Compensation Problems, TTI Vanguard Conference (Washington, D.C. October 4, 5, 2011) ("The Nash Bargaining Solution ("NBS") provides a generally accepted framework for identifying and evaluating factors that influence negotiation outcomes between parties."). Cf. Sanofi-Aventis Deutschland GmbH v. Glenmark Pharmaceuticals Inc., Civil Action No. 07-CV-5855 (DMC-JAD), 2011 WL 383861, at *12-13 (D.N.J., Feb. 3, 2011) (denying defendant's MIL against plaintiffs' expert's 50/50 profit split, and apparently accepting plaintiffs arguments (1) that "game theory, which is what [the expert] used in determining his reasonable royalty rate, is the standard model in economics for calculating the outcome of a negotiation, is recognized as a scientific method in determining reasonable royalty rates, and is unrelated to the 25 percent rule rejected in Uniloc," and (2) "that [the expert] did not arbitrarily apply a 50/50 profit split, but rather reached that result</sup> rule rejected in *Uniloc*," and (2) "that [the expert] did not arbitrarily apply a 50/50 profit split, but rather reached that result after considering the facts of the case, specifically the relationship between the parties and their relative bargaining power, the relationship between the patent and the accused product, the standard profit margins in the industry, and the presumed

relationship between the patent and the accused product, the standard profit margins in the industry, and the presumed validity of the patent.").

43 VirnetX Inc. v. Cisco Sys., Inc., Case No. 6:10-cv-00417-LED (E.D. Tex. March 1, 2013) (Doc. No. 745) (denying motion to exclude expert's use of NBS); Gen-Probe Inc. v. Becton Dickinson & Co., Case No. 09-CV-2319 BEN NLS and 10-CV-0602 BEN NLS (S.D. Cal. Nov. 26, 2012) (noting that NBS has been "criticized as impenetrable," citing Oracle Am., Inc. v. Google Inc., 798 F. Supp. 2d 1111, 1120 (N.D. Cal. 2011), but nevertheless allowing plaintiff's expert to testify on profit splitting approach that used "combination of real world observation and the Nash bargaining solution"); Lucent v. Gateway, No. 07-CV-2000 H(CAB), 2011 WL 2728317 (S.D. Cal., July 13, 2011) (denying Microsoft's motion in limine regarding Lucent's expert's opinion that the alleged value of the patented technology (\$138M) would be split roughly 50/50); Sanoft-Aventis, 2011 WL 383861, at *12-13 (denying defendant's MIL against plaintiffs' expert's 50/50 profit split that was ostensibly based on "game theory"); Inventio Ag v. Otis Elevator Co., No. 06 Civ. 5377 (CM), 2011 WL 3359705, *3 (S.D.N.Y., June 23, 2011) (allowing patentee's expert to use an approach applying the Georgia-Pacific factors to "the midpoint" between the rate in a license and the defendant's presumed profit), revid in part, vacated in part, and remanded, all on other grounds, 497 Fed. Apps. 37 (Fed. Cir. Nov. 27, 2012) (unpublished opinion).

Mars, Inc. v. Coin Acceptors, Inc., 527 F.3d 1359 (Fed. Cir. 2008).

⁴⁵ Id. at 1373.

This article's proposal does not, however, violate Coinco. In that case, the defendant urged that damages should not exceed the cost to implement the cheapest noninfringing alternative. Here, in contrast, damages are based on the incremental difference in value between the patented invention and the next best noninfringing alternative, not the cost of the cheapest alternative. The flaw in the Coinco defendant's theory is that it was trying to limit its damages to the cost of a cheap design-around without accounting for the value of the patented invention. Indeed, Judge Lifland in his decision explicitly stated that he believed the availability of noninfringing alternatives to be "highly relevant to hypothetical reasonable royalty negotiations, and this is not a very difficult conclusion to reach."46 Judge Lifland stated he had "no doubt that [defendant] had the ability and the resources to develop noninfringing technology," but also found that "the particular noninfringing technology didn't perform as well" as the patented technology.⁴⁷ So the district court's analysis in *Coinco* was arguably consistent with this proposal - Judge Lifland recognized the defendant had alternatives, but also found those alternatives to be less valuable than the infringing technology, and used that data as a key piece of his royalty analysis.

• What happens when there is no NBNA?

Critics will argue that Georgia-Pacific will still be required in cases where no NBNA exists, and that this exception will swallow the new proposal. This is a valid concern, but far from insurmountable. First, it should be noted that an NBNA will likely exist in a large majority of NPE cases. Most NPE patents are directed to a single feature in a multicomponent product, and there are nearly always alternatives - either a noninfringing design that could be substituted for the patented feature (even an imperfect substitute),48 or the option to omit the patented feature entirely. In fact, the cases where Georgia-Pacific has caused the most concern - patents directed to features in computer hardware, computer software, smartphones, etc. - will mostly, if not always, have an identifiable NBNA. Even in cases where the patent is directed to an overall product, an NBNA will almost certainly exist. We live in a world of explosive technological advancements, and nearly every product, product feature, or process is built upon preexisting technology – meaning prior art, noninfringing alternatives will exist in nearly every field.

Accordingly, there will be little need to deviate from this proposal. If the need does arise, courts can exercise their role as gatekeeper to ensure the NPE's fallback damages theory is reliable and tethered to the facts of the case.

• Willfulness will be back to the jury in every case

The Federal Circuit recently stiffened the standard for proving willful infringement in Bard Peripheral Vascular v. W.L. Gore (en banc). 49 Prior to Bard, the Federal Circuit handed down In re Seagate (en banc) in which it held that a negligent defendant could not be found liable of willful infringement.⁵⁰ Instead, the patentee must prove by clear and

⁴⁶ Mars, Inc. v. Coin Acceptors, Inc., Case 2:90-cv-00049-JCL-ES, at page 27 (D.N.J., May 11, 2007) (transcript of proceedings). Judge Lifland added: "It just seems to me self evident [sic] that if the accused infringer who is negotiating for a royalty and is of course seeking a lower royalty, will find it very relevant that he can present alternatives that don't infringe, and that will be acceptable to customers and likewise the patentee that is seeking a high royalty will be very interested in showing during the negotiations that such alternatives do not exist." Id.

Lu. at 27.
 See Brandeis Univ. v. Keebler Co., Case No. 1:12-cv-01508, slip op. at 10 (N.D. Ill. January 18, 2013) (Posner, J. sitting by designation) ("For [a reasonable] royalty would depend on the cost, in higher production costs and loss of business to competitors, of the best imperfect substitute") (emphasis added).
 Bard Peripheral Vascular, Inc. v. W.L. Gore & Assoc., Inc., 682 F.3d 1003 (Fed. Cir. 2012) (en banc).
 In re Seagate Tech., LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc).

convincing evidence that the defendant acted in an objectively reckless manner.⁵¹ In *Bard*, the Federal Circuit further refined willful infringement, taking objective recklessness out of jurors' hands and placing it into the judge's to determine as a matter of law.⁵²

Under the current proposal, an NPE would be permitted to seek enhanced damages if it believes the fully paid-up lump sum award is insufficient. Consequently, one could argue that nearly every NPE will drum-up some form of alleged misconduct by the patentee that requires an enhancement, or contend that under principles of fairness and equity the damages award should be enhanced, in order to have these issues decided by the jury as part of the damages inquiry. The proposal would thus return patent litigation to its pre-*Bard* state.

The response to this criticism is that courts are well equipped to address willfulness-type arguments. Willfulness arises in many kinds of litigation and has long been a part of patent cases. Moreover, enhancement of damages would be guided by the strict *Seagate* standard; not just any conduct by the defendant would result in increased damages under Section 284. In any event, even with the *Seagate* standard in place, NPEs will assert willful infringement in nearly every case to gain settlement leverage. Thus, allowing for enhancement of the fully paid-up lump sum damage award proposed here would not make a significant change to the existing state of patent litigation. Alternatively, the enhancement provision of this article's proposal could be jettisoned, leaving the remaining components in place.

V. CONCLUSION

This article's proposal would significantly reduce runaway damages awards in NPE cases. It would cut off any argument by an NPE for injunctive relief and would eliminate ongoing royalties that complicate NPE cases and may result in a windfall. Moreover, the proposal would bring patent damages more in line with licensing realities, tying an NPE's damages award to the contribution of its patented invention over the prior art and/or noninfringing alternatives. Finally, eliminating the *Georgia-Pacific* approach to reasonable royalty damages would avoid the unrealistic assumptions and unbridled framework that plague the approach.

⁵¹ Id. ("Accordingly, to establish willful infringement, a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its action constituted infringement of a valid patent. ... The state of mind of the accused infringer is not relevant to this objective inquiry. If this threshold objective standard is satisfied, the patentee must also demonstrate this objectively-defined risk ... was either known or so obvious that it should have been known to the accused infringer.").

accused infringer.").

682 F.3d at 1007, 1008 ("When a defense or noninfringement theory asserted by an infringer is purely legal (e.g., claim construction), the objective recklessness of such a theory is a purely legal question to be determined by the judge. When the objective prong turns on fact questions, as related, for example, to anticipation, or on legal questions dependent on the underlying facts, as related, for example, to questions of obviousness, the judge remains the final arbiter of whether the defense was reasonable, even when the underlying fact question is sent to a jury."; "[T]he ultimate legal question of whether a reasonable person would have considered there to be a high likelihood of infringement of a valid patent should always be decided as a matter of law by the judge.") (citations omitted).