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Implementing Apportionment¹

by Bernard Chao²

On August 15, 2019, Time Warner filed a petition with the United States Supreme Court seeking to vacate a \$139.8 million damages verdict.³ That amount represents approximately 5% of Time Warner's monthly subscriber revenue (\$1.37 per subscriber per month).⁴ Time Warner argues that this award is too much given the contribution the patented feature made to its infringing service. At its core, the damages portion of the petition is asking the Supreme Court to provide guidance that will ensure that damages verdicts rely on apportionment principles and provide clarity in how they achieve this.⁵

For years, the Federal Circuit has required apportionment in calculating royalties for complex products because modern technology products (*e.g.* smart phones and semiconductors) have countless features, most of them unrelated to any given patent at issue. The patentee is entitled to capture value added by the infringing feature, but cannot recover value attributable to everything else.

As with many issues in patent law, this is easier said than done. How do courts ensure that a patentee's expert opinion on the ultimate damages figure is based on apportionment principles? How do we know if the jury verdict reflects those same principles?

These issues are at the heart of Time Warner's petition. To be clear, the underlying decisions all affirm the idea of apportionment. Indeed, the Federal Circuit pointed out that there was a jury instruction on apportionment and then concluded that the verdict properly took into account apportionment principles.⁶ But is it really that simple? How can we be sure that a jury is following the apportionment instruction when there are a mind boggling fifteen *Georgia Pacific* factors to consider?⁷

Up until now, the Federal Circuit's guidance on apportionment has been a bit of patchwork.

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³ Time Warner Cable, Inc. v. Sprint Communications Co., L.P., 2019 WL 3932044 (U.S.) (hereinafter "Time Warner's Petition").

⁴ Sprint Commc'ns Co., L.P. v. Time Warner Cable, Inc., 760 F. App'x 977, 983 (Fed. Cir. 2019).

⁵ Time Warner's Petition, *supra* note 3 (the petition also raises a written description issue).

⁶ Sprint Commc'ns Co., 769. Fed Appx. at 984.

⁷ *Georgia-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

Some decisions have explained what patentees cannot do. They cannot rely on the so called 25% “rule of thumb.”⁸ They generally cannot calculate a royalty based on a larger product, when there is a smaller saleable unit.⁹ But sophisticated patentees and their experts know these rules and undoubtedly say that they are apportioning damages and avoiding the prohibited approaches. The Federal Circuit has also suggested what evidence might work by encouraging the use of comparable licenses.¹⁰ But sometimes that kind of evidence does not exist.

Given this context, how should a court determine if an expert report or jury verdict took into account apportionment principles? Should they just take a look at the amount? If the royalty rate appears to be a disproportionately high percentage of the product’s revenue, the courts could imply that there was no apportionment and reject it. This appears to be what the Federal Circuit has done in some cases with extremely high damages awards.¹¹

In very simple terms, we can think of the Federal Circuit’s jurisprudence as:

1. Tell the jury that it should apportion damages (within the fifteen *Georgia Pacific* factors);
2. Don’t use any of the forbidden approaches; and
3. If the verdict is disproportionately large, consider vacating the award.

Thus, the Federal Circuit has said what approaches violate apportionment principles, but they have not identified any kind of concrete analysis that apportionment requires. Certainly, introducing the term “apportionment” like a magical incantation cannot be sufficient.

That brings us to Time Warner’s petition. In support of its damages demand, Sprint relied on a prior verdict from its lawsuit against Vonage as evidence of a reasonable royalty rate.¹² That lawsuit involved many of the same patents and resulted in a 5% royalty rate - the same rate that the jury used to calculate the award against Time Warner. Because that verdict was rendered prior to *Uniloc*, Sprint was able to rely on

⁸ *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315 (Fed. Cir. 2011) (rejecting the 25% rule of thumb that some experts had used to calculate patent damages).

⁹ *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012) (the primary exception being when the patented feature drives the entire demand for the larger product).

¹⁰ *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1330? (Fed. Cir. 2014).

¹¹ See e.g. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336 (Fed. Cir. 2009) (vacating a \$368 million verdict for the infringement of date picker technology which amounted to roughly 5.5% of the infringing software products); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1312 (Fed. Cir. 2018) (remanding a \$24 million damages award that was based on a \$8 per user fee). Indeed, one commentator previously observed that “[w]ith few exceptions, the largest jury verdicts awarded each year are typically reduced or overturned on appeal.” Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, p. 161 n. 6 (2011)(citation omitted).

¹² *Sprint Commc’ns Co.*, 769. Fed Appx. at 981.

the 25% rule of thumb in the earlier case. Of course, Sprint's attorneys said their expert did not use the 25% rule of thumb in calculating damages in the current case against Time Warner.¹³ However, they conceded that their expert relied on the Vonage verdict. This seems a little too cute. Even if the Vonage jury did not award a 25% royalty, the testimony on the 25% rule of thumb likely framed the earlier jury's thinking. And if the 5% Vonage verdict was tainted by the 25% rule of thumb, surely the 5% verdict against Time Warner suffers from the same taint.

Now there are all sorts of other problems with relying on a prior jury verdict to establish what another jury should decide, but that is beside the point. The real issue is how do we know when a decision was based on apportionment principles? As far as the Federal Circuit is concerned, the answer appears to be when: (i) the expert testified that he considered apportionment principles, and (ii) the jury received an instruction on apportionment.

The law should not be satisfied with that answer. It only gives lip service to the concept of apportionment. But that still leaves the harder question unanswered. What should patentees be required to do? While no one appears to have a good answer yet, there are some ideas that warrant further exploration.

Time Warner raises one possibility. Its brief points out that Sprint never tried "to quantify the value of other technologies comprising Petitioners' VoIP service and separate those out."¹⁴ Perhaps patentees should be required to show the value of other non-patented technologies as well. That kind of analysis would separate the value of patented features from the value of the features unrelated to the patent at issue. Roderick O'Dorisio and I recently conducted an experiment along these lines. The article describing the result, *Saliency, Anchors and Frames: A Multicomponent Damages Experiment*, looks at how jurors might decide damages if they were to assess the value of multiple features simultaneously.¹⁵ But we did not ask the plaintiff to offer valuations for all these features. This approach suffers from some practical problems. For example, most modern products have too many features to realistically value. Maybe, the patentee should only have to analyze a subset of the most important non-patented features. But how many features should be selected and how should we select those features?

In some complex technology cases (*e.g. Apple v. Samsung*), patentees have already relied on a variation of this approach called conjoint analysis.¹⁶ For years market

¹³ *Id.* at 982.

¹⁴ Time Warner's Petition, *supra* note 3 at *10.

¹⁵ Bernard Chao & Roderick O'Dorisio, *Saliency, Anchors & Frames: A Multicomponent Damages Experiment*, MICH. TECH. L. REV. (forthcoming 2019) (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3360003). In the interest of full disclosure, Intel funded this study with a \$10,000 grant that paid for our mock jurors.

¹⁶ See *Apple, Inc. v. Samsung Elecs. Co.*, No. 12-CV-00630-LHK, 2014 WL 794328, at *13 (N.D. Cal. Feb. 25, 2014) (denying Samsung's motion to exclude expert evidence relating to conjoint analysis).

researchers have used conjoint analysis to help determine how to price a product with a given set of features. The technique uses a survey that asks the participants to choose among a series of hypothetical prices and features. Statistical analysis can then isolate the value of specific features of interest. Again, problems arise when there are too many features. A survey can only present a limited number of features to the participants. Researchers can manipulate which features they chose to affect the results.¹⁷ A few years ago, I tried to study how conjoint analysis was being used (and possibly misused) in patent cases. Unfortunately, many of the reports and related motions were filed under seal, making it impossible to assess how well conjoint analysis was working.

But even if conjoint analysis can isolate the value of a patented feature, the cost might be too high for many patent disputes. So far, I have only seen conjoint analysis used in high stakes patent cases suggesting that the cost is high. Thus, there is still a need to explore lesser priced alternatives.

There are other possible ways to apportion damages. Commentators have discussed using a “top down” approach to calculate patent royalties for standards essential patents (“SEPs”).¹⁸ Under this approach, the aggregate royalty for a standard is calculated first, then that total is divided among the individual SEP holders. The top down approach seeks to apportion the value each SEP contributes to the standard. While one would think that this approach might require a large proceeding with many patent holders present, the approach has been used in disputes with one patent holder.¹⁹ A similar approach might also work for apportioning royalties for complex multicomponent products outside the standards context. To my knowledge, only two domestic courts have used the “top down” approach, and only then in the standards context.²⁰ Thus, it would require a significant change in jurisprudence to move reasonable royalty calculations away from the *Georgia Pacific* factors and in this direction.

Finally, still other approaches would change how juries make damages decisions. The law could limit customer suits in order to promote litigation with the original infringing manufacturer.²¹ Because the customer’s product would no longer be at issue, Love and Yoon’s proposal would effectively prevent juries from taking value

¹⁷ See Zelin Yang, *Damages Royalties: An Overview of Reasonable Royalty Damages*, 29 BERKELEY TECH. L. J. 647, 665 (2014).

¹⁸ See e.g. Jorge L. Contreras, *Aggregated Royalties for Top-Down FRAND Determinations: Revisiting ‘Joint Negotiation’*, 62 ANTITRUST BULL. 690 (2017) and Thomas F. Cotter, *Patent Damages Heuristics*, 25 TEX. INTELL. PROP. L.J. 159, 206 (2018)

¹⁹ See e.g. *In re Innovatio IP Ventures, LLC Patent Litigation*, No. 11 C 9308, 2013 WL 5593609 (N.D. Ill. Oct. 3, 2013).

²⁰ The two cases are *In re Innovatio IP Ventures, supra.* and *TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. CV 15-2370 JVS(DFMX), 2017 WL 6611635 (C.D. Cal. Dec. 21, 2017).

²¹ See Brian Love & James Yoon, *Expanding Patent Law’s Customer Suit Exception*, 93 B. U. L. REV. 1605 (2013).

added by the manufacturer's customers and attributing it to the patent. While this solution will not work for many types of patent cases, it can certainly help apportion damages in some of them. Others suggest simplifying damages jury instructions.²² The general idea is relatively uncontroversial. Different proposals propose different instructions with slightly different emphases. But it is unclear if any of these instructions will effectively ensure that juries will rely on apportionment principles.

As you can see, I do not claim to have the answers, but I do have some suggestions on the way forward. First, courts should not let parties seal the majority of their damages reports. Observing how damages are calculated in these cases will help companies improve their damages analysis in the future. Transparency will also allow judges to see analyses from other cases, not just from those cases on their dockets. This will allow them to learn more about these sophisticated techniques and spot when they are being misused. Further, academics can assess whether these theories are grounded in sound legal and economic theory.

Second, researchers need to study different ways to assess the value of a given multicomponent feature. For years, the legal system has been focused on valuing the infringing feature in a vacuum. Perhaps context is necessary. Experts may be able to provide that context by using different techniques like conjoint analysis. Alternatively, courts can insist that the parties introduce evidence about the value of other features. That might be through some kind of top down approach. Courts might even ask juries to make decisions about the value of those non-patented features. Perhaps, a combination of these approaches makes the most sense. Moreover, as we study these proposals, we should keep in mind that jurors are subject to various cognitive biases like anchoring.²³ Any proposals that change how the law calculates damages should also consider if juries will respond to these changes in the ways we expect.

To be clear, I am not arguing that we have the answers now. But I am arguing that these potential solutions are either worth studying, or even trying, in an effort to implement a system that will truly apportion patent damages. Time Warner's petition for *certiorari* presents an interesting problem for the Supreme Court. There are good reasons to believe that the verdict below did not rely on apportionment principles. Perhaps, it is time for the Court to tell everyone to take apportionment more seriously. This may force new developments in apportionment. At the same time, the Supreme Court may be unwilling to simply say "do better" without giving more specific guidance.

²² See e.g. Hon. Arthur J. Gajarsa, William F. Lee, A. Douglas Melamed, *Breaking the Georgia-Pacific Habit: A Practical Proposal to Bring Simplicity and Structure to Reasonable Royalty Damages Determinations*, 26 TEX. INTELL. PROP. L.J. 51, 52 (2018); Stuart Graham et. al., *Final Report of the Berkeley Center for Law & Technology Patent Damages Workshop 15 August 2016*, 25 TEX. INTELL. PROP. L.J. 115, 140 (2017).

²³ John Campbell, Bernard Chao, Christopher Robertson & David Yokum, *Countering the Plaintiff's Anchor: Jury Simulations To Evaluate Damages Arguments*, 101 IOWA L. REV. 543 (2016) (showing how juries are susceptible to anchors when deciding damages).