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Downgrade To "Neutral": A Diminishing Role Of The Georgia-Pacific Factors In Reasonable Royalty Analyses

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I. Introduction

More than 80% of damages awards in patent litigation include reasonable royalties.[1] In these litigations, reasonable royalty analyses by economic experts often involve a linear and monotonous march through the fifteen economic factors listed in *Georgia-Pacific v. United States Plywood* (S.D.N.Y. 1970), commonly referred to as the *Georgia-Pacific* factors. For readers that are unfamiliar with the Georgia-Pacific factors, the factors include considerations relating to past technology agreements (factors 1, 2), the nature, scope, and duration of the license (factors 3, 7), licensing policy (factor 4), commercial relationship between the licensor and licensee (factor 5), sales of non-patented items (factor 6), sales and profits (factors 8, 11), contribution of the patented technology (factors 9, 10, 12, 13), opinions of qualified experts (factor 14), and the amount that a licensor and licensee would have agreed to in a hypothetical negotiation for a license to the patent-in-suit (factor 15). Damages experts in patent litigation often perform an assessment of each of the fifteen factors as having an "upward," "downward," or "neutral" effect on the royalty in a hypothetical negotiation.

While rote recitation of the *Georgia-Pacific* factors was nearly a *de facto* standard for inclusion in reasonable royalty analyses, recent opinions of the Federal Circuit indicate otherwise. Because the *Georgia-Pacific* factors are neither mutually exclusive nor collectively exhaustive with respect to relevant economic issues, their utility in quantifying a reasonable royalty is inherently limited. In this article, we explore shortcomings and misapplications of the *Georgia-Pacific* factors as identified by the Federal Circuit, indicating a diminishing role for the *Georgia-Pacific* factors in the future.

Fifteen Factors for All Situations and Circumstances?

Georgia-Pacific is a case that is almost invariably cited in the context of reasonable royalty damages in patent litigation. But why? Not because the district court in *Georgia-Pacific* intended its factors to be globally applicable in all reasonable royalty cases. In fact, the court's language at the time it introduced those factors demonstrates the opposite:[2]

"A comprehensive list of evidentiary facts relevant, in general, to the determination of the amount of a reasonable royalty for a patent license may be drawn from a conspectus of the leading cases. The following are some of the factors *mutatis mutandis* seemingly more pertinent to the issue herein…"

While brief, the court's introduction provides three indications that its factors are not applicable to all cases. First, the court explicitly stated that its fifteen factors are only "some" of the factors to be considered in a reasonable royalty analysis. This is consistent with our observation that the *Georgia-Pacific* factors are not collectively exhaustive from an economic perspective— *i.e.*, the factors are not

necessarily all of the factors that should be considered. Second, the court qualified the factors it presented as *mutatis mutandis*, a Latin phrase meaning "the things being changed which need to be changed." This language indicates that the court presented factors that were modified from the "evidentiary facts relevant…from a conspectus of the leading cases" that it observed in general. Third, the court stated that it identified factors that are "seemingly more pertinent to the issue herein." This language indicates that the factors were not intended to be pertinent to each and every potential fact pattern that may arise in patent litigation, but rather pertinent to determining a reasonable royalty between Georgia Pacific Corporation and United States Plywood Corporation specifically.

Similar to the court in *Georgia-Pacific*, recent Federal Circuit opinions indicate that a linear march through the *Georgia-Pacific* factors is unnecessary, and can even be counterproductive or confusing in determining a reasonable royalty. For example, in *Ericsson v. D-Link* (2014), the Federal Circuit found that "the district court erred by instructing the jury on multiple Georgia-Pacific factors that are not relevant, or are misleading, on the record before it, including, at least, factors 4, 5, 8, 9, and 10 of the *Georgia-Pacific* factors."[3] The Federal Circuit elaborated as follows:[4]

"Although we have never described the *Georgia-Pacific* factors as a talisman for royalty rate calculations, district courts regularly turn to this 15-factor list when fashioning their jury instructions. Indeed, courts often parrot all 15 factors to the jury, even if some of those factors clearly are not relevant to the case at hand. And, often, damages experts resort to the factors to justify urging an increase or a decrease in a royalty calculation, with little explanation as to why they do so, and little reference to the facts of record."

In *WhitServe v. Computer Packages* (2012), the Federal Circuit provided guidance to litigants and expert witnesses, stating that "[e]xpert witnesses should concentrate on fully analyzing the applicable factors, not cursorily reciting all fifteen. And, while mathematical precision is not required, some explanation of both why and generally to what extent the particular factor impacts the royalty calculation is needed."[5] The Federal Circuit elaborated:[6]

"We do not require that witnesses use any or all of the *Georgia-Pacific* factors when testifying about damages in patent cases. If they choose to use them, however, reciting each factor and making a conclusory remark about its impact on the damages calculation before moving on does no more than tell the jury what factors a damages analysis could take into consideration."

If neither the court in *Georgia-Pacific* nor the Federal Circuit provide an endorsement of global applicability of the *Georgia-Pacific* factors, why is their application so universally pervasive? One

plausible explanation would be if the *Georgia-Pacific* factors provided a quantifiable basis to determine a reasonable royalty when alternative evidence is limited. For example, the Federal Circuit indicated in *Apple v. Motorola* (2014) that a reasonable royalty must be determined as a minimum floor for patent infringement damages even without full evidentiary support:

"Because no less than a reasonable royalty is required, the fact finder must determine what royalty is supported by the record. … Indeed, if the record evidence does not fully support either party's royalty estimate, the fact finder must still determine what constitutes a reasonable royalty from the record evidence."

This explanation might be compelling if the *Georgia- Pacific* factors did indeed provide a well-defined method for mathematically quantifying a reasonable royalty. Unfortunately, they do not. The court in *Georgia-Pacific* agreed when it stated that "there is no formula by which these factors can be rated precisely in the order of their relative importance or by which their economic significance can be automatically transduced into their pecuniary equivalent."[7]

This is further evidenced by the fact that the district court's quantification of a reasonable royalty in *Georgia-Pacific* was rejected and modified on appeal. The Second Circuit reduced the district court's reasonable royalty award by 29%, stating "we modify its ultimate conclusion as to a reasonable royalty because we think it fails to leave [Georgia Pacific Corporation] a reasonable profit on its sale of striated plywood."[8]

Additional Shortcomings

Because the *Georgia-Pacific* factors do not provide a mathematical formula for calculating a reasonable royalty, application of the *Georgia-Pacific* factors by many experts has traditionally included an assessment of each of the fifteen factors as having an "upward," "downward," or "neutral" effect on the royalty in a hypothetical negotiation. In some instances, an expert will derive a royalty from another source as a starting point and then use the *Georgia-Pacific* factors to modify the starting point. In other instances, experts will not even specify a starting point, yet opine of "upward", "downward", and/or "neutral" effects in a vacuum, without reference to what or how the effects apply. In these instances, expert testimony on the *Georgia- Pacific* factors can be unhelpful and even misleading, as an "upward" effect from a vacuous starting point can provide limited insight into an economically appropriate reasonable royalty.

The Federal Circuit explained in *Uniloc v. Microsoft* (2011) that, even when a "starting point" is specified, no amount of *Georgia-Pacific* factor adjustments could rescue a reasonable royalty analysis if that starting point is fundamentally flawed (in the *Uniloc* case, the now-abolished "25 percent rule").

The Federal Circuit stated: "It is of no moment that the 25 percent rule of thumb is offered merely as a starting point to which the Georgia- Pacific factors are then applied to bring the rate up or down. Beginning from a fundamentally flawed premise and adjusting it based on legitimate considerations specific to the facts of the case nevertheless results in a fundamentally flawed conclusion."[9]

Nevertheless, even when beginning from a reliable starting point, a directional approach to a *Georgia-Pacific* analysis often ignores the high degree of overlap among the factors and frequently relies upon a non-quantifiable impact of each factor. Assignment of an upward or downward adjustment to each *Georgia-Pacific* factor can be misleading because the factors are not mutually exclusive from an economic perspective—*i.e.*, the factors have considerable overlap with each other. For example, two factors that are not mutually exclusive are factor 12 ("The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions") and factor 13 ("The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer."). From an economic perspective, a customary profit apportionment to the patented technology in factor 12 would likely reflect considerations relating to "profit that should be credited to the invention" in factor 13, such that a similar directional impact (*e.g.*, "upward effect on royalties") may be redundant. As another example, factor 15, which describes the outcome of a hypothetical negotiation for a license to the patented technology, may overlap with any of the other 14 factors. Indeed, the court in *Georgia-Pacific* observed, "In the present case there is a multiplicity of inter-penetrating factors bearing upon the amount of a reasonable royalty."[10]

Nor are the *Georgia-Pacific* factors necessarily exhaustive of all relevant economic considerations in a reasonable royalty analysis. As noted above, the court in *Georgia-Pacific* explicitly states that its factors are only "some" of the relevant factors to consider. The Federal Circuit has acknowledged that other approaches to a reasonable royalty may be better suited for the specific facts and circumstances of a particular case. In *Wordtech Systems v. Integrated Network Solutions* (2010), the court stated, "A reasonable royalty can be calculated from an established royalty, the infringer's profit projections for infringing sales, or a hypothetical negotiation between the patentee and infringer based on the factors in *Georgia-Pacific*."[11] In *Apple v. Motorola* (2014), the Federal Circuit stated that "there are multiple reasonable methods for calculating a royalty" and "[a]ll approaches have certain strengths and weaknesses and, depending upon the facts, one or all may produce admissible testimony in a single case."[12]

Nor do the *Georgia-Pacific* factors provide guidance on underlying conceptual principles, *per se*, for evaluating reasonable royalties. When recently seeking to clarify underling principles, the Federal

Circuit in *Ericsson v. D-Link* (2014) cited back to *Garretson v. Clark* (1884), which stated that "the governing rule is that the ultimate combination of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more."[13] The Federal Circuit also recently reaffirmed a principle of reasonable royalties reflecting the "value of what was taken—the value of the use of the patented technology," as stated in the 100 year old Supreme Court case *Dowagiac v. Minn. Moline Power* (1915).[14] See also *Warsaw Orthopedic v. NuVasive* (2015): "A reasonable royalty, on the other hand, is intended to compensate the patentee for the value of what was taken from him—the patented technology."[15] In contrast, the *Georgia-Pacific* factors provide one potential implementation of underlying principles rather than guidance on proper principles themselves.

An Economic Approach

If *Georgia-Pacific* is not the "talisman for royalty rate calculations," then what is a viable approach to a reasonable royalty in all cases? The answer is applying sound economic principles to the specific facts of a particular case. This is consistent with legal precedent going back to United States *Frumentum Co. v. Lauhoff* (6th Cir. 1914), which provides general guidance that a reasonable royalty is an amount of money determined by applying sound economic principles to case-specific facts, whatever those facts may be.[16]

As an illustration, consider a scenario in which a company offers two otherwise identical products that differ only in that one product includes an additional feature that is precisely the asserted invention of the patent-in-suit. An analysis of the difference in price and profitability between these two products may be the most relevant information from which to determine a reasonable royalty for the patent-in-suit, and that information may inherently reflect a number of relevant *Georgia-Pacific* factors. Such a comparison is similar to a market-based valuation approach for real estate, where, for example, an appraiser may analyze two houses that are sufficiently similar for comparison (*e.g.*, similar floor plans and neighborhoods) and observe differences in value attributable to differences in the homes (*e.g.*, one home has a swimming pool). This approach to determining value would not be considered economically invalid simply because a recitation to the Georgia-Pacific factors is not present.

One advantage of focusing on application of sound economic principles to case-specific facts is that there is no need to recite each *Georgia-Pacific* factor individually in a particular sequence. In *Lucent v. Gateway* (2009), the Federal Circuit's analysis was explicitly "focus[ed] on the relevant *Georgia-Pacific* factors." The court elaborated stating, "We need not identify any particular *Georgia-Pacific* factor as being dispositive. Rather, the flexible analysis of all applicable *Georgia-Pacific* factors provides a useful and legally-required framework for assessing the damages award in this case."[17] Similarly, the court in

Ericsson v. D-Link (2014) found that "the district court erred by instructing the jury on multiple *Georgia-Pacific* factors that are not relevant" under the specific facts of that case.[18]

While a traditionally enumerated presentation of the *Georgia-Pacific* factors may distract from key economic information, an economic and fact-centric analysis addresses the relevant factors in an order that is most logical and economically informative with respect to the facts of the case. It is likely that a thoughtful and thorough economic analysis will inherently address all *Georgia-Pacific* factors, even if not explicitly or sequentially. Approaching expert analysis in this way is likely to be more helpful to the trier of fact because it can be logically organized around relevant economic principles rather than tethered to specific, pre-defined implementations.

We cannot say with certainty what the future holds, but it is possible that one day the *Georgia-Pacific* factors will become a method of the past. Until that happens, an approach that focuses on applying sound economic principles to case specific facts, rather than rote iteration of all fifteen *Georgia-Pacific* factors, appears to be a wise way to proceed. In the long run, we are quite certain that sound economic analysis is here to stay.

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2. *Georgia-Pacific v. U.S. Plywood Corp*, 318 F. Supp. 1116, at 1120 (S.D.N.Y. 1970).
3. *Ericsson, Inc., et al. v. D-Link Systems, Inc., et al.,* No. 2013- 1625, -1631, -1632, -1633, at 48-49 (Fed. Cir. Dec. 4, 2014).
4. *Ericsson, Inc., et al. v. D-Link Systems, Inc., et al.,* No. 2013- 1625, -1631, -1632, -1633, at 47 (Fed. Cir. Dec. 4, 2014). (emphasis added).
5. *WhitServe, LLC v. Computer Packages, Inc.,* 694 F.3d 10, at 31 (Fed. Cir. 2012). (emphasis added).
6. *WhitServe, LLC v. Computer Packages, Inc.,* 694 F.3d 10, at 31-32 (Fed. Cir. 2012). (emphasis added).

7. *Georgia-Pacific v. U.S. Plywood Corp,* 318 F. Supp. 1116, at 1120¬–21 (S.D.N.Y. 1970).
8. *Georgia-Pacific v. U.S. Plywood Corp,* 446 F.2d 295, 297 (2nd. Cir. 1971).
9. *Uniloc USA, Inc. v. Microsoft Corp*., 632 F.3d 1292 (Fed. Cir. 2011).
10. Georgia-Pacific v. U.S. Plywood Corp, 318 F. Supp. 1116, at 1120–21 (S.D.N.Y. 1970).
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12. *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1315, 1319 (Fed. Cir. 2014).
13. *Ericsson, Inc., et al. v. D-Link Systems, Inc*., *et al.*, No. 2013- 1625, -1631, -1632, -1633, at 48-49 (Fed. Cir. Dec. 4, 2014).
14. *AstraZeneca AB v. Apotex Corp.* No. 2014-1221, at 33 (Fed. Cir. Apr. 7, 2015).
15. *Warsaw Orthopedic, Inc., et al. v. NuVasive Inc.*, 778 F.3d 1365, 1375 (Fed. Cir. Mar. 2015)
16. *United States Frumentum Co. v. Lauhoff*, 219 F.610 (6th Cir. 1914). Sullivan, Ryan M. and John B. Sherling, *Rational Reasonable Royalty Damages: A Return to the Roots* (November/ December 2011, *ABA Landslide,* Volume 4, Number 2).
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