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The authors offer lessons from a multitude of cases in the lower courts since the Federal Circuit's Lucent decision on patent infringement damages.

Reasonable Royalty Patent Infringement Damages After *Lucent v. Gateway* and *Uniloc v. Microsoft*: Reports of the Dearth of Patent Infringement Damages Are Greatly Exaggerated

BY MARTHA K. GOODING AND
WILLIAM C. ROOKLIDGE

In a series of opinions spanning from *Lucent Technologies Inc. v. Gateway Inc.*[1] to *Uniloc USA Inc. v. Microsoft Corp.*,[2] the U.S. Court of Appeals for the Federal Circuit has emphasized the need for greater rigor in presenting, challenging, and reviewing a claim for patent infringement damages. In the wake of those decisions, litigants and trial courts alike have struggled to understand the contours of the damages regime and implement the Federal Circuit's directives. Recent trial court orders on *Daubert* and in limine motions—as well as on motions for summary judgment, JMOL, remittitur, and new trial—provide insight into how parties, experts, and courts are responding to the evolving state of patent infringement damages law and, in the case of litigants and their experts, adjusting their damages strategy.

To those who believe patent damages analyses have been subject to abuses that yielded some extreme verdicts, the recent Federal Circuit opinions represent a welcome backward swing of the pendulum. And it appears they may be having an impact: a recent study reports that the 2010 median patent damages award was

[1] 580 F.3d 1301, 92 USPQ2d 1555 (Fed. Cir. 2009) (78 PTCJ 583, 9/18/09).
[2] 632 F.3d 1292, 98 USPQ2d 1203 (Fed. Cir. 2011) (81 PTCJ 275, 1/7/11).

The authors are partners at Jones Day, Irvine, Calif. The views expressed in this paper belong to them only and should not be attributed to Jones Day or its clients.

$1.8 million—the lowest since 1995.[3] But the existence of *Lucent v. Gateway*, *Uniloc v. Microsoft*, and their progeny by no means guarantees smooth sailing for accused infringers. Stakes remain high. Patentees remain determined to maximize their damages demand. Experts remain creative and adaptable. And juries remain willing to award substantial damages.[4]

This article reviews some key patent damages issues and some recent case law—both at the Federal Circuit and in the federal district courts—that grappled with them.

I. The Entire Market Value Rule After *Lucent v. Gateway*

Sometimes described as ''the most controversial rule in patent damages,''[5] the entire market value rule has been the subject of considerable recent judicial attention. That rule generally may be stated as allowing recovery of reasonable royalty damages based on the value of an entire apparatus containing more than one component where the infringing component is the basis for customer demand for the entire apparatus, the infringing and non-infringing components are sold together so they constitute a functional unit or are parts of a complete machine or single assembly of parts, and the infringing and non-infringing components are analogous to a single functioning unit.[6]

A. *Lucent v. Gateway and Uniloc v. Microsoft* Reiterate and Clarify the Rule

In *Lucent v. Gateway*,[7] the Federal Circuit firmly reiterated that, for the entire market value rule to apply, ''the patentee must prove that 'the patent-related feature' is 'the basis for customer demand.' ''[8] The court was not breaking new ground. It cited three recent Federal Circuit decisions that had articulated the same test.[9] *Lucent v. Gateway* also cited Supreme Court cases dating back to 1853 that underscored the need to ensure that any damages awarded are attributable to the patented feature.[10] But after articulating the rule, the court strayed into an inexplicable bit of dicta: ''There 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 multiplier accounts for the proportion of the base represented by the infringing component or feature.''[11] A decision that should have been a clear affirmation of a long-standing rule devolved into a potential loophole to evade the rule.

Predictably, patentees seized on the *Lucent v. Gateway* dicta, arguing that it permitted damages to be based on the entire market value of an accused product, even where the patented feature was not ''the basis'' for customer demand, so long as the royalty rate was low enough. The Federal Circuit put an end to that argument in *Uniloc v. Microsoft*. Citing *Lucent v. Gateway* and some of the same cases on which that opinion had relied, the *Uniloc v. Microsoft* court unequivocally stated:

> The Supreme Court and this court's precedents do not allow consideration of the entire market value of accused products for minor patent improvements simply by asserting a low enough royalty rate.[12]

B. Application of the Rule in the Post-*Uniloc v. Microsoft* World

In the months following *Uniloc v. Microsoft*, a number of district courts have applied a strict articulation of the entire market value rule. For example, just two days after the Federal Circuit issued the *Uniloc v. Microsoft* opinion, the court in *Versata Software Inc. v. SAP America Inc.*,[13] set aside a jury's $138.6 million patent infringement damages award and granted a new trial on damages. Citing *Lucent v. Gateway, Uniloc v. Microsoft, and ResQNet.com Inc. v. Lansa Inc.*,[14] the court acknowledged that ''it erred when it admitted [plaintiff's damages expert's] testimony and his dam-

[3] PricewaterhouseCoopers, 2011 Patent Litigation Study 9 (October 2011). Conventional wisdom understood that ''Plaintiffs often seek lost profits because they are believed to usually result in larger damages awards than a reasonable royalty calculation.'' David J.F. Gross, James W. Poradek, Theodore M. Budd, and Timothy E. Grimsrud, Winning Patent Litigation 219 (2d ed. 2010). That wisdom is outdated. While the median damages award was 23 percent higher for practicing entities than for NPEs during 1995 to 2000, the median damages award for NPEs was over twice as high for NPEs ($6.9 million) as that for practicing entities ($3.4 million) during 2006-2010. 2011 Patent Litigation Study, *supra* at 9.

[4] *See, e.g.*, *Versata Software Inc. v. SAP America Inc.*, No. 2:07-CV-153, 2011 U.S. Dist. LEXIS 102333 (E.D. Tex. Sept. 9, 2011) ($345 million verdict on new damages trial, increased from initial verdict of $138.6 million); *Mirror Worlds LLC v. Apple Inc.*, No. 6:08-cv-88, 2011 U.S. Dist. LEXIS 36451, 100 USPQ2d 1564 (E.D. Tex. Aug. 4, 2011) ($208.5 million verdict); *ActiveVideo Networks Inc. v. Verizon Communications Inc.*, No. 2:10cv248, 2011 U.S. Dist. LEXIS 91722 (E.D. Va. July 29, 2011) ($115 million verdict); *Saffran v. Johnson & Johnson*, No. 2:07-CV-451, 2011 U.S. Dist. LEXIS 5274 (E.D. Tex. Jan. 20, 2011) ($482 million verdict).

[5] *See, e.g.,* Ted Mathis, Amy Kokoski, and Thara Russell, *Heightened Standard for the Entire Market Value Rule?*, Law 360 (Aug. 3, 2011) (hereinafter heightened standard).

[6] *See, e.g., Cornell University v. Hewlett Packard Co.*, 609 F. Supp. 2d 279 (N.D.N.Y. 2009).

[7] 580 F.3d at 1336.

[8] *Id*.

[9] *Id.* (citing *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1554, 35 USPQ2d 1065 (Fed. Cir. 1995) (50 PTCJ 197, 6/22/95) (en banc) (entire market value rule applies where the patent-related feature is ''the 'basis for customer demand.' ''); *Bose Corp. v. JBL Inc.*, 274 F.3d 1354, 61 USPQ2d 1216 (Fed. Cir. 2001) (63 PTCJ 163, 12/21/01) (same; citing *Rite-Hite*); *TWM Manufacturing Co. v. Dura Corp.*, 789 F.2d 895, 898, 229 USPQ 527 (Fed. Cir. 1986) (''The entire market value rule allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand.'')).

[10] 580 F.3d at 1336-37.

[11] 581 F.3d at 1339. Even before *Uniloc v. Microsoft*, it was suggested that, despite the *Lucent v. Gateway* dicta, ''Courts should be cautious about admitting testimony or allowing argument directed to total revenue, particularly total revenues unrelated to infringement, because of the risk that the probative nature of that testimony or argument may be outweighed by its prejudicial nature.'' William C. Rooklidge, Martha K. Gooding, Philip S. Johnson, and Mallun Yen, Compensatory Damages Issues in Patent Infringement Cases 32 & n.98 (Federal Judicial Center 2011) (citing Fed. R. Evid. 403).

[12] 632 F.3d at 1320.

[13] No. 2:07-CV-153, ECF No. 412 (E.D. Tex. Jan. 6, 2011).

[14] 594 F.3d 860, 93 USPQ2d 1553 (Fed. Cir. 2010) (79 PTCJ 422, 2/12/10).

ages model.''[15] Several months later, in connection with the new damages trial, the *Versata* court excluded the plaintiff's revised reasonable royalty analysis. Again citing *ResQNet*, *Lucent v. Gateway*, and *Uniloc v. Microsoft*, the court found that the ''experts' analysis utilizes the Entire Market Value Rule in violation of Federal Circuit precedent and this Court's prior rulings because the reasonable royalty is nothing more than an unsupported percentage of SAP's total revenue.''[16]

The court in *Inventio AG v. Otis Elevator Co.*[17] granted a motion to preclude the patentee from seeking reasonable royalty damages calculated using what the court identified as the entire market value rule. Although the evidence showed that the patented feature was desirable, that its absence would put a competitor at a disadvantage, and that the feature was a ''substantial basis for demand'' for the infringing product, the court found this insufficient under *Uniloc v. Microsoft*:

> It is not enough to present evidence that the patented feature was desirable, or that it played some role—even a substantial role—in the customer's decision to purchase a system containing the infringing product. If the patented aspect of a system containing both patented and unpatented elements creates a ''substantial basis for demand,'' that would tend to support the reasonableness of a higher royalty rate. But as long as other features of a product contributed to the customer's decision, Supreme Court precedent (which the Federal Circuit is powerless to overrule) demands that there be an apportionment of the defendant's profits and patentee's damages between the patented features and the various unpatented features of the ''whole machine'' . . . .[18]

The *Inventio* court emphasized that, without statistical or regression analysis, customer surveys, customer interviews, or some kind of ''*marketplace-wide evidence* of demand sensitivities,'' there was no way to know ''whether this feature alone drove the decision to purchase from Otis—or, put otherwise, whether the presence or absence of the allegedly infringing feature 'was of such paramount importance that it substantially created the value of the component parts.' ''[19]

Likewise, in *LaserDynamics Inc. v. Quanta Computer Inc.*,[20] the court granted remittitur or a new trial on damages on the ground that there was insufficient support for the jury's $52 million jury award based on application of the entire market value rule. The court noted that the claimed invention was one small component of the entire accused computers, there was no evidence the demand for the assembled computers was driven by the patented disk-discrimination method, and the patentee did not show that anyone purchased the assembled computers because of the patented methods or that defendant had sold more of the computers because they included drives practicing the patented method.[21]

The *Uniloc v. Microsoft* standard is not insurmountable. In *Broadcom Corp. v. Emulex Corp.*,[22] the court denied the defendant's motion in limine to exclude the plaintiff's entire market value analysis. Citing *Uniloc v. Microsoft*, the trial court found the evidence sufficient to permit a jury to find that the patented feature ''substantially creates the value'' of the accused product.[23] Likewise, in *ActiveVideo Networks, Inc. v. Verizon Communications*,[24] the court refused to exclude damages testimony based on the entire market value rule, finding the plaintiff had presented substantial evidence that the patented feature is ''the basis for consumer demand for [the infringing system] or substantially contributed to the value of the system.''[25]

Where there is no direct evidence that the patented feature is the basis for customer demand, patentees have turned to survey evidence. That evidence must,

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[15] *Versata*, ECF No. 412 at 1.

[16] No. 2:07-CV-153, 2011 U.S. Dist. LEXIS 10233, at *13 (E.D. Tex. Sept. 9, 2011).

[17] No. 06 Civ. 5377, 2011 U.S. Dist. LEXIS 88965 (S.D.N.Y. June 22, 2011).

[18] *Id*. at *5. A decade earlier, in *Bose Corp. v. JBL Inc.*, 274 F.3d 1354, 61 USPQ2d 1216 (Fed. Cir. 2001) (63 PTCJ 163, 12/21/01), the court determined there was substantial evidence to support an award of a reasonable royalty based on the entire value of the accused product (loudspeakers) that included the infringing component (a port tube). Among other things, the *Bose* court cited the trial court's finding that the invention of the patent in suit ''improved the performance of the loudspeakers and contributed substantially to the increased demand for the products in which it was incorporated.'' *Id.* at 1361.

[19] 2011 US. Dist. LEXIS 88965 at *5-6 (emphasis in original; citing *IP Innovation LLC v. Red Hat Inc.*, 705 F. Supp. 2d 687, 689 (E.D. Tex. 2010)). *Inventio* has been criticized as a ''notably strict application'' of the entire market value rule that, if adopted by other courts, ''would dramatically limit instances where the EMV rule applies.'' *Heightened Standard*, *supra* note 6. Such criticism overlooks the point of the *Lucent v. Gateway* and *Uniloc v. Microsoft* standard: the test for application of the entire market value rule *is* strict because rare is the case in which a single patented component is genuinely responsible for driving product demand. And, of course, sharply limiting use of the entire market value rule does not mean patentees will not be compensated for the use of their inventions; it simply means they will not be compensated based on the value of technology they did not invent. That is a fair result, fully consistent with the statutory directive that the patentee is entitled to ''a reasonable royalty *for the use made of the invention* by the infringer.'' 35 U.S.C. § 284 (emphasis added).

If there is criticism to be leveled at the *Inventio* court's application of the entire market value rule, it is the court's focus on demand factors unrelated to the accused product or patented technology, including ''the vendor's history, reliability, price or ability to get the job done in a timely fashion.'' *Inventio at* *14. *Uniloc v. Microsoft* focused on whether the features of the *accused product itself*—including unpatented and patented features—drive market demand. 632 F.3d at 1318 (patentee must ''apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features''). Focusing on the characteristics of the vendor does not address the question at the heart of the entire market value rule.

[20] No. 2:06-CV-348, 2010 U.S. Dist. LEXIS 56634 (E.D. Tex. June 9, 2010) (79 PTCJ 327, 1/22/10).

[21] *Id.* at *9-10.

[22] No. 8:09-01058, ECF No. 770 (C.D. Cal. Aug. 10, 2011).

[23] *Id.* at 12.

[24] No. 2:10-cv-2448, 2011 U.S. Dist. LEXIS 41722 (E.D. Va. July 15, 2011).

[25] *Id.* at *6. The *ActiveVideo* court's ''substantial contribution to value'' formulation of the test is a departure from the *Uniloc v. Microsoft* ''substantially creates the value'' test. One can envision a product in which a number of patented features each makes a ''substantial contribution'' to the value of the product. But that is not the same as saying that a single patented feature is ''the basis'' for customer demand or ''substantially creates'' the value of the infringing product, as *Uniloc* requires. ''Substantial contributions'' can (and should) be apportioned; revenues obtained by using an invention that is itself responsible for creating the value of the infringing product should not.

however, be tied to the patented feature. In *Fractus S.A. v. Samsung Electronics Co.*,[26] the trial court excluded two of the patentee's surveys on the basis that they sought customer preference regarding the general feature (internal cell phone antenna) rather than the claimed invention (a specific kind of internal cell phone antenna), which was an improvement on that feature. In *Mirror Worlds LLC v. Apple Inc.*,[27] the trial court rejected the patentee's surveys because they failed to show that the patented features were the basis for consumer demand where the surveys addressed only one of three patented software features, were not tied to any accused hardware devices (''all of which have exponentially more features with varying attributes that are unaccounted for''), and were limited to one of three accused operating systems. In short, surveys should be tied to the claimed invention and should test all the accused features in enough of the accused products to support a finding that the patented features do in fact serve as the basis for customer demand.[28]

C. When Use of Total Revenues Does Not Implicate the Entire Market Value Rule

There are times when one (or both) of the parties presents evidence showing that genuinely comparable licenses analyzed as part of the royalty calculation consistently use the entire sales revenue as the royalty base for determining the license payment. In those instances, the party is not relying upon the ''entire market value rule'' as the basis of the royalty analysis and ought to be able to calculate royalties based on the entire revenue derived from the accusing product without satisfying *Lucent v. Gateway's* ''the basis for demand'' test. The court in *Mondis Technology Ltd. v. LG Electronics Inc.* reached that very result.[29]

Repeatedly emphasizing ''the facts in this case,'' the *Mondis* court found that use of the entire revenue of the accused products as the royalty base was ''economically justified'' because the comparable licenses included a royalty based on the entire revenue of the licensed products.[30] The court noted the irony that the accused infringer had based its own royalty analysis on the entire market value of the accused products and thus effectively was arguing that patentee could not do the same absent proof that the patented features were the basis for customer demand.[31] Citing the *Lucent v. Gateway* dictum that '' 'even when the patented invention is a small component of a much larger commercial product, awarding a reasonable royalty based on either sale price of number of units sold can be economically justified,' '' the *Mondis* court concluded that the facts before it presented precisely such a case.[32] The court reasoned that the *Uniloc v. Microsoft* ''basis for customer demand'' test could not be ''absolute.''[33] If it were, on these facts, the patentee would be in a ''tough position'' because it would be forced to either (1) ignore the licenses of the patents-in-suit, even though they are likely ''the most reliable evidence'' from which to calculate a royalty, or (2) speculate how the parties to those licenses would have apportioned the patented feature in those licensed products, which would not only be impermissible speculation but would render the comparable licenses ''suddenly . . . non-comparable.''[34]

Acknowledging that a patentee of an invention that is only a component of a larger machine may, by virtue of the accused infringer's licensing practices, be able to use the total revenue of sales of the machine as the royalty base does not mean that the patentee is entitled to a windfall. In such instances, the royalty rates should reflect apportionment,[35] thereby confining the patentee's recovery to that ''reasonable . . . for the use made of the invention by the infringer.''[36]

Not all courts agree that the parties' licensing history can permit use of total revenues without the restrictions of the entire market value rule. On remand, the trial court in *Lucent Technologies Inc. v. Microsoft Corp.*[37] twice rejected a similar argument and, in the process, distinguished *Mondis*. After the case returned to the district court on remand, the patentee's expert prepared three alternative damages analyses for alleged infringement of the patent-in-suit (the ''Day patent''). The trial court concluded that one of the analyses, dubbed the ''Alternative Apportionment approach,'' ran afoul of the entire market value rule because it used as the royalty base the entire portion of Outlook revenue received from users who used the infringing Day patent technology.[38] The court concluded this was not properly apportioned: ''just because a user of Outlook uses the Day patent technology does not mean that the user does not at other times use the other patented features of Outlook.''[39] Thus, the patentee ''ha[d] not shown that it is entitled to include in the royalty base all . . . of revenue generated from'' each user who used the Day patent technology.[40] The court concluded that the patentee ''must further apportion the base in a way that better accounts the value of the Day patent technology compared to the other features in Outlook that are not covered by the Day patent.''[41] The trial court explicitly rejected plaintiff's argument that it should be allowed to introduce the entire revenue because ''its licensing practice historically applies to the fair market value of

[26] No 6:09-cv-00203, ECF No. 896 at 2-3 (E.D. Tex. Apr. 29, 2011).

[27] No. 6:08-cv-88, 2011 U.S. Dist. LEXIS 36451 (E.D. Tex. Apr. 4, 2011).

[28] *See generally* David Weaver, Avelyn Ross, and Kristen Foster, *A Few Key Points to Remember When Using a Survey in a Patent Damages Case* (83 PTCJ 35, 11/4/11).

[29] No. 2:07-cv-565, 2011 U.S. Dist. LEXIS 78482 (E.D. Tex. June 14, 2011).

[30] *Id.* at *20-22.

[31] *Id.* at *17. *But see Lectec Corp. v. Chattem Inc.*, No. 5:08-CV-00130, ECF No. 345 at 4-7 (E.D. Tex. Jan. 4, 2011) (because the court considers the plaintiff's expert report on its own merits, plaintiff cannot justify its expert's use of the same royalty rate for two separate defendants whose hypothetical negotiations would have taken place at different times by pointing to the fact that defendant's expert arrived at the same rate for both defendants; the expert's ''failure to conduct a totally separate reasonable royalty analysis'' for the two defendants goes to the weight of the testimony, not to its admissibility).

[32] *Mondis,* 2011 U.S. Dist. LEXIS 78482, at *16-17 (citation omitted).

[33] *Id.* at *15.

[34] *Id.*

[35] *See* Richard F. Cawley, Winning the Patent Damages Case 110-11 (2009).

[36] 35 U.S.C. § 284.

[37] No. 07-CV-2000, 2011 U.S. Dist. LEXIS 75504 (S.D. Cal. July 13, 2011); *id.*, ECF No. 1284 (June 16, 2011).

[38] *Id.*, ECF No. 1284 at 13-14 (June 16, 2011).

[39] *Id.* at 13.

[40] *Id.*

[41] *Id.* at 14.

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the entire product sold by the licensee.''[42] The court acknowledged that it would not prevent the patentee from introducing its historical licensing policy as part of its damages case, but it distinguished *Mondis* on the facts, observing that the expert in *Mondis* had relied on ''thirteen comparable licenses that applied a rate to the entire market base of accused products,'' whereas the patentee presented only two licenses in which the patent-in-suit was ''bundled with many other patents and one generalized license.''[43] The expert later submitted a new apportionment opinion based on a ''per unit analysis,'' and the court found the new approach was still inadmissible because it ''still fails to apportion.''[44] The court again rejected the patentee's argument that ''it should be allowed to introduce the entire market value of Outlook because such consideration is rooted in its license practices,'' as shown through the same two licensing agreements.[45] The court reiterated that the licenses ''may be relevant to *Georgia Pacific* factors 1, 4 and 12,'' but insisted that Lucent must apportion to ''separate between the patented and unpatented features as tied to the facts of this case and economic realities.''[46]

Although the trial court in *Lucent v. Microsoft* rejected use of total revenues derived from licensing history based on the facts before it, the trial court in *Lighting Ballast Control LLC v. Philips Electronics North America Corp.*,[47] rejected that approach as a matter of law. There, the patentee argued that it used total revenue as the royalty base, not under the entire market value rule, but because the licenses upon which its expert relied did the same. Without evidence that the patented technology drove sales of the accused products, the *Lighting Ballast* court held that ''use of the entire market value theory in [patentee's] expert report was improper under Federal Circuit case law.''[48]

D. Efforts to Work Around *Uniloc v. Microsoft*

After *Uniloc v. Microsoft*, patentees have not abandoned their efforts to present to the jury evidence of the accused infringer's entire sales revenue. Some creative lawyering (and expert witnessing) has ensued.

One approach, which never mentions the total revenue, is for the expert to calculate damages, multiplying the per-unit revenue figure obtained by dividing the total revenue by units by the royalty rate to obtain a per-unit royalty, and then multiplying the per-unit royalty by the number of units to arrive at the damages amount. Characterizing that approach as ''mathematical games,'' the trial court in *Versata v. SAP*[49] excluded expert testimony based on that very approach because the patentee's ''analysis utilizes the Entire Market Value Rule in violation of Federal Circuit precedent and this Court's prior rulings because the reasonable royalty is nothing more than an unsupported percentage of [the infringer's] revenue.''

Another approach is for the expert not to address the total revenue received from accused products, but rather to compare the proposed royalty rate to the accused infringer's incremental profit margin on all sales of accused product. The court in *Lighting Ballast v. Philips*,[50] found this approach contravened *Uniloc v. Microsoft* because, even though it did not apply the royalty rate to the entire sales revenue of the accused product, it still put the defendant's profit margin on all accused products in front of the jury.

Yet another approach was successfully offered by the patentee following remand in *Lucent v. Microsoft*. Coined the ''Business Realities Approach,'' the analysis appears to have been the patentee's expert's counterpart to an analysis prepared by the infringer's expert, which the court dubbed the ''real world negotiation theory.''[51] Indeed, the court concluded that the patentee's approach did not differ significantly from the accused infringer's approach and denied the motion in limine to exclude it, albeit with the cautionary notes that ''[a]t trial [the patentee] will still need to demonstrate that [the] business realities analysis is not a violation of the entire market value rule'' and that its ruling was ''without prejudice to any contemporaneous objections at trial and subject to any post-trial motions.''[52]

What, exactly, is the ''Business Realities Approach''? As the court described it, this approach does not resort to a ''rate times base'' calculation and it does not rely ''exclusively'' on the patentee's licensing policy. Rather, the $65-$75 million royalty range that was yielded by this approach ''is based on the parties' 'knowledge of their respective bargaining positions,' influenced by a host of factors apart from [the patentee's] licensing policy, including [the infringer's] competitors in the marketplace, and the risk of negotiations breaking down.''[53] In short, the ''Business Realities'' approach—like the ''Real World Negotiation'' theory—is a ''multifactorial approach to evaluating the hypothetical negotiation'' that ''take[s] into account factors that would influence the hypothetical negotiation.''[54] The court permitted the patentee's expert to testify to his $65 to $75 million ''Business Realities'' royalty range.[55]

One might be forgiven for being skeptical of the *Lucent v. Microsoft* ''business realities'' methodology. It began with the expert setting the ''full value'' of the patented technology at $138.7 million, based on a ''Results Analysis'' premised on a small survey sample.[56] It then ''considers the negotiation between [patentee and in-

[42] *Id.*
[43] *Id.*
[44] 2011 U.S. Dist. LEXIS 75504 at *29 (July 13, 2011).
[45] *Id.* at *30.
[46] *Id. Georgia-Pacific* Factor 1 is the royalties received by the patentee for licensing the patent-in-suit, tending to prove an established royalty; Factor 4 is the licensor's ''established policy and marketing program'' to either maintain the patent monopoly by not licensing, or to grant licenses ''under special conditions designed to preserve that monopoly''; and Factor 12 is the portion of the profit or selling price that, in the particular business or analogous businesses, is customarily allowed for the use of the invention or analogous inventions. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120, 166 USPQ 235 (S.D.N.Y. 1970).
[47] No. 7:09-CV-29, 2011 U.S. Dist. LEXIS 96148 at *10 (N.D. Tex. June 10, 2011).
[48] *Id.*
[49] 2011 U.S. Dist. LEXIS 102240 at *12-13 (E.D. Tex. Sept. 9, 2011).
[50] 2011 U.S. Dist. LEXIS 96148 at *10.
[51] *Id.* at *33-34.
[52] *Id.* at *34.
[53] *Id.*
[54] *Id.*
[55] *Id*.
[56] The court previously had allowed the patentee's expert's ''Results Analysis'' because it was ''an attempt to show the value of the Day patent technology to consumers as suggested by the Federal Circuit in *Lucent*.'' *Id.* ECF No. 1284 at 20-21.

fringer], assuming that [the infringer] would want a royalty as close to zero as possible and [the patentee] would want a royalty rate as close to the full value of the . . . patent technology as possible.[57] Thus, the ''business realities'' approach started with an approximately $140 million spread between the negotiation low and high points. But recall that the *Lucent v. Microsoft* court rejected (as lacking in economic principles and factual predicates) the patentee's expert's third damages approach—which posited a $70 million royalty based simply on ''meeting in the middle'' of the $0 to $138.7 million range.[58] It takes little analysis to see that the ''Business Realities'' calculus ends in the same place—since it ''yielded'' a final ''business realities'' royalty range that extended $5 million on either side of the ''meet in the middle'' point. The take-away message here may be that an expert who labels her damages analysis a ''meet in the middle'' approach may find the analysis excluded; but the same expert may be able to survive a *Daubert* or in limine motion by repackaging her opinion as the product of a ''multi-factorial,'' ''real world,'' ''business realities'' approach that happens to arrive at essentially the same result. It is fair to ask whether this exalts form over substance.

The resulting jury verdict in *Lucent v. Microsoft* following remand—and the ensuing JMOL opinion by the court—illustrates how the ''business realities'' approach in that case was used to end-run the entire market value rule. In the new damages trial, the patentee insisted that it was *not* invoking the entire market value rule and *not* arguing that the patented date-picker feature was ''the basis'' for customer demand. Instead, the patentee maintained that it was ''simply'' ''identifying the value of the Day Patent technology to the infringer based on sales it would forgo to consumers who would not buy Outlook if it did not include the patented technology.''[59] In other words, the patentee insisted that it was ''focus[ing] exclusively on the expected financial impact to the infringer if it did not include the patented technology,''[60] because ''without an Outlook sale, there is no Outlook revenue and no Outlook profit.''[61] According to the patentee, knowledge of this supposed financial impact would have caused the infringer to agree, in the hypothetical negotiation, to pay $70 million for the right to use the date-picker feature—a sum equal to roughly half of the profits it supposedly would have lost (or ''forgone'') if it could not have offered consumers an Outlook program with the date-picker.

This sounds suspiciously like an argument that the patented technology was ''the basis'' for the consumers' demand for the Outlook product—i.e., that it was the feature that caused consumers to buy the product. But the patentee provided no evidence that this was true. Instead, the patentee relied on the results of a survey conducted by its expert, in which a small percentage of respondents who used the date-picker feature said they would not have purchased Outlook if it did not have that feature.[62] From this, the patentee argued that the infringer would have conducted the hypothetical negotiation knowing that if it did not license the patent, it would lose three percent of its Outlook revenue—i.e., it would have lost three percent of the sales in their entirety if the date-picker technology were not included in the many features embodied in the product.

There is a critical flaw in this reasoning. As Microsoft explained in its JMOL briefing:

> [S]omeone shopping for a new car may be interested in a car with cup holders, side airbags, anti-lock brakes, a CD changer and Bluetooth capability. After buying the car, if you asked that person whether they would have bought the car if it did not have a cup holder, that person would say no. But nobody would conclude that the cup holder was the 'basis for customer demand' for the car, or that one would not need to apportion the value of the cup holder apart from the other features. To understand what (if any) individual features of the car are the bases of customer demand, you'd have to ask different questions. In this case, those questions would ask customers whether they bought Outlook (or Office) solely or primarily ''because of'' the date-picker, or whether the date-picker was the ''reason consumers purchase Outlook.''[63]

A patentee cannot fairly be permitted to value the patented technology for damages purposes based on 100 percent of ''foregone profits'' unless it can show that the patented feature is actually responsible for generating those profits. That is the principle that underlies the entire market value rule. Yet the patentee's survey did not ask whether there were other features whose absence would have caused the consumers not to buy the product. Thus, the survey did not show that the date-picker was responsible for generating even three percent of the sales and corresponding revenues and profits. Given the question posed to respondents, the patentee's survey showed only that the date-picker was *an* important feature to 27 respondents; it did not rule out the possibility that the date-picker feature was just one of *many* important features, all of which would have to be included in the product for the consumers to purchase it. In the words of the *Inventio* court, the patentee survey showed only that ''the patented feature was desirable, or that it played some role'' in the customer's decision to purchase a product containing the infringing product.[64] The Federal Circuit has made clear that is not enough.

E. Proving the Basis for Demand

In the wake of *Uniloc v. Microsoft*, patentees who hope to rely on the entire market value to calculate damages must come to grips with how to prove that the patented technology is ''the basis'' for customer demand. They appear to have a range of options.

In *Cornell University v. Hewlett-Packard Co.*,[65] now Chief Judge Randall Rader (sitting by designation) long ago suggested that the requisite economic proof of customer demand for application of the entire market

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[57] 2011 U.S. Dist. LEXIS 96148 at *35.

[58] *Id.*

[59] *Lucent Technologies Inc. v. Microsoft Corp.*, No. 07-CV-2000, ECF No. 1454 at 1, 5 (S.D. Cal. Sept. 27. 2011).

[60] *Id.* at 8.

[61] *Id.* at 1.

[62] Query whether a sample consisting of 27 out of 384 users (the number of respondents who used the Outlook calendar program that said they would not have bought Outlook without the date-picker) is statistically significant, or whether there is reasonable basis to extrapolate it to nearly 110 million consumers, the vast majority of which purchased Microsoft's Office suite, not a stand-alone Outlook product.

[63] *Lucent v. Microsoft*, ECF No. 1433-1 at 13 (Aug. 26, 2011) (citation omitted).

[64] *Inventio*, 2011 U.S. Dist. LEXIS 88964 at *5.

[65] No. 01-CV-1974, 2008 WL 2222189 at *3 (N.D.N.Y. May 27, 2008).

value rule could consist of "demand curves" or other "marketplace-wide evidence of demand sensitivities." Citing *Cornell*, the *Inventio* court recently suggested statistical or regression analysis, customer surveys, or "even interviews asking . . . why [customers] selected" the infringing product.[66] Whatever approach a patentee uses, however, it must employ evidence of consumer demand closely tied to the actual claimed invention.[67] This typically presents patentees with several problems, not the least of which are that developing such evidence can be expensive and time consuming and that the result of such evidence (particularly where the patented invention is just one of many features embodied in the accused product) will likely suggest that the value of "the use made of the invention by the infringer" is not very high.[68]

II. Apportionment After *Uniloc v. Microsoft*

A. The 25 percent Rule of Thumb

Uniloc v. Microsoft left no doubt that the "25 percent rule of thumb" as a tool for determining a reasonable royalty is dead. Under that now discredited rule, a royalty analysis could proceed on the premise that a licensee would pay a royalty equal to 25 percent of its profits for the product that incorporates the patented technology at issue. Finding that the rule of thumb did not account for either the "unique relationship between the patent and the accused product" or the "unique relationship between the parties" and is "essentially arbitrary and does not fit within the model of the hypothetical negotiation within which it is based," the Federal Circuit laid the rule to rest:

> This court now holds as a matter of Federal Circuit law that the 25 percent rule of thumb is a fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation. Evidence relying on the 25 percent rule of thumb is thus inadmissible under *Daubert* and the Federal Rules of Evidence, because it fails to tie a reasonable royalty base to the facts of the case at issue.[69]

Trial courts lost no time applying the *Uniloc v. Microsoft* decision.[70] One court recently granted a motion for a new trial on damages post-remand, based on the intervening *Uniloc* decision, even though the accused infringer had not objected at trial to the patentee's expert's use of the 25 percent rule of thumb.[71] The trial court found that at the time of trial, the accused infringer "had no notice" that an objection to the rule of thumb "would have been fruitful in light of the Federal Circuit's previous treatment of the rule."[72] It ordered a new trial on reasonable royalty damages because the patentee's "expert based his reasonable royalty calculations on the now-inadmissible rule of thumb; consequently, an evidentiary foundation on which the jury made a reasonable royalty finding may not now be considered."[73]

Of course, this is not to say that a patentee may never present a proposed reasonable royalty based on a 25 percent apportionment factor, so long as there is a sound evidentiary basis in the facts of the case that supports the analysis. That evidentiary basis usually consists of proof that the parties have entered into license agreements based on just such a profit split, as in *Convolve Inc. v. Dell Inc.*[74] and the Federal Circuit's *Finjan Inc. v. Secure Computing Corp*.[75]

B. "Experience" as a Substitute for Facts and Analysis

By closing the door on a blanket 25 percent rule of thumb, the Federal Circuit no doubt intended that parties and experts would adopt a more analytically rigor-

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[66] *Inventio*, 2011 U.S. Dist. LEXIS 88965 at *16 (June 23, 2011). *See also Convolve Inc. v. Dell Inc.*, No. 2:08-cv-244, ECF No. 460 (E.D. Tex. July 8, 2011) (declining to exclude accused infringer's expert's response to one patentee expert's "econometric analysis" of a survey, conducted by another patentee expert, related to the value to consumers of a patented feature).

[67] *See, e.g., Mirror Worlds v. Apple*, 2011 U.S. Dist. LEXIS 36451 at *61 (granting JMOL vacating damages award; consumer surveys and emails showing customer demand addressed only one of the accused software features and were not tied to any of the accused hardware devices); *IP Innovation v. Red Hat*, 705 F. Supp. 2d at 690 (statements from online user forum from a third party product are insufficient; "selected users' statements in isolation and without a relationship to the actual claimed technology do not show an accurate economic measurement of total market demand for the [accused] feature, let alone its contribution to the demand for the entire product asserted as the royalty base.").

[68] *See* Paul H. Roeder, *Challenging Inflated Damages Claims by NPEs,* Law 360 (July 11, 2011) ("To date, NPEs have mostly ignored apportionment, and steadfastly clung to so-called comparable licenses, which are easy to obtain and summarize. . . . This is not surprising as the NPE . . . business model does not support the out-of-pocket expense necessary to even attempt to determine the incremental profit attributable to the patented invention. Moreover, in virtually every NPE case, a legally sufficient analysis will yield a [damages] number insufficient to match NPE investor expectations.").

[69] *Uniloc v. Microsoft*, 632 F.3d at 1314.

[70] *Douglas Dynamics LLC v. Buyer Products Co.*, No. 3:09-cv-00261, 2011 U.S. Dist. LEXIS 108170 at *4 (W.D. Wis. Sept. 22, 2011), appears to be an aberration in that well after *Uniloc v. Microsoft*, the court continued to use the 25 percent rule as a starting point to determine the amount of a post-verdict ongoing royalty. Notably, the court did not cite *Uniloc v. Microsoft*, and the district court case it relied on—*Paice LLC v. Toyota Motor Corp*., 609 F. Supp. 2d 620, 91 USPQ2d 1835 (E.D. Tex. 2009) (78 PTCJ 68, 5/15/09)—predated *Uniloc v. Microsoft* by more than a year.

[71] *Spine Solutions Inc. v. Medtronic Sofamor Danek Inc.*, No. 2:07-02175, ECF No. 555 (W.D. Tenn. Nov. 23, 2011).

[72] *Id.*at 12.

[73] *Id.*at 14.

[74] No. 2:08-CV-244, ECF No. 458 at 1 (E.D. Tex. July 8, 2011) (expert's use of a 25 percent apportionment factor is not an impermissible use of the 25 percent rule of thumb prohibited in *Uniloc v. Microsoft* because it was derived from an "actual, arms-length license agreement" entered into by one of the parties to the hypothetical negotiation, which called for a royalty equal to 25 percent of the manufacturing cost savings that resulted from use of the licensed technology).

[75] 626 F.3d 1197, 97 USPQ2d 1161 (Fed. Cir. 2010) (81 PTCJ 55, 11/12/10) (expert's use of a "one-third/two-third" split of operating profit margins is not arbitrary where he "considered the custom in the industry, history of prior licenses, competitiveness of the parties, and the importance of the patented technology, among other factors, in concluding that the parties would have agreed that the patentee was entitled to 33 percent of the operating profit margin."). The *Finjan* defendants' challenge to the patentee's (and jury's) use of the entire market value rule in computing damages failed because the Federal Circuit held that they had waived their entire market value arguments by not raising them in their post-trial motions. *See infra* Section V.D.

ous approach to the facts and economic circumstances of the hypothetical negotiation. Not all experts (or courts) have fully embraced the concept.

In *Solvay SA v. Honeywell Specialty Materials LLC*,[76] for example, the patentee sought to exclude the accused infringer's supplemental damages report, arguing that the expert had calculated reasonable royalty damages using a ''50% profit sharing rule,'' without offering any ''authoritative source'' for such a split. The court denied the patentee's *Daubert* motion. Without addressing whether the expert actually had applied a 50 percent profit split, the court found that the expert's many years of experience was a sufficient basis for her opinion:

> [T]he record demonstrates that [Honeywell's expert] based her opinion regarding the general expectation for a company during a negotiation upon her ''review of thousands of agreements over the 33 years of [her] career.'' The court concludes that [her] experience in reviewing comparable agreements is sufficient to establish the reliability of her methodology.[77]

Another court, in *VS Technologies LLC v. Twitter Inc.*,[78] denied a motion to strike an expert's report and testimony, finding that the expert's extensive experience was sufficient to form the factual underpinning of his opinion regarding how the parties would agree to share the revenues derived from the accused product.

It is difficult to reconcile the reasoning in *Solvay* and *VS Tech* with that of *Uniloc v. Microsoft*. The *Uniloc* court rejected the 25 percent profit-sharing ''rule'' *in the face of* arguments that its veracity had been ''confirmed by a careful examination of years of licensing and profit data, across companies and industries.''[79] Moreover, it is safe to assume that all patent damages experts, whether testifying for patentee or accused infringer, will bring a wealth of experience to the table. Allowing ''years of experience'' to substitute for a rigorous economic analysis sounds more like an ''ipse dixit'' damages opinion[80] than one grounded in ''sound economic and factual predicates.''[81]

C. 50-50 Splits, ''Meeting in the Middle,'' and Other Analytical Shortcuts

What about the use of other shortcuts or implicit ''rules of thumb'' in the calculation of patent damages? The results in the trial courts have been mixed.

One profit-splitting approach—referred to as ''Nash Bargaining''—has recently received some attention in the courts.[82] It was rejected in *Oracle America v. Google Inc.*,[83] where the trial court explained the approach in a way that left little doubt where it was headed:

> The Nash bargaining solution is a mathematical model that purports to define the most mutually beneficial outcome of a two-party bargaining scenario. After identifying the profits each party could expect without a deal and the surplus created by their cooperation, the Nash model allocates the value of the deal in two steps: each party first receives the same profits it could expect without a deal, and then the remaining surplus is divided evenly between them. The Nash bargaining solution relies on ''a few general assumptions'' that ''idealize the bargaining problem.'' . . . It is no wonder that a patent plaintiff would love the Nash bargaining solution 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.[84]

The *Oracle* court found that the expert had not provided an adequate factual justification for applying the Nash Bargaining model to the facts of the particular case. The court reasoned that ''the Nash solution cannot describe real-world behavior unless the conditions on which it is premised are satisfied in the real world,'' and found that patentee's damages expert did not point to any evidence showing that the assumptions were warranted in this particular case.[85] Moreover, ''[t]here is no anchor for this fifty-percent assumption in the

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[76] No. 1:06-cv-557, 2011 U.S. Dist. LEXIS 100750 at *7 (D. Del. Sept. 8, 2011).

[77] *Id.* The expert later submitted a declaration in a different lawsuit (which involved neither Honeywell nor Solvay), in which she asserted that her supplemental damages report in *Solvay* had not been premised on a 50 percent profit-sharing split. *See Mformation Technology Inc. v. Research in Motion Ltd.*, No. 5:08-CV-04990, ECF No. 683 at 1 (N.D. Cal. Sept. 2, 2011) (''I never opined that the parties should split profits 50-50. Quite the opposite: I opined that the accused infringer would not have agreed to 50% profit sharing in that case.'').

[78] No. 2:11cv43, 2011 U.S. Dist. LEXIS 114975 at *20, 23 (E.D. Va. Oct. 5, 2011) (in opining that ''willing parties agree to share the incremental benefit attributable to the licensed feature somewhere in the range of 15% to 40% to the licensor,'' patentee's expert ''does not rely upon general market studies, but rather his forty (40) years of experience in dealing with the negotiation of more than four hundred (400) licenses''; ''the extent of [the expert's] experience and factual underpinnings for his conclusions remain properly the subject of cross-examination at trial.'').

[79] *Uniloc v. Microsoft*, 632 F.3d at 1313 (citation omitted).

[80] *See General Electric Co. v. Joiner*, 522 U.S. 136 (1997) (''[n]othing in either *Daubert* or the Federal Rules of Evidence requires the district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.''); *Tyco Healthcare Group LP v. Applied Medical Resources Corp.*, No. 9:09-CV-176, ECF No. 315 at 6 (E.D. Tex. Sept. 23, 2011) (expert's testimony about royalty rates was improperly based on his experience in ''the medical field as a whole,'' rather than on comparable licenses).

[81] *Riles v. Shell Exploration & Production Co.*, 298 F.3d 1302, 1311, 63 USPQ2d 1819 (Fed. Cir. 2002) (64 PTCJ 350, 8/9/02). *See also* John B. Scherling and Ryan M. Sullivan, *Rational Reasonable Royalty Damages: A Return to the Roots*, Landslide 55 (Nov./Dec. 2011) (''Even worse, the experts simply may rely on years of personal experience to proclaim what the appropriate royalty should be. Yet these experts frequently are unable to tie the cited agreements (or claimed wisdom) to the specific facts and circumstances underlying the hypothetical negotiation. Unsurprisingly, this approach often results in outlandish royalty opinions.'').

[82] Application of Nash Bargaining to the reasonable royalty analysis is explained in Cawley, *supra* n. 36, at 29-30, and Mark Lemley and Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 Tex. L. Rev. 1991 (2007). The first variable in this analysis is the value of the patented feature in comparison to the next best alternative technology, Cawley, *supra* note 36, at 29, a variable that often is difficult, expensive, and time-consuming to identify. Hence the 50-50 split fallback. Note, however, that this assumption is a based on the parties having equal bargaining power, an assumption that is unlikely where the infringer has taken the entirety of the business risk, made the entire investment to create the revenue and profit, and contributed its own research and development, innovation, and marketing.

[83] No. 3:10-CV-03561, 2011 U.S. Dist. LEXIS 80280 (N.D. Cal. July 22, 2011).

[84] *Id.* at *23-24.

[85] *Id.* at *24.

record of actual transactions.''[86] Finally, characterizing the mathematical underpinning of the Nash approach as ''Greek,'' the court found that it ''involves complex mathematical formulas and equations that would surely be incomprehensible to the average juror.''[87] Thus, allowing it to be used as a basis for the damages analysis ''would invite a miscarriage of justice by clothing a fifty-percent assumption in an impenetrable façade of mathematics.''[88] Citing *Uniloc v. Microsoft*'s rejection of the 25 percent rule of thumb, the court excluded expert testimony based on the Nash bargaining solution.[89]

Although it did not use the label ''Nash Bargaining,'' the court in *Lucent v. Microsoft*[90] rejected a similar ''split the difference'' approach. Finding that the expert did not explain any factual basis for why the parties to the hypothetical negotiation would ''meet in the middle'' of the supposed bargaining range (which the expert opined extended from $0 to $138.7 million, based on his calculation of the purported ''full value'' of the patented technology), the court excluded the testimony as lacking ''sound economic principles and factual predicates.''[91] Recall, however, that in the same order, the *Lucent v. Microsoft* trial court allowed the patentee to proceed with its ''Business Realities'' approach, effectively a meet-in-the-middle approach shrouded in the *Georgia-Pacific* factors.[92] After trial, the court explained that this approach was based on the patentee's expert's apportionment of the profit attributable to the Outlook program containing the patented feature and a roughly 50/50 split of that profit based on ''value of time savings to consumers, documents reflecting the qualitative value of the patented technology, [patentee's] licensing policy, and the parties' respective bargaining positions,'' that is, ''the *Georgia-Pacific factors*, and business realities . . . .''[93]

The court in *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharmaceuticals Inc.*[94] approved a 50/50 split clothed in different garb, game theory. The accused infringer brought an in limine motion challenging the patentee's expert for ''mechanically'' and ''routinely'' applying a 50/50 profit split ''regardless of the patent, technology industry or parties involved.''[95] In response, the patentee argued that

> *game theory, which is what [patentee's 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*.[96]

But the patentee also argued that its 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 validity of the patent.''[97] The court ignored the patentee's acknowledgement that its expert had relied on ''game theory.'' Instead, the court denied the motion, finding—without explanation or analysis—that the patentee's expert had not applied an arbitrary 50/50 profit split, but had based his royalty analysis on the specific facts of the case.[98]

In *Inventio v. Otis Elevator*,[99] the court allowed the patentee's expert to use a variation on the ''meet in the middle'' approach. The expert began by selecting minimum and maximum possible license values. The minimum value selected was the rate in a license granted to a related company that included the patent-in-suit, a fact challenged by the accused infringer but viewed by the trial court as ''not completely untethered from the facts of this case.''[100] For the maximum value, the expert selected the entire amount of profits the accused infringer would make from the sale of infringing products, which the trial court also viewed as not ''unrelated

[86] *Id.*
[87] *Id.* at *26-27.
[88] *Id.* at *27.
[89] *Id.* at *27-28. The propriety of an expert's reliance on the ''Nash Bargaining Solution'' is before the court in *Mformation Technologies v. Research in Motion*, on a *Daubert* motion challenging the patentee's damages expert. In its brief in opposition to the *Daubert* motion, the patentee defended its expert's use of Nash Bargaining on the grounds that (1) Nash Bargaining is plainly a ''reliable methodology or theory'' since it ''won a Nobel Prize, and has been cited in economics literature for over 50 years''; (2) the expert ''diligently tied the assumptions and application of Nash Bargaining to the facts of this case'' and (3) in any event, the expert only ''used the Nash Bargaining Solution as a *check* on the reasonableness of his independent and free-standing *Georgia-Pacific* analysis.'' *Id.*, ECF No. 654 at 4, 9 (emphasis in original). Much of the briefing on this issue is under seal and the portions available in the public records do not reveal how (or if) the expert tied the assumptions of Nash Bargaining to the facts of the case. But the fact that Nash Bargaining may be a recognized economic theory does not mean that it accurately predicts how the specific parties to this specific hypothetical negotiation would behave. Moreover, the Federal Circuit has rejected the use of an otherwise improper methodology as a ''reasonableness check.'' *See Uniloc v. Microsoft*, 632 F.2d at 1321 (''the fact that the entire market value was brought in as only a 'check' is of no moment.''). *See also Lighting Ballast v. Philips*, ECF No. 215 at 10-11 (June 10, 2011) (expert improperly ''tested'' the reasonableness of his proposed royalty rates by comparing the proposed royalty rate to the defendant's pre-royalty profit margin on sales of the accused products; ''using total profit margin as opposed to revenue is a distinction without difference, because it still improperly attributes all of ULT's profits from the accused products to the patented technology without evidence that the [patent-in-suit] drives consumer demand.'').
[90] No. 3:07-CV-2000, 2011 U.S. Dist. LEXIS 75504 at *35 (S.D. Cal. July 13, 2011).
[91] *Id. See also Wordtech Systems v. Integrated Networks Solutions Inc.*, 609 F.3d 1308, 1320, 95 USPQ2d 1619 (Fed. Cir. 2010) (80 PTCJ 264, 6/25/10) (rejecting argument that damages award is supported by two prior licenses because the amount of the verdict was roughly the average of the two lump-sum licenses, where the licenses provide no basis for comparison with the infringing sale).
[92] *See supra* at text accompanying notes 52-58.
[93] *Lucent Technologies Inc. v. Microsoft Corp.*, No. 07-cv-2000, ECF No. 1478 at 10-11 (S.D. Cal. Nov. 10, 2011).
[94] No. 07-CV-5855, 2011 WL 38361 at *13 (D.N.J. Feb. 3, 2011).
[95] *Id.* at 22.
[96] *Id.* (emphasis added).
[97] *Id.*
[98] *Id. See also* C. Meyer and D. Blackburn, *25 Percent, 50 Percent . . . What's in a Number?* Law 360 (June 21, 2011) (using the midpoint in the bargaining range ''is a useful paradigm, rooted in rigorous, well-established economic theory and—in marked contrast to the 25-percent rule—directly tied to the facts of the case.'').
[99] *Inventio*, 2011 U.S. Dist. LEXIS 88965 at *8-10 (S.D.N.Y. June 23, 2011).
[100] *Id.*

to the facts of this case.''[101] The expert then purported to apply the *Georgia Pacific* factors to arrive at the midpoint. The *Inventio* court found this analysis was not ''completely untethered from the facts of the case'' and distinguished it from the prohibited 25 percent rule of thumb on the ground that the 25 percent rule was ''applied willy nilly . . . without the slightest regard to the underlying facts.''[102] Although the court acknowledged some ''problems'' with the expert's analysis, it concluded that they merely went to the weight of the evidence and did not run afoul of *Uniloc v. Microsoft*.[103]

A fundamental question that underlies all these ''profit split'' cases is whether this analysis should be allowed at all. Congress eliminated the infringer's profits as a remedy for utility patent infringement in 1946.[104] It did so in part because of the difficulty in apportioning between the portion of those profits properly awardable to the patentee for the infringer's use of the invention and the portion of the profits attributable to the infringer's contributions,[105] and in part to avoid patentees obtaining windfall recoveries where apportionment could not be performed.[106] The reasonable royalty theory was developed to ameliorate the harsh effect of limiting patentees who cannot prove an established royalty rate or lost profits to nominal damages.[107] To be sure, the reasonable royalty analysis may consider the infringer's profit, as explained in one of the early reasonable royalty cases:[108]

> The jury, in a patent case, can be shown what plaintiff's patent property was, to what extent defendant has taken it, its usefulness and commercial value as shown by its advantages over other things and by the extent of its use and as shown by the profits and savings which could be made upon its sale or adoption. The jury can learn how much of the realizable profit should be credited to the manufacturing process and business risk and how much to the patent . . . .

But, this court explained, application of the reasonable royalty analysis was appropriate ''where the utility and advantages of the invention were established and where there was substantial basis for estimating the value of these advantages.[109] In the words of the Supreme Court, the reasonable royalty analysis should focus on ''the nature of the invention, its utility and advantages, and the extent of the use involved.''[110] Instead, some patentees' experts have of late turned the reasonable royalty analysis into a naked profit split unencumbered by the burdens of apportionment.

An example is *Lucent v. Microsoft*, where the trial court on remand allowed the patentee's expert to identify the profit the infringer purportedly earned from sales of a software program (Outlook) that contained the patented feature (the ''drop-down calendar'' feature), reduce the profit by the percentage of purchasers of the software program that—according to a survey—would not have purchased the program without that feature, and split that profit in half.[111] Even setting aside the problems with the 50/50 profit split,[112] this analysis is fraught with problems.

First and foremost, the *Lucent v. Microsoft* reasonable royalty analysis bears little relation to ''the nature of the invention, its utility and advantages, and the extent of the use involved'' that is supposed to underlie the reasonable royalty analysis. Instead, this analysis awards the patentee an unapportioned slice of the infringer's profits. The value of the patented drop-down calendar feature was never contrasted with, or apportioned from, the value of any of the other myriad features in the Outlook program. Absent such evidence, introduction of profit data is far more prejudicial than probative.

Second, the apportionment did not go far enough. The trial court refused to require what it called ''further micro-apportionment . . . to account for the minor na-

[101] *Id*. The *Inventio* trial court observed that ''[t]he notion that [the accused infringer] would be willing to pay a royalty that would wipe out its entire profit . . . is of course worthy of some pointed cross-examination; but [the patentee's expert's] upper bound of reasonableness cannot be said to be unrelated to the facts of this case.'' *Id*. That the facts are in some manner ''related'' to the case, however, should not be the standard. Using the total profit as the upper bound of reasonableness is a common assumption among patentee's damages experts that rarely finds any support in the facts of a given case and finds even less in common experience or general licensing practice.

[102] *Id.* at *8-9.

[103] *Id.* Based on the description in the trial court's order, it appears that virtually everything about this methodology was improper: the ''starting point'' license included technology beyond that covered by the patent-in-suit; there apparently was no evidence the accused infringer would have (or ever had) entered into a license that would require it to pay 100 percent of its profits; and despite the incantation of ''*Georgia Pacific* factors,'' there was no apparent basis in fact for splitting the difference between the two unsupportable numbers to arrive at the midpoint. *See Uniloc v. Microsoft*, 632 F.3d at 1317 (starting with a ''fundamentally flawed premise'' and applying the *Georgia-Pacific* factors to it still yields a ''fundamentally flawed conclusion'').

[104] Act of August 1, 1946, Ch. 726, § 1, 60 Stat. 778.

[105] *See* H.R. Rep. No. 1587, 79th Cong., 2d Sess. 2 (1946), *reprinted* in U.S. Code Cong. Serv. 79th Cong., 2d Sess. 1386-87 (1946); *see also Kori Corp. v. Wilco Marsh Buggies & Draglines Inc.*, 761 F.2d 649, 654-55, 225 USPQ 985 (Fed. Cir. 1985).

[106] *See Recovery in Patent Infringement Suits*, H.R. 5231, 79th Cong., 2d Sess. 3, 14-15 (1946) (statement of Hon. Robert K. Henry of Wisconsin decrying that patentees obtain ''in very many cases enormously more than that to which he is really entitled'').

[107] Developed by the courts, the reasonable royalty was codified in the Act of February 18, 1922, Ch. 58, 42 Stat. 392. Although the courts previously had referred to ''reasonable royalty,'' the 1922 Act used the formulation ''reasonable sum as profits or general damages.'' Not until the 1946 Act did Congress adopt the phrase ''not less than a reasonable royalty.'' Act of August 1, 1946, Ch. 726, § 1, 60 Stat. 778. The judicial development of reasonable royalty law is recounted in Eric E. Bensen and Danielle M. White, *Using Apportionment to Rein in the Georgia-Pacific Factors*, 9 Colum. Sci. & Tech. Rev. 1, 8-11, 22-27 (2007).

[108] *United States Frumentum Co. v. Lauhoff*, 216 F. 610, 617 (6th Cir. 1914); *see also* III William C. Robinson, The Law of Patents for Useful Inventions § 1062 (1890) (explaining that while the apportioned infringer's profits was a remedy in equity, the apportioned infringer's profits also served as indirect evidence of the patentee's damages in an action at law).

[109] *Lauhoff*, 216 F. at 617.

[110] *Dowagiac Manufacturing Co. v. Minnesota Moline Plow Co.*, 235 U.S. 641, 648 (1914). *Dowagiac* confirmed that the reasonable royalty approach then in use by the Third, Sixth, and Ninth Circuits was acceptable and not inconsistent with Supreme Court precedent. *Id*. at 649.

[111] *Lucent Technologies Inc. v. Microsoft Corp.*, No. 07-cv-2000, ECF No. 1478 at 14-19 (S.D. Cal. Nov. 10, 2011).

[112] *See* Section I.D., *supra*.

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ture of the date-picker within Outlook,''[113] which is exactly the apportionment that Federal Circuit law requires and that the trial court's pretrial orders repeatedly had instructed Lucent to perform.[114] The *Lucent v. Microsoft* trial court allowed the patentee to recover half the profit from allegedly foregone software sales without considering what features *other than* the infringing date-picker feature the infringer itself contributed to the accused products. For the Outlook product, there were likely many other features. For the Office product, which constituted the vast majority of sales, there surely were many, many other features.

D. The Use of Multipliers

A different kind of ''shortcut'' was used in *Mondis v. LG Electronics*,[115] where the patentee's damages expert was permitted to testify that an industry-standard one percent royalty should be tripled to arrive at the hypothetical royalty, to account for ''uncertainty.'' The court emphasized that the ''Federal Circuit law allows for the fact that real world licenses might be greatly reduced for uncertainty'' regarding validity and infringement.[116]

> In the hypothetical negotiation, however, the patent is assumed to be valid and the accused products are assumed to infringe. Therefore, as compared to the ''real-world'' in which the licenses to the patents-in-suit were negotiated, the patentee in the ''hypothetical-world'' is in a better bargaining position. How much better is debatable, but that decision is for the fact-finder.[117]

To its credit, the court recognized that it is one thing to say that a standard licensing rate may be increased to account for uncertainty and another to say that the rate should be tripled. Nevertheless, the court found sufficient ''facts and/or data'' to support the expert's opinion that the hypothetical royalty would be three times the standard royalty rate.[118] The evidence cited by the court for that proposition—''pre-litigation licensing documents, where patentees were clear that three percent was their 'litigation rate' '' —appears thin, to say the least. In light of Federal Circuit precedent, it seems a stretch to say such evidence is enough to find that the final, tripled rate is rooted in ''sound economic and factual predicates.''[119]

A multiplier approach was rejected in *ePlus Inc. v. Lawson Software Inc.*,[120] where the court listed a string of infirmities in the plaintiff's damages expert's reasonable royalty analysis, including a ''questionable royalty base, the use of questionable, minimally probative settlement agreements to arrive at a royalty rate, and the conversion of lump sum royalty rates to running royalty rates using a speculative royalty base.''[121] On top of that, the court criticized the expert's ''ipse dixit'' doubling of the royalty rate arrived at in the hypothetical negotiation.[122] The court found that the doubling could not be justified by a vague suggestion that four *Georgia-Pacific* factors ''would suggest some unarticulated quantum of 'higher' royalty rate.''[123] Although the court readily acknowledged that ''exact, to-the-penny, quantification is not required,'' it noted that no Federal Circuit precedent ''approves use of generalized application of the *Georgia-Pacific* factors to double the baseline royalty rate, either with or without articulation of the extent to which each factor supports such an increase.''[124] The expert was precluded from testifying at trial.[125]

E. The Factual Underpinnings of Apportionment

Even where a party chooses to apportion the value of the patented invention, instead of trying to rely on the entire market value, it still must introduce *facts* supporting the proposed apportionment.[126] Further, litigants should be cautious about their revised damages model when the court has sent them back to the drawing board after granting a motion in limine or vacating a damages award. Where a court has rejected a party's initial damages analysis (e.g., for improperly using the entire market value or for inadequate apportionment),

[113] *Lucent v. Microsoft*, ECF No. 1478 at 19 n. 12.

[114] *See, e.g.*, *Lucent v. Microsoft*, No. 3:07-CV-2000, ECF No. 1284 at 12 (June 16, 2011) (''[The patentee's] method of apportionment does not properly apportion between the patented and unpatented features of Outlook in a way that separates out from the royalty base the portion that can be attributed to the Day patent technology''); *id.* ECF No. 1323 (July 13, 2011) (''[The patentee] still fails to apportion''; its ''per unit'' equation yields same result as its prior ''total revenue'' equation); *id.* ECF No. 1478 at 13 (Nov. 10, 2011) (''During three rounds of motions in limine, the Court concluded that [the patentee] failed to properly apportion between the patented and unpatented features of Outlook in a way that separates out from the royalty base the portion that can be attributed to the Day patent technology.'').

[115] No. 2:07-CV-565, 2011 U.S. Dist. LEXIS 78482 at *22 (E.D. Tex. June 14, 2010).

[116] *Id.* The problems with increasing historical royalty rates to account for uncertainty—namely that there are no valid empirical studies supporting that approach, that there is no reason to believe that uncertainty would affect any given patentee in any particular way, and that cost of litigation weighs disproportionately on accused infringers, suggesting that historical license rates should be decreased—are identified in W. Rooklidge & M. Gooding, *When Hypothetical Turns to Fantasy: The Patent Reasonable Royalty Hypothetical Negotiation* (80 PTCJ 700, 9/24/10).

[117] *Id.* at *23.

[118] *Id.* at *25-26.

[119] *See Riles v. Shell*, 298 F.3d at 1311.

[120] 764 F. Supp. 2d 807 (E.D. Va. 2011).

[121] *Id.* at 815.

[122] *Id.*

[123] *Id.*

[124] *Id.* at 816.

[125] Less dramatic ''adjustments'' made to royalty numbers also may receive close scrutiny. It is not uncommon for an expert to use one or more licenses as a ''starting point'' for a royalty analysis, and then make upward or downward adjustments to reflect the particular circumstances of the hypothetical negotiation. But that approach is not without risk. In *ResQNet*, for example, the court pointed to such downward adjustments as evidence of a flawed analysis: The expert's ''downward shift from the re-bundling royalties is an admission that his calculations are speculative without any relation to actual market rates at all.'' 594 F.3d at 871. This would seem to put an expert in something of a ''Catch-22.'' If the expert does not adjust the analysis as necessary to reflect the particular circumstances of the hypothetical negotiation, she is open to criticism that she did not properly tailor her analysis to the facts at hand. If she does make adjustments, she may run the risk of having the adjustment construed as an ''admission'' of a flawed analysis.

[126] *See LaserDynamics Inc. v. Quanta Computer Inc.*, No. 2:06-CV-348, 2011 U.S. Dist. LEXIS 42590 at *6 (E.D. Tex. Jan. 7, 2011) (rejecting patentee's new damages model following grant of new trial; patentee's expert ''offers no credible economic analysis to support'' his conclusion that a disk drive installed in a computer ''contributes a full third of the value of the computer'').

it is likely to look askance at an expert that returns with a ''new'' damages model that yields exactly the same result.[127]

III. Other License Agreements

Another issue that has received considerable judicial attention is whether other intellectual property licenses (entered into either by the patentee, accused infringer or third parties) are sufficiently comparable to the hypothetical license to inform the reasonable royalty negotiation. Again, the rulings in the trial courts are somewhat mixed.

A. Comparability of Previous Licenses After *Lucent v. Gateway*

A patentee seeking to rely on other license agreements to support a royalty damages award must prove that ''the licenses relied on by the patentee in proving damages are sufficiently comparable to the hypothetical license at issue in suit.''[128] The *Lucent v. Gateway* court carefully scrutinized the evidentiary value of past licensing agreements used to estimate royalties under *Georgia-Pacific* and found the evidence lacking. Some of the license agreements were ''radically different from the hypothetical agreement under consideration'' for the one patent-in-suit because, e.g., they licensed entire patent portfolios or a much broader swath of technology.[129] For other license agreements, the record was so sparse as to make it ''impossible'' for the court ''to determine whether the agreements are at all comparable to the hypothetical agreement of the present suit.''[130] The *Lucent v. Gateway* court made clear that a patentee cannot sustain its burden of proof with ''evidence which amounts to little more than a recitation of royalty numbers.''[131] The Federal Circuit reemphasized the point in subsequent opinions.[132]

No district court has had more occasions to apply the ''comparability'' requirement than the Eastern District of Texas. *In Convolve v. Dell*,[133] for example, the trial court ruled that, before the patentee's damages expert could testify about the royalty rate reflected in another license agreement, the patentee would first have to ''establish the functionality enabled by the patent-in-suit, as well as the functionality purportedly covered by the [other] license, and compare their economic importance.''[134]

In *LaserDynamics v. Quanta*,[135] the trial court excluded the patentee's expert damages testimony based on a series of other licenses on the grounds that (1) there was no showing of comparability between the single patent-in-suit and the ''pool of patents'' licensed in one of the agreements; (2) another agreement licensed an ''unspecified number of patents for optical disk technology'' and there was no showing of comparability; and (3) one agreement was a purchase agreement and there was no showing how it would be comparable to the hypothetical patent license.[136] The court also excluded the patentee's expert testimony based on

[127] *Id.* (''The Court will not permit Plaintiff to reach the same result previously rejected simply by taking a less direct approach.''). *See also Lucent v. Microsoft*, No. 3:07-CV-2000, ECF No. 1323 (July 13, 2011) (''[The patentee] still fails to apportion''; its ''per unit'' equation yields same result as its prior ''total revenue'' equation); *id.* ECF No. 1478 at 13-14 (Nov. 10, 2011) (granting JMOL on ground that expert's damages model based on $67 revenue per license for Outlook still fails to properly apportion: ''Pretrial, the Court questioned [patentee's] use of $67 as a proper base'' and ''warned'' patentee ''that its expert failed to properly apportion the Day patent technology as one feature within many features of Outlook and within Office.'').

[128] *Lucent v. Gateway*, 580 F.3d at 1325, 1327-28; *ResQNet*, 594 F.3d at 868-73; and *Wordtech*, 609 F.3d at 1319-22, all involved patentees attempting to rely on their previous settlement agreements, and those patentees properly had the burden of demonstrating that those agreements were comparable to the license that would have resulted from the hypothetical negotiation. But that burden should be kept in mind when considering the extent to which an accused infringer can use the patentee's licenses to contrast with the patentee's proposed hypothetically negotiated license, both as to structure and amount. In *Lucent v. Gateway*, the Federal Circuit relied on four of the patentee's lump-sum license agreements to contrast with the patentee's damages sum: ''we see little evidentiary basis under *Georgia-Pacific* Factor 2 for awarding roughly three to four times the average amount in the lump-sum agreements in evidence,'' because ''[h]ere the award was $358 million; there, the amounts were $80, 93, 100, and 290 million.'' 580 F.3d at 1332. ''That some licenses were cross-licenses or commuted-rate licenses—which may warrant a higher damages award—does not fill the evidentiary lacunae,'' the *Lucent v. Gateway* panel explained, because ''it was Lucent's burden to prove that the licenses relied on were sufficiently comparable to sustain a lump-sum damages award of $358 million.'' *Id.* Thus, an accused infringer should be able to introduce evidence of the patentee's previous licenses and shift the burden to the patentee to explain why the structure or amount of damages it seeks are so far out of line with those of its own previous licenses.

[129] *Id.* at 1328 (patentee ''characterizes the four agreements as covering 'PC-related patents,' as if personal computer kinship imparts enough comparability to support the damages award'').

[130] *Id.*

[131] *Id.* at 1329.

[132] *See ResQNet*, 594 F.3d at 870 (overturning $506,000 running royalty damages award based on seven licenses, five of which had ''no relation to the claimed invention''; damages analysis ''must consider licenses that are commensurate with what the defendant has appropriated[; otherwise,] a prevailing plaintiff would be free to inflate the reasonable royalty analysis with conveniently selected licenses without an economic or other link to the technology in question''); *Wordtech*, 609 F.3d at 1318-22 (reversing denial of new trial on damages; patentee's royalty analysis was a ''pattern of guesswork,'' as neither the prior lump sum nor running royalty licenses in evidence provided a ''basis for comparison''); *Finjan*, 626 F.3d at 1211-12 (affirming denial of JMOL or new trial on damages; although use of past patent licenses under the *Georgia Pacific* analysis ''must account for differences in the technologies and economic circumstances of the contracting parties,'' the evidence here explained the differences between the hypothetical license and the prior license and ''permitted the jury to properly discount'' the prior license).

[133] No. 2:08-CV-244, ECF No. 498 (E.D. Tex. July 19, 2011).

[134] *See also id.*, ECF No. 463 at 4-5 (July 8, 2011) (accused infringer's damages expert, who had no basis to link the particularly technology of the patent-in-suit to other licenses, may refer to the licenses only for establishing general licensing practices; expert may not opine that a license for the single patent-in-suit would yield a lower royalty payment than another license that covered four patents, because there is no basis to permit the jury to compare the economic value of the underlying technologies).

[135] No. 2:06-CV-348, 2011 U.S. Dist. LEXIS 42590 (Jan. 7, 2011).

[136] *Id.* at *8-9.

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a survey of licensing executives, noting that the survey ''covers a wide range of technologies and circumstances'' and the expert ''failed to establish comparability between any of the agreements covered by the survey and a bare license to the patent-in-suit.''[137] The court permitted the expert to use the survey only ''to allude to general practices, such as preference for a running royalty or a lump sum.''[138]

The comparability requirement has led courts to reject an expert's reliance on average ''industry'' royalties. In *Tyco Healthcare Group LP v. Applied Medical Resources Corp.*,[139] for example, the trial court found an expert's testimony about royalty rates was improperly based on his experience in ''the medical field as a whole,'' and not on licenses for devices comparable to the particular medical devices at issue. Likewise, simply noting that the hypothetical license and the prior licenses are for technology in the same general industry or product area is not enough.[140]

Not all trial courts have been as exacting in their evaluation of comparability, however. As noted, the *Inventio* court permitted an expert to set a floor for the hypothetical negotiation based on the royalty set forth in a license agreement that included technology that extended beyond the patent-in-suit.[141] And in some cases, ''comparability'' has been hung on what appears to be a slender thread. For example, in *Lighting Ballast v. Philips*,[142] the trial court found a ''sufficient link'' between the patent-in-suit and a prior license, even though the prior license was broader than the rights at issue in the hypothetical negotiation in that it also conveyed rights to three patent applications. The ''link'' the court found sufficient was simply the fact that the prior license represented a non-exclusive licensing of the patent-in-suit ''around the time of the hypothetical negotiation.''[143] In one of the *Convolve* orders, the court reiterated the need for evidence that would allow the jury to weigh the economic value of the patented feature against the economic value of the features/services covered by other license agreements and cautioned that this is particularly true ''where a license covers a portfolio of patents or includes other intellectual property or services.''[144] But the court then proceeded to find that the accused infringer's damages expert had established a sufficient link between the previously licensed technology and the technology underlying the patent-in-suit by stating that he relied on a technical expert's opinion ''for the understanding'' that the technology covered by the other licenses was ''more important'' than the technology covered by the patent in suit.[145] Citing *Lucent v. Gateway* for the proposition that ''the law does not require an expert to convey all his knowledge to the jury about each license agreement in evidence,'' the court found this was a sufficient link between the two technologies to permit ''the jury to weigh the economic value of the patented features against the economic value of the features covered by the [other] licenses.''[146]

In another order, the *Convolve v. Dell* court recognized an exception to the ''comparability'' requirement where a litigant seeks to introduce evidence of other licenses not for their specific royalty rates, but rather to show the proper *structure* of the license—i.e., a lump sum vs. a running royalty.[147] The trial court found that the accused infringer's expert, ''gave adequate consideration to the comparability of the commercial circumstances and the technology at issue,'' particularly in light of the fact that his use of the licenses is limited to showing industry preference for a lump sum royalty.[148] The court cautioned, however, that if the expert intended to use the royalty rates from the underlying licenses in his testimony, he must first establish the comparability of the licenses.[149]

Finally, in *LaserDynamics v. Quanta*, the court recognized that an accused infringer may wish to offer licenses that admittedly are *not* comparable agreements to a hypothetical license to the patent-in-suit (because they ''cover many patents at a lower rate than the patentee's expert proposes''), *precisely because* they are non-comparable.''[150] The court did not exclude the licenses, but found that accused infringer ''still must offer evidence or testimony allowing for comparison between the patents covered by the licenses in question and the patent-in-suit as well as evidence or testimony allowing for a comparison between other relevant terms of the licenses and the hypothetical license to the patent-in-suit.''[151]

B. Litigation Licenses After *ResQNet*

Courts traditionally have not permitted settlement licenses to be used in the hypothetical negotiation royalty calculation.[152] In *ResQNet*,[153] however, the Federal

[137] *Id.* at *10.
[138] *Id.*
[139] No. 9:09-CV-176, ECF No. 315 at 6 (E.D. Tex. Sept. 23, 2011).
[140] *See Convolve v. Dell*, No. 2:08-CV-244, ECF No. 455 at 1-2 (E.D. Tex. July 7, 2011) (before expert may incorporate royalty rates from other licenses into his testimony, he ''must first establish the comparability of licenses. It is not enough to say that the patent in suit and the patents underlying the other licenses all cover ''hard disk drive technology''); *id.* ECF No. 463 at 4 (July 8, 2011) (''surmising'' that the technology covered by prior licenses are in the ''same general field . . . and covers the same products'' as the patent in suit is insufficient); *LaserDynamics v. Quanta*, 2011 U.S. Dist. LEXIS 42590 at *11 (''It is not sufficient to state that both patents cover optical disk drive technology''). *See also IP Innovation v. Red Hat*, 705 F. Supp. 2d at 691 (E.D. Tex. 2010) (royalty analysis based on average royalty rates for the ''software industry'' or ''computer and electronic products manufacturing industry'' is improper, absent evidence that the alleged industry agreements are comparable to the patents-in-suit).
[141] 2011 U.S. Dist. LEXIS 88965 at *8-9.
[142] No. 7:09-CV-29, ECF No. 215 at 8 (N.D. Tex. June 10, 2011).
[143] *Id.*
[144] *Convolve v. Dell,* ECF No. 463 at 3 (July 8, 2011).
[145] *Id.* at 2.
[146] *Id.* (citation omitted).
[147] *Convolve v. Dell,* ECF No. 455 (July 7, 2011).
[148] *Id.* at 1.
[149] *Id.* at 1-2. *See also Convolve v. Dell,* ECF No. 463 at 3-4 (July 8, 2011) (where experts did not link the particular technology of licenses to the patent-in-suit, the expert can use the licenses only to allude to general licensing practices, e.g., lump sum preference; evidence must establish comparability of licenses before integrating the royalty rates of those licenses into the royalty analysis).
[150] No. 2:06-CV-348, ECF No. 785 at 1 (Jan. 30, 2011) (emphasis added).
[151] *Id.* at 1-2.
[152] *See, e.g., Cornell University v. Hewlett-Packard Co.*, No. 5:01-cv-1974, 2008 U.S. Dist LEXIS 39343 at *12, (N.D.N.Y. May 14, 2008) (J. Rader, sitting by designation) (an agreement that ''arises under the threat of litigation . . . has little rel-

Circuit opened the door to the use of such licenses. In *ResQNet*, the Federal Circuit set aside a $12.5 million reasonable royalty verdict on the ground that ''[t]he majority of the [seven] licenses on which ResQNet relied in this case are problematic for the same reasons that doomed the damage award in *Lucent [v. Gateway]*.''[154] In other words, the patentee's damages expert had ''used licenses with no relationship to the claimed invention to drive the royalty rate up to unjustified double-digit levels.''[155] Five of the seven licenses were ''re-branding'' or ''re-bundling'' licenses that included not only software products and source code, but also an array of services, including training, maintenance, marketing, and upgrades—all in exchange for revenue-based royalties. ''[N]one of these licenses even mentioned the patents in suit or showed any other discernible link to the claimed technology.''[156] The remaining two licenses were ''straight'' licenses that arose out of litigation over the patents-in-suit. But one was a lump sum agreement that even the patentee's expert could not analogize to a running royalty rate; the other settlement license called for a royalty rate well under the 12.5 percent revenue license the expert had proposed. The Federal Circuit sent the case back to the trial court ''to reconsider the reasonable royalty calculation,'' with the observation that ''the *most reliable* license in this record arose out of litigation.''[157] In the next breath, however, the court noted that ''[o]n other occasions, this court has acknowledged that the hypothetical reasonable royalty calculation occurs before litigation and that litigation itself can skew the results of the hypothetical negotiation.''[158]

Four months later, in *Wordtech*,[159] the Federal Circuit continued to signal reservations about the comparability of settlement licenses. Finding that none of the thirteen licenses relied on by the patentee at trial was sufficient to support the verdict, the court noted that past royalties ranging from 3-12 percent could not explain the jury's 26.3 percent rate, observing that the patentee ''signed several of these licenses after initiating or threatening litigation against the licensees, and 'litigation itself can skew the results of the hypothetical negotiation.' ''[160]

So where does this leave litigation licenses vis-a-vis the reasonable royalty calculation? There is no unanimity. Some courts have cited *ResQNet* in finding litigation licenses admissible to prove a reasonable royalty.[161] Another court, in *ePlus v. Lawson*, cited *ResQNet* for the proposition that it is ''well-settled that settlement agreements entered into in the context of litigation may be considered, but that they have minimal probative value respecting the calculation of reasonable royalties.''[162] The *ePlus* court criticized the expert both for relying on selected settlement agreements (because they had ''minimal, if any, probative value'') and for ignoring, without cogent reason, three other litigation settlements that would have significantly reduced the royalty rate under his methodology.[163]

Other courts continue to find that licenses entered into in settlement of litigation are not admissible. In *Fenner Investments Ltd. v. Hewlett-Packard Co.*,[164] the court found that ''*ResQNet* is distinguishable and does not compel the admission of evidence and testimony relating to settlement agreements in prior litigation.'' The court noted that the admissibility of the litigation licenses was not before the court in *ResQNet* (since the litigation licenses were already in evidence) and, in any event, *ResQNet* ''did not raise the concern of jury confusion because they had been admitted during a bench trial.''[165]

Yet another court, in *ReedHycalog UK Ltd. v. Diamond Innovations Inc.*,[166] has ruled ''that the admissibility of litigation licenses—like all evidence—must be assessed on a case-by-case basis, balancing the potential for unfair prejudice and jury confusion against the potential to be a 'reliable license.' '' In a different case, *Clear With Computers LLC v. Bergdorf Goodman Inc.*,[167] the same court noted that ''[w]hether the settlement agreements are admissible will likely depend on whether they are an accurate reflection of the inventions' value.'' It acknowledged the ''increased relevance'' of settlement licensing agreements when they are likely the *only* licenses of the patent-in-suit because the patentee is a non-practicing entity.[168] The court cautioned, however, that this should be the ''exception, not the rule.''[169]

evance to the hypothetical reasonable royalty situation''). *Cf. Rude v. Westcott*, 130 U.S. 152, 164 (1889) (rejecting an established royalty and explaining, ''It is clear that a payment of any sum in settlement of a claim for an alleged infringement cannot be taken as a standard to measure the value of the improvements patented, in determining the damages sustained by the owners of the patent in other cases of infringement.'')

[153] 594 F.3d at 869.

[154] *Id.*

[155] *Id.* at 870.

[156] *Id.* The take-away message here is the experts who do choose to rely on litigation licenses cannot safely ignore those that contradict or undercut the royalty figure the expert seeks to justify.

[157] *Id*. at 872 (emphasis added).

[158] *Id.* (citations omitted).

[159] 609 F.3d at 1318.

[160] *Id.* at 1320-21 (citing *ResQNet*).

[161] *See DataTreasury Corp. v. Wells Fargo & Co.*, No. 2:06-cv-72, ECF No. 2006 (E.D. Tex. Mar. 4, 2010) (''In light of *ResQNet*, litigation-related licenses should not be excluded''; concerns about the reliability of the licenses go to weight).

[162] 764 F. Supp. 2d 807, 813 (E.D. Va. Jan. 26, 2011) (probative value is ''even less'' where the settlement agreements occurred years after the hypothetical negotiation and the settlement agreements include extensive cross-licenses for many patents and are for lump sum payments, where the hypothetical royalty does not involve a lump sum payment or cross-licensing).

[163] *Id.*

[164] No. 6:08-cv-273, 2010 WL 1727916 at *1-3 (E.D. Tex. Apr. 28, 2010).

[165] *Id.* at *3. *See also Tyco Healthcare Group LP v. Applied Medical Resources Corp.*, No. 9:09-CV-176, ECF No. 315 at 5 (E.D. Tex. Sept. 23, 2011) (''this is a litigation license and not admissible'') (citing *ResQNet* and *Fenner*).

[166] 727 F. Supp. 2d 543, 546-47 (E.D. Tex. 2010) (*ResQNet* did not adopt ''a bright-line rule regarding the reliability of litigation licenses nor even a ruling on their admissibility. It was merely a reflection on the evidence before it.'').

[167] 753 F. Supp. 2d 662, 663 (E.D. Tex. Nov. 29, 2010).

[168] *Id.* at 664.

[169] *Id.* The ''case by case'' approach seems to have been adopted in *Lighting Ballast*, *supra*, which excluded an expert's testimony based on a settlement license entered into with one of the other accused infringer in the same case. The settlement license conveyed rights broader than would be at issue in the

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Further guidance from the Federal Circuit on this point clearly will be useful. Until then, litigants wishing to rely on litigation licenses should anticipate that such licenses may well come under greater scrutiny and should come to court armed with facts addressing the comparability of those licenses to the hypothetical license at issue.

IV. Lump Sum Versus Running Royalty

The second *Georgia-Pacific* factor ''examines whether the licenses relied on by the patentee in proving damages are sufficiently comparable to the hypothetical license at issue in suit.''[170] ''Subsumed within this factor is the question of whether the licensor and licensee would have agreed to a lump-sum payment or instead to a running royalty based on ongoing sales or usage.''[171] That in turn raises the question of whether prior lump sum licenses can be used to inform a hypothetical negotiation for a running royalty, and vice versa.

In *Lucent v. Gateway*, the Federal Circuit suggested that, where a patentee seeks to prove damages based on a lump sum license, other lump sum licenses generally are more useful comparisons than running-royalty licenses, given the ''fundamental differences'' between lump sum and running-royalty agreements.[172] But the patentee still must show that there is some factual basis for comparing the prior lump sum licenses to the hypothetical lump sum negotiation.[173]

Nevertheless, the Federal Circuit has recognized that running royalty agreements can be relevant to lump sum damages analysis, so long as the evidence presented to the jury contains ''some basis for comparison.''[174] The *Lucent v. Gateway* court stated that ''the jury had almost no testimony with which to recalculate in a meaningful way the value of any of the running royalty agreements to arrive at the lump-sum damages award.''[175]

The court in *ePlus v. Lawson*[176] read *Lucent v. Gateway* to stand for the proposition that ''lump sum settlement agreements have minimal, if any, probative value in establishing a reasonable running royalty.''[177] In the next sentence, however, *ePlus* more accurately reflected the import of *Lucent v. Gateway* on this point: ''Even when a lump sum royalty agreement can be extrapolated to suggest a reasonable running royalty, the methodology must itself be sound and not speculative and not far removed from the facts of the case . . . .''[178] Some courts take an even more extreme position, finding that where a patentee seeks a running royalty damages, the accused infringer's expert may not testify to lump sum settlement agreements.[179]

The fact that a patentee seeks damages based on a running royalty should not preclude a jury from awarding a lump sum royalty, so long as there is sufficient evidence for the jury to find that the parties would have negotiated a lump sum and to support the lump sum awarded. It has long been the law that a jury awarding damages is not limited to the damages numbers proffered by the parties.[180]

Interestingly, the *Personal Audio v. Apple* court implicitly criticized the patentee's decision to present *only* a running royalty damages number.[181] It branded plaintiff's decision not to suggest an alternative amount for a lump sum ''a bold tactical move'' and observed that a ''patentee who puts on little or no evidence of an appropriate lump sum royalty is not in a good position to complain that the amount awarded by the jury is not reasonable.''[182]

One court recently ruled that a jury is not bound by a *stipulated* amount of a reasonable royalty. In *Bendix Commercial Vehicle Systems LLC v. Haldex Brake Products Corp.*,[183] the jury was told that the parties had agreed a reasonable royalty would be four percent of the accused infringer's revenue from infringing sales.

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hypothetical negotiation, as it included rights to an additional patent. Although the expert stated his ''understanding'' that the additional patent was ''immaterial'' to the negotiation of the license, he did not explain where that ''understanding'' came from or what it was based on. The court therefore found the expert's analysis did not ''rely upon sufficient facts or data to be considered reliable.'' *Id.*, ECF No. 215 at 6 (June 10, 2011). *See also Pandora Jewelry Inc. v. Bajul Imports Inc.*, 2011 WL 976623 (E.D. Mo. March 17, 2011) (settlement agreement licenses can be discoverable, but accused infringer here did not show sufficient need); *MSTG Inc. v. AT&T Mobility LLC*, 2011 WL 841437 at *3-4 (N.D. Ill. Mar. 8, 2011) (documents regarding settlement negotiations are discoverable where relevant to demonstrate what agreement such a process would produce; confining decision to specific facts).

[170] *Lucent v. Gateway*, 580 F.3d at 1325.

[171] *Id.* at 1326.

[172] *Id.* at 1330.

[173] *See id.* (record did not show comparability of other lump sum licenses, *e.g.*, because there was no explanation about the subject matter or patents covered by some of the agreements and because others appeared to be ''vastly different'' from the agreement the parties would have struck for the single patent-in-suit).

[174] *Id.* (''This is not to say that a running-royalty license agreement cannot be relevant to a lump-sum damages award, and vice versa. For a jury to use a running-royalty agreement as a basis to award lump-sum damages, however, some basis for comparison must exist in the evidence presented to the jury.'').

[175] *Id. See also Wordtech*, 609 F.3d at 1322 (considering both running royalty award and lump sum licenses as possible support for damages award where patentee sought 12 percent royalty and received $250,000 award; remanding for new trial on damages because jury's $250,000 damages verdict is clearly not supported by evidence and was based only on ''speculation and guesswork'').

[176] 764 F. Supp. 2d 807 (E.D. Va. Jan. 26, 2011).

[177] *Id.* at 814.

[178] *Id.*

[179] *See Lectec v. Chattem*, No. 5:08-CV-00130, ECF No. 321 at 14 (E.D. Tex. Jan. 4, 2011).

[180] *See Fuji Photo Film Co. v. Jazz Photo Corp.*, 394 F.3d 1368, 1378, 73 USPQ2d 1678 (Fed. Cir. 2005) (69 PTCJ 274, 1/21/05); *Personal Audio LLC v. Apple Inc.*, No. 9:09CV111, 2011 U.S. Dist. LEXIS 83746 at *17 (E.D. Tex. July 29, 2011) (refusing to overturn jury's $8 million lump sum royalty, even though patentee sought a running royalty and accused infringer's expert testified to a $5 million lump sum royalty); *Judkins v. HT Window Fashions Corp.*, 704 F. Supp. 2d 470, 492-93 (W.D. Pa. Mar. 31, 2010) (jury award of 8.75 percent royalty not improper where evidence at trial pointed to 3 percent royalty; the evidence also showed patentee's licensing agreements often included an up-front fee followed by a percentage based on sales, and that both figures increased over the years).

[181] *Personal Audio v. Apple, supra,* at *34.

[182] *Id.*

[183] No. 1:09 CV 176, 2011 U.S. Dist. LEXIS 138 (N.D. Ohio Jan. 3, 2011).

When the jury awarded a higher amount, the accused infringer sought to overturn the verdict, arguing the jury was bound by the stipulated rate. The court denied JMOL, finding that the jury was properly instructed that damages ''may not be less than a reasonable royalty'' for the use of the product and that a reasonable royalty is ''merely the floor below which damages should not fall.'' The court concluded that ''ample evidence'' supported the higher award.[184] The evidence included the facts that the patentee ''was not a willing participant to a licensing agreement'' and ''would not have willingly granted a license'' at a four percent rate; there was ''long standing contention between the parties'' stemming from previous infringement by defendant; and one patentee had lost sales to the infringing product.[185] From this, the court concluded that a jury could find that a four percent royalty ''would not have been enough to adequately compensate the patentees for the use of their patented ideas, or the damages derived from lost customers and the corresponding profits from lost sales.''[186]

V. MOTION PRACTICE

A. Motions to Compel Discovery

One of the harsh realities (and frequent criticisms) of patent litigation is the enormous cost of discovery.[187] The phenomenon is not just anecdotal.[188] And the problem is perhaps felt most acutely in non-practicing-entity litigation, where the discovery burdens on the patentee and accused infringer typically are quite disparate.[189]

Recent Federal Circuit damages opinions have been cited as a basis for limiting the scope of discovery. For example, in *Anvik Corp. v. Samsung Electronics America Inc.*,[190] the court denied discovery of ''cross-license agreements, involving multiple patents, and so-called 'know-how' agreements'' as well as modifications and extensions of those agreements. The court reasoned that, because the agreements ''are vastly different from any potential licensing agreement that might have been entered into'' with regard to the patent in suit, they have no apparent relevance and there would be ''no purpose'' in producing them.[191]

Still, discovery remains a potent patentee's weapon. In *Kimberly-Clark Worldwide Inc. v. First Quality Baby Products LLC*,[192] for example, the court cited the ''book of wisdom'' to allow discovery of four years of ''sales evaluation files'' relating to accused products on the theory that files containing information related to profits—including anticipated profits— may assist in calculation of royalties, even though the patentee had not identified when the hypothetical negotiation would have occurred.[193] In another order in the same case,[194] the court ordered broad production of corporate financial documents for the accused infringer ''group of companies,'' including company-wide financial documents, company-wide forecasts, cash flow forecasts, historical balance sheets and profit-and-loss statements for two product families. In a similar vein, the trial court in *Elan Microelectronics Corp. v. Apple Inc.*[195] granted a motion to compel broad discovery directed both to accused products and non-accused products, reasoning that discovery on non-accused products is relevant because it might afford the patentee information required to apportion damages.[196]

Of course, weapons can cut both ways. Accused infringers also can make use of broad discovery to ensure they have the facts necessary to tailor the damages analysis to the specific facts of the accused infringement.[197] One court, however, recently rejected an argument by an accused infringer that it needed to obtain, during fact discovery, interrogatory responses regard-

[184] *Id*. at *4-5.

[185] *Id*. at *6.

[186] *Id*. at *5-6.

[187] Peter S. Menell, Lynn H. Pasahow, James Pooley, and Matthew D. Powers, PATENT CASE MANAGEMENT JUDICIAL GUIDE § 4.2.2 at 4-4 (2009) (''Document production can be extremely painful and costly for patent litigants'').

[188] *See* Am. Intellectual Prop. L. Ass'n, REPORT OF THE ECONOMIC SURVEY 2011 I-153-56 (July 2011) (median cost for patent infringement litigation through discovery is $350,000 for cases with less than $1 million at stake, $1.5 million for cases with $1-25 million at stake, and $3 million for cases with more than $25 million at stake).

[189] *See generally* COMPENSATORY DAMAGES ISSUES IN PATENT INFRINGEMENT CASES, *supra* note 11, at 19-21.

[190] No. 1:07-CV-00818, ECF No. 121 at 3 (S.D.N.Y. Sept. 30, 2011).

[191] *Id.* at 4.

[192] No. 09-C-0916, ECF No. 482 at 3 (E.D. Wis. July 28, 2011).

[193] For discussion of the ''book of wisdom,'' *see generally When Hypothetical Turns to Fantasy*, *supra* note 117.

[194] *Id.* ECF No. 435 at 2-3 (July 1, 2011).

[195] No. 09-01531, ECF No. 423 (N.D. Cal. Sept. 9, 2011).

[196] Some accused infringers have sought to blunt the force of the discovery weapon with a motion to bifurcate discovery or to stay damages discovery while other issues are decided. *See generally* COMPENSATORY DAMAGES ISSUES IN PATENT INFRINGEMENT CASES, *supra* note 12, at 12-13. Discovery, however, is a subject committed to the broad discretion of the trial court; litigants should not count on such motions to limit the burden or cost of discovery. *See, e.g., Cherdak v. Rack Room Shoes Inc.*, No. 1:11-cv-169, ECF No. 99 (E.D. Va. Oct. 18, 2011) (denying motion to bifurcate and stay damages discovery; accused infringer's recourse is to seek a protective order ''to prevent unreasonably broad discovery''); *3D Systems Inc. v. Envisiontec Inc.*, No. 05-74891, ECF No. 335 (E.D. Mich. Oct. 13, 2011) (denying stay of damages discovery pending determination of issues certified for appeal; if patentee's ''approach to discovery'' should prove ''excessive,'' the court will reconsider its denial).

[197] *See, e.g.*, *Fastek LLC v. Steco,* No. 10cv0972, 2011 U.S. Dist. LEXIS 85876 at *3 (S.D. Cal. Aug. 3, 2011) (patentee ordered to answer interrogatories about facts underlying hypothetical license, lost profits and price erosion, including financial data supporting its assertion that but for the infringement it would have made additional profits); *Volumetrics Medical Imaging LLC v. Toshiba American Medical Systems Inc*., No. 1:05-CV-955, 2011 U.S. Dist. LEXIS 65422 at *52 (M.D.N.C. June 20, 2011) (granting motion to compel production of settlement agreements with other accused infringer in the action; *ResQNet* found litigation licenses are a ''potential proper basis for a determination of the reasonable royalty''); *High Point SARL v. Sprint Nextel Corp.*, No. 2:09-cv-02269, ECF No. 669 (D. Kan. July 29, 2011) (patentee ordered to produce licensing and/or settlement communications with third parties, even though no agreement resulted; where there are no consummated agreements, correspondence reflecting licensing or settlement negotiations may be the best reflection of the value of the patents); *Grant Street Group Inc. v. RealAuction.com LLC*, No. 2:09-cv-01407, ECF No. 215 (W.D. Pa. Aug. 19, 2011) (granting broad discovery to accused infringer regarding reasonable royalty damages, including information concerning loans, financing, investor contributions, lien holders, lines of credit, debts, credit extended to plaintiff, and documents provided by patentee to potential investors).

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ing how the patentee ''allocates the value of the features that drive demand'' for the accused products and whether the patentee intended to rely on the entire market value rule in calculating its damages.[198] The court found that the defendant had not identified or specified ''exactly why'' it needed the discovery before the close of fact discovery, and that these topics were properly left to disclosure in expert reports and other expert discovery.[199]

B. Summary Judgment Motions

Recent district court decisions confirm that parties seek (and sometimes obtain) summary judgment on a broad range of issues that affect the scope of damages. It appears, however, that many, if not most, of the recent summary judgment rulings on damages do not turn on the principles set forth in *Lucent v. Gateway*, *Uniloc v. Microsoft*, and progeny. For example, summary judgment may eliminate the patentee's lost profits damages remedy,[200] establish the date of hypothetical negotiation,[201] or limit the patentee's ability to recover pre-suit damages for failure to mark,[202] damages for infringement before issuance of a reexamination certificate,[203] pre-grant damages,[204] or punitive and enhanced damages.[205]

One interesting recent decision denied summary judgment on the amount of damages in a case in which the accused tools were used only for rental purposes.[206] In essence, the court found that the damages calculations presented by both parties were too simplistic because they did not account for multiple material facts in dispute, including the nature of the patentee's business model, the extent to which defendant made use of the accused tools, and the effect of accused infringer's use of the tools on the patentee's business. Not every day do we see a court find both parties' damages analyses too simple.

C. In Limine and *Daubert* Motions

The Federal Circuit's insistence on greater rigor in the analysis of patent damages has created fertile ground for motions challenging the propriety of expert testimony and expert reports, in the form of in limine and *Daubert* motions and, when those do not succeed, in JMOL and new trial motions.[207] Many of the cases discussed above that addressed issues of entire market value, apportionment, and rules of thumb arose in the context of such motions, and we do not repeat those discussions here. But we do offer several general observations:

First, flawed expert testimony still can get to a jury. Particularly where courts find the reliability of an expert's analysis a ''close call,'' they continue to find that

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[198] *Nomadix Inc. v. Hewlett-Packard Co.*, No. CV09-08441, ECF No. 667 (Nov. 28, 2011).

[199] *Id.*

[200] *See Innovention Toys LLC v. MGA Entertainment Inc.*, No. 2:07-6510, ECF No. 342 (E.D. La. Feb. 3, 2011) (granting summary judgment that patentee is not entitled to lost profits damages; patentee failed to prove it had manufacturing and marketing capability to make the allegedly diverted sales); *Duhn Oil Tool Inc. v Cooper Cameron Corp.*, No. 1:05-cv-01411, ECF No. 636 (E.D. Cal. Jan. 24, 2011) (granting summary judgment that patentee is not entitled to lost profits after being acquired; post-acquisition profits and losses from the patent belonged to the acquiring entity); *Ascion LLC v. Ruoey Lung Enterprise Corp.*, No. 09-10293, 2011 U.S. Dist. LEXIS 110862, at *11-12 (D. Mass. Sept. 28, 2011) (granting summary judgment of no lost profits patent damages). *But see Broadcom Corp. v. Emulex Corp.*, No. 8:09-cv-01058, ECF No. 716 (C.D. Cal. Aug. 10, 2011) (denying summary judgment of no lost profits; evidence of significant sales, including sales of accused infringer's competing product, sufficient to establish a reasonable inference of demand for patented products); *Sanofi-AventisDeutschland GmbH v. Glenmark Pharmaceuticals Inc. USA*, No. 07-CV-5855, 2011 U.S. Dist. LEXIS 70692, at *15 (D.N.J. June 30, 2011) (denying summary judgment re calculation of lost profits; payment between co-patentees under licensing agreement does not offset any lost profits damages).

[201] *See Boston Scientific Corp. v. Cordis Corp.*, 777 F. Supp. 2d 783, 792 (D. Del. 2011) (denying accused infringer's motion for summary judgment regarding date of hypothetical negotiation and sua sponte granting patentee partial summary judgment on the proper date of the hypothetical negotiation).

[202] *See Calvori v. One World Technologies Inc.*, No. 07-2035, ECF No. 156 (C.D. Cal. Sept. 16, 2011) (granting summary judgment of no pre-suit damages for failure to mark); *IMRA America Inc. v. IPG Photonics Corp.*, No. 2:06-cv-15139, ECF No. 212 (E.D. Mich. Mar. 14, 2011) (granting summary judgment of no pre-suit damages; patentee did not mark and made no specific pre-suit charge of infringement by a specific product); *Alexsam Inc. v. Pier 1 Imports Inc.*, No. 2:08-cv-15, ECF No. 236 (E.D. Tex. Oct. 14, 2011) (determining that patentee had a duty to mark but withholding judgment on whether patentee proves marking); *but see Halo Electronics Inc. v. Pulse Engineering*, No. 2:07-cv-00331, 2011 U.S. Dist. LEXIS 100122, at *75-76 (D. Nev. Sept. 6, 2011) (denying summary judgment on marking; there is genuine issue of material fact re whether patentee consistently marked substantially all of its products); *Convolve Inc. v. Dell Inc.*, No. 2:08-cv-00244, ECF No. 461 (E.D. Tex. July 8, 2011) (denying summary judgment; material questions of fact exist regarding whether defendants received actual pre-suit notice of infringement and whether patentee's license agreement with third party, which did not require marking, granted rights covered by any claim of the patent-in-suit).

[203] *See eBay Inc. v. PartsRiver Inc.*, No. C10-04947, 2011 U.S. Dist. LEXIS 49522, at *7-13 (N.D. Cal. May 9, 2011) (granting summary judgment; no damages for alleged infringement prior to issuance of reexamination certificate because reexamined claims are substantively different); *The Irrevocable Trust of Anthony J. Antonious v. Roger Cleveland Golf Co.*, No. 8:10-cv-01198, ECF No. 36 (C.D. Cal. Jan. 11, 2011) (same).

[204] *See LIVJO Inc. v. Deckers Outdoor Corp.*, No. 2:10-cv-04557, ECF No. 116 (C.D. Cal. Sept. 27, 2011) (granting summary judgment; patentee has no provisional rights or entitlement to pre-issuance damages for unpublished design patent applications).

[205] *Seirus Innovative Accessories Inc. v. Cabela's Inc.*, No. 09-cv-102, ECF No. 367 (S.D. Cal. Oct. 5, 2011).

[206] *Walhonde Tools Inc. v. Wilson Works Inc.*, No. 1:09-cv-00048, ECF No. 199 (N.D. W.Va. Aug. 23, 2011).

[207] An example is *Alexsam Inc. v. Pier 1 Imports Inc.*, No. 2:08-cv-15, ECF No. 235 (E.D. Tex. Oct. 14, 2011), in which the court granted the patentee's *Daubert* motion to preclude the accused infringer's expert from testifying to a license that had not been produced and for which he could provide no details during deposition, but allowed the accused infringer's expert to testify to a lump sum settlement agreement only after he connects the settlement to a per-unit royalty rate. The latter approach—conditioning admission of the testimony on the witness laying the factual foundation—is common. *See, e.g., id.*, No. 2:08-cv-15, ECF No. 237 (Oct. 14, 2011) (allowing the patentee's expert to testify to 50 percent profit split only ''after he establishes a proper predicate connecting the 50% rate to the facts of this case'').

attacks on the correctness of an expert's opinion go to weight, rather than admissibility.[208]

Second, denial of a motion in limine or *Daubert* motion may not spell the end of the issue. Courts often deny or "carry" the motion, reserving the right to revisit the issue at trial.[209]

Third, although many believe that the Federal Circuit's insistence on economic and factual predicates for damages analysis was intended to curtail damages awards, the demand for rigor in damages analyses is not a one-way street. It can work against both the patentee and the accused infringer.[210] And, of course, any party relying on expert testimony must ensure that the foundational facts on which its expert relies are properly established through witnesses with "firsthand knowledge."[211]

Fourth, parties (or experts) who attempt to push the damages envelope too far may find that the strategy backfires.[212] For example, one trial court recently excluded a technical expert's rebuttal report in its entirety after finding that it strayed into an area—damages—that was "well beyond" the scope of the expert's expertise.[213] The court acknowledged that portions of the rebuttal report were proper, but concluded "[i]t would be too time-consuming for the court to separate the admissible portions of the rebuttal report from the many parts that are inadmissible."[214] Unable to use its rebuttal report, the party was relegated to what the court described as the "traditional" methods of attacking the other side's expert: cross-examination, presentation of contrary evidence, and jury instructions on the burden of proof.[215]

D. JMOL Motions

Motions for judgment as a matter of law continue to serve as an avenue to attack unsupported damages awards. One of the more dramatic recent JMOL orders was entered in *Mirror Worlds v. Apple Inc.*[216] After the jury awarded the patentee infringement damages in the amount of $208.5 million, the court granted JMOL on both infringement and damages and entered final judgment in favor of the accused infringer. The court found the evidence insufficient to support the damages award because (1) the patentee was not entitled to use the entire market value rule because it did not prove the allegedly infringing features of the accused operating systems created the basis for customer demand for the accused software and hardware products; and (2) it failed to "properly apportion the royalty base to address the accused features."[217] The patentee also failed to present a "legally sound justification" for its proffered

[208] *See, e.g., LecTec Corp. v. Chattem Inc.*, No. 5:08-cv-00130, ECF No. 345 (E.D. Tex. Feb. 1, 2011) (expert's failure to conduct "totally separate" reasonable royalty analyses for two separate accused infringers goes "primarily to weight rather than admissibility"); *In re Gabapentin Patent Litigation*, MDL No. 1384, ECF No. 1132 (D.N.J. Apr. 25, 2011) (patentee expert's testimony that reasonable royalty and lost profit damages would be exactly the same $3.8 billion number can be challenged on cross-examination; there is no "basis in analytical methodology" to exclude the testimony); *Inventio, supra* ("problems" in expert's analysis "can be highlighted to the jury" and are "of course worthy of some pointed cross examination," but they do not make the opinion inadmissible); *Lucent v. Microsoft*, No. 3:07-cv-02000, ECF No. 1285 (June 16, 2011) (declining to exclude consumer survey data intended to show value of patented technology to consumers; objections to the data are not frivolous, but they go to weight, not admissibility); *Lear Automotive Dearborn Inc. v. Johnson Controls Inc.*, No. 04-73461, 2011 U.S. Dist. LEXIS 5203, at *19-20 (E.D. Mich. Jan. 20, 2011) (court cannot say that expert's analysis is "altogether implausible and wholly unreliable"; although the question "is a close one," challenges to testimony go to weight, not admissibility); *See Southeastern Metals Manufacturing Co. v. Fla. Metal Products Inc.*, No. 3:09-cv-1250, 2011 U.S. Dist. LEXIS 116748, at *5 (M.D. Fla. Apr. 21, 2011) (denying motion to exclude patentee's expert; his report is supported by enough research and data to indicate both reliability and relevance; "weaknesses" in the opinion go to weight, not admissibility).

[209] *See Lear, supra* (reserving the right to "revisit the matters raised" in accused infringer's motion in limine "after it hears the entirety of [the expert's] testimony at trial."); *Lucent v. Microsoft*, No. 07-cv-2000 (S.D. Cal. July 13, 2011) (excluding one of three alternatives damages calculations by the patentee's expert for failure to apportion, but "reserv[ing] the right to revisit this ruling at trial if [the patentee] meaningfully apportions the per unit price of Outlook, or otherwise convinces the court outside the presence of the jury" that the exhibit reflecting the excluded damages calculation "is permissible.").

[210] *See, e.g., LaserDynamics Inc. v. Asus Computer International* No. 2:06-cv-00348, ECF No. 785 (E.D. Tex. Jan. 30, 2011) (accused infringer precluded from introducing evidence of patentee's licensing program without introducing the "full terms" of the agreements entered into under the program); *id.* at ECF No. 735 (Jan. 20, 2011) (excluding accused infringer's expert report on non-infringing alternatives; expert failed to opine that accused infringer would be capable of implementing non-infringing alternatives); *Convolve v. Dell,* ECF No. 455 (July 7, 2011) (accused infringer's damages expert may rely on other licenses to show industry preference for lump sum royalty, but may not use the royalty rates from those licenses in his testimony without establishing their comparability; it is not enough to say that licenses and the patent in suit all cover "hard disk drive technology"); *LecTec v. Chattem,* ECF No. 324 (Jan. 4, 2011) (because patentee sought a running royalty on a per-patch basis, accused infringer's expert may not testify regarding any lump sum settlement agreements, which do not have a per-patch royalty rate).

[211] *Oracle v. Google*, ECF No. 632 at 2 (Nov. 28, 2011) (" 'The traditional and correct way to proceed is for a foundational witness to testify first-hand at trial to the foundational fact . . . and to be cross-examined. Then the expert can offer his or her opinion on the assumption that the foundational fact is accepted by the jury.' ") (citation omitted).

[212] The phenomenon of overreaching experts is not new. In 1891, upon the occasion of the Centennial of the United States Patent System, one observer remarked:

> "Expert witnesses often take a partisan view of their positions it is true, and consider themselves in duty bound to try to win the cases on which they are engaged. While this is an evil, the tendency of which is to bring all such expert testimony into contempt, yet the discrimination of the Courts is a corrective influence through which the truth is finally established."

W.P. Trowbridge, *The Effect of Technological Schools Upon the Progress of Invention*, *in* Proceedings and Addresses, Celebration of the Beginning of the Second Century of the American Patent System 239, 246 (Bicentennial Commemorative ed. 1990)

[213] *Koninklijke Philips Electroncs N.V. v. Cinram International Inc.*, Nos. 08 Civ 0515, 4-68, 4070, 4071, ECF No. 376 (Nov. 4, 2011).

[214] *Id.* at 2.

[215] *Id.*

[216] No. 6:08-cv-88, 2011 U.S. Dist. LEXIS 36451 (E.D. Tex. Apr. 4, 2011). The case is on appeal.

[217] *Id.* at *61-62.

royalty rate.[218] The patentee's damages expert (1) did not present evidence explaining why the accused infringer would agree to a running royalty in a hypothetical negotiation; (2) did not account for the accused infringer's existing licensing agreements that did not provide for similar royalties; (3) did not explain why the accused operating system features "would be in such demand or so frequently used" to command the running royalties requested.[219]

Even where a JMOL motion does not vacate the entire award of damages, it still can limit or reduce damages. One of the more common JMOL motions seeks to slice off pre-suit damages for failure to prove marking or other notice.[220]

Of course, to effectively use JMOL motions and preserve the issues for appeal, the motion must be made. All too often, critical damages arguments are considered waived on appeal for failure to file an appropriate JMOL motion.[221]

E. Motions for New Trial or Remittitur

Where a jury's damages verdict has been set aside, either on JMOL or a motion for new trial, the result generally is hailed as a victory for the infringer, with the expectation that retrial will result in a lower damages verdict. That certainly was the case in *Lucent v. Microsoft*, where the new trial of damages on remand led to a $70 million verdict (later reduced by the court to $26.3 million)—a far cry from the $358 million verdict vacated by the Federal Circuit.[222]

That is not always the case, however. In *Versata v. SAP*,[223] an August 2009 jury trial on two patents-in-suit resulted in a $138.6 million damages award. In December 2010, the district court granted JMOL of noninfringement on one of the two patents,[224] and on Jan. 6, 2011—just two days after *Uniloc v. Microsoft*—granted the infringer a new trial on damages on the remaining patent. The court ruled it had erred in permitting the patentee's expert to testify to his damages model.[225] Following retrial, the second jury awarded *$345 million*—more than twice the original verdict—consisting of $260 million in lost profits and $85 million in reasonable royalty damages.[226] This occurred after the court granted the patentee's motion to exclude the expert testimony of three patentee's witnesses as they related to the proposed reasonable royalty analysis.[227] The court denied the patentee's motion for JMOL on damages or, in the alternative, a new trial or remittitur,[228] although it did reduce the damages award by $16.3 million for lack of evidence that the infringer had constructive notice of the patent from the time it issued until the patentee began marking its products.[229]

VI. Court-Appointed Experts

It is clear that courts struggle with the complexity of patent infringement damages issues. One court's answer to the problem lies in Rule 706 of the Federal Rules of Evidence, which provides that a court "may on its own motion or on the motion of any party enter an order to show cause why expert witnesses should not be appointed, and may request the parties to submit nominations."[230] The court may then appoint "any expert witnesses agreed upon by the parties, and may appoint expert witnesses of its own selection."[231] The Federal Circuit recently affirmed the use of a court-appointed technical expert in a patent case the court described as "unusually complex" and involving "what appeared to be starkly conflicting expert testimony."[232]

The trial court in *Oracle America Inc. v. Google Inc.*[233] applied the same reasoning to appoint an independent damages expert to aid the jury, citing both the complexity of the damages inquiry in that case and the widely divergent damages models offered by the parties.[234] The trial court authorized the expert to "review any and all materials necessary for him to be personally and thoroughly informed as to all aspects of the damages claims and analyses of the parties," ordered him to prepare an expert report that would critique each parties' damages report as well as provide his own damages assessment, gave the parties the right to conduct discovery from the court's expert, and ordered the expert to testify at trial.[235] In addition to these tasks, which are common for court-appointed experts, the trial court allowed the expert to attend depositions of

[218] *Id.* at *63.

[219] *Id.* at *63.

[220] *See, e.g., Versata Software Inc. v. SAP America Inc.*, No. 2:07-CV-153, ECF No. 574 (E.D. Tex. Sept. 9, 2011) (reducing $345 million verdict by $16.3 million; no sufficient evidentiary basis for jury to find constructive notice prior to marking); *ActiveVideo Networks Inc., supra* (granting JMOL re pre-suit damages for failure to mark or otherwise give pre-suit notice).

[221] *See, e.g., Finjan*, 626 F.3d at 1203 (court cannot consider infringer's entire market value argument because of failure to file JMOL motion); *i4i L.P. v. Microsoft Corp.*, 598 F.3d 831, 856-57, 93 USPQ2d 1943 (Fed. Cir. 2010) (79 PTCJ 538, 3/12/10) ("Although [infringer] now objects to the size of the damages award, we cannot reach that question because it did not file a pre-verdict JMOL on damages."); *Wordtech*, 609 F.3d at 1318 (because infringer failed to challenge the sufficiency of the damages evidence in its Rule 50(a) JMOL motion, the challenge was waived; on appeal, the court could review the challenge to excessiveness of damages only in the context of the Rule 59(a) motion for new trial). Perhaps even more fundamental is the failure to object to testimony at trial. *See Lucent v. Gateway*, 580 F.3d at 1325 (appellate court "must accept" that the licensing agreements and the testimony of patentee's expert concerning them were properly before the jury, inasmuch as the infringer failed to object at trial).

[222] *See also LaserDynamics v. Quanta*, ECF No. 800 (Feb. 2, 2011) (new trial on damages, following grant of JMOL on initial $52 million jury verdict, resulted in new damages verdict of $8.5 million lump sum royalty).

[223] No. 2:07-CV-153, 2009 Jury Verdicts LEXIS, 412524 (Aug. 26, 2009).

[224] *Id.*, ECF No. 409 (Dec. 21, 2010).

[225] *Id.*, ECF No. 412 (Jan. 6, 2011).

[226] *Id.*, ECF No. 515 (May 13, 2011).

[227] *See id.*, ECF No. 570 (Sept. 9, 2011) (explaining bases for May 7, 2011, order excluding testimony of three expert witnesses).

[228] *Id.*, ECF No. 571 (Sept. 9, 2011).

[229] *Id.*, ECF No. 574 (Sept. 9, 2011).

[230] Fed. R. Evid. 706(a).

[231] *Id.*

[232] *Monolithic Power Systems Inc. v. O2 Micro International Ltd.*, 558 F.3d 1341, 1347-48, 90 USPQ2d 1001 (Fed. Cir. 2009) (77 PTCJ 499, 3/13/09).

[233] No. 3:10-cv-03561, ECF No. 374 (N.D. Cal. Aug. 30, 2011) (appointing Rule 706 damages expert); ECF No. 610 at 1 (Nov. 9, 2011) (explaining "why one was needed").

[234] *Id.*, ECF No. 610 at 2-3 (Nov. 9, 2011) (Oracle's damages expert opined that damages were between $1.4 billion and $6.1 billion; Google's damages expert argued for zero damages or, at most, $100 million).

[235] *Id.*, ECF No. 413 at 1-3 (Sept. 9, 2011).

the parties' experts and have his counsel question them, and also authorized the expert to communicate with the parties' experts ''in an informal off-the-record manner to address any ambiguities he may wish to have clarified.''[236] There is no doubt the *Oracle v. Google* court's appointment of an independent damages expert will be closely watched and its propriety and wisdom questioned.[237]

CONCLUSION

Parties, experts, and federal district courts are struggling with recent developments in patent infringement reasonable royalty damages law. That law will continue to develop at a rapid pace, and the Federal Circuit will be called upon again and again to shepherd that development.

In the near future, the court likely will be called upon to reaffirm that application of the entire market value rule does in fact require that the claimed invention be *the* basis for consumer demand, clarify that the entire market value rule is not implicated when there is evidence that at least one of the parties used total revenue as a royalty base in comparable running royalty license agreements, abolish ''meet in the middle'' apportionment (under whatever label) that is untethered to the parties' licensing practices, end multiplication of royalty rates for ''uncertainty'' when unsupported by rigorous economic analysis, and reject substitution of a damages expert's experience for sound economic and factual predicates.

[236] *Id*. at 2-3.

[237] The *Oracle v. Google* court recently issued an order trifurcating the trial, with copyright and patent liability issues decided first, followed (if necessary) by a third trial on damages. *Id.* ECF No. 564 (Oct. 26, 2011).

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