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Lost Profits in Intellectual Property Cases

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Abstract:
Much has been written about various remedies in litigation involving intellectual property ("IP") infringements, some economic and other non-economic. A common remedy across different types of IP is lost profits. This paper explores similarities and differences among different types of IP infringement: patent, copyright, trademark, and trade secrets. Common elements needed in any lost profits claim, especially causality, are presented and along with damages implications for plaintiff and infringer by type of IP. These are a few of issues considered along with brief discussion of key statutes, cases, and the alternative of damages based on reasonable royalty rates.

Keywords: lost profits, intellectual property infringement, damages, patents, trade-secrets

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1 Introduction

There are several reasons to consider lost profits in Intellectual Property ("IP") cases. First, an obvious point is IP involves several types of intangible assets, the main ones being patents, copyright, trademark, and trade secrets yet lost profits, a common remedy across each IP type, is not computed quite the same way among these different types of IP cases. Second, until recently when one referred to an IP infringement case, the common reaction was it involved some type of patent infringement; however, in recent years damages from patent infringement cases may not exceed those for non-patent cases. In a recent empirical article, (*Houston Law Review* Vol. 55, Issue 1, 2017) law professor Elizabeth Rose noted:

> *Since 2004, the annual average trade secret damages award has exceeded $1 million, except for 2008 when the average was $861,051. Of the secret damages awarded, about 25 % were over $1 million with about 15 % exceeding $5 million.*
>
> *The average trade secret damages are less than, but comparable to, damages in patent litigation. They are larger than those for trademark litigation. The average award in patent cases is about $19 million, and about 25 % of the damage awards are over $1.7 million. Average trademark damages were about $1–2 million with over half of the awards less than $500,000.* (*Ibid.* p.16)

Even though lost profits is not computed quite the same way among these different types of IP cases, one wonders what the main lost profits issues in different IP cases are?[1]

In addition to special aspects of IP infringement, when making any lost profits claim in civil litigation, three or four common elements must be shown by the plaintiff.[2] These are as follows:

1. **Proximate cause.** In breach of contract case and in tort cases plaintiff must prove the defendant's actions directly and proximately caused the lost profit damages.
2. **Foreseeability.** This does not mean that a specific breach or infringement was foreseeable, only that the breach or conduct was likely to cause the damages.
3. **Reasonable certainty.** Speculative, remote, and hypothetical lost profits are not recoverable; however, if the fact of damages is established then courts may permit more leeway in measurement of the amount of damages, especially if based on reasonable and reliable, non-speculative data.
4. **Mitigation.** The injured party has a duty to act to reasonably prevent or limit its lost profits.

To summarize, several main issues are discussed in this paper. Namely,

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– Lost Profits in IP cases really means noting key similarities and differences in lost profits among different IP types. Here we consider patent, copyright, trademark, and trade secret infringement claims. Lost profits in each are outlined here.

– Lost Profits is only one of the remedies in an IP infringement case. Other remedies may include injunction, statutory award, prejudgment interest, attorney fees, augmented/punitive damages, impoundment, and reasonable royalty damages. All are excluded here except reasonable royalty damages, which is discussed briefly.

– We also note three challenging litigation issues confronting the damages expert: (1) proving causality, a common issue in any lost profits case; (2) apportionment of damages; and (3) unjust enrichment and defendant's overhead.[3]

– Two final points are that (a) we do not list all legal and financial remedies but attempt to provide guidance regarding what are the main drivers of lost profit in IP cases, and (b) we do not provide legal advice. For such, one needs to contact the attorney on the case.

– The table below provides a summary of the potential lost profits damages awards available in IP cases. It is intended to be general guide to these damages, but the economic expert needs to work closely with the client/lawyer regarding their applicability in his/her case.

	Patents	**Trademark (Trade dress)**	**Copyright**	**Trade-secrets**
Lost Profits*	Yes (Panduit Factors)	Yes	Yes	Yes
Price Erosion	Yes	Yes	Yes	Yes
Future Lost Profits (Including Future Price Erosion)	Yes	N.A.	Yes	Yes
Head Start or First Player Advantage Affecting Market Share	Depends	Yes	No	Yes
Infringer's Profits	No (Only allowed for Design Patents)	Yes (No Double Counting)	Yes (No Double Counting)	Yes (No Double Counting)

**Note: In some infringement cases, one can claim loss of convoyed sales after proving causation*

2 Lost Profits in Patent Infringement Cases

Patent infringement cases are an obvious place to start.[4] They are the largest as per IP infringement awards, most frequently filed cases, and arguably most studied by the courts, legal scholars, and damages experts. The basis for patent infringement remedies is found in the "Patent Act", more precisely, 35 U.S. Code Chapter 29 – REMEDIES FOR INFRINGEMENT OF PATENT, AND OTHER ACTIONS, especially § 284 Damages, which states (in part),

> *Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.*

This is a general guide on patent infringement damages, which calls for added comments, including how the courts have interpreted remedies for patent infringement cases. Before highlighting major cases, here are a few key points about patent infringement damages:

– As stated, compensation to the patent owner for an infringement can be in lost profits or reasonable royalty damages. If the patentee owns a design patent, then damages can also include infringer's profits, so-called disgorgement of 'unjust enrichment'.

– Start date to damages in a patent infringement case is often a debatable issue and depends on things like notification and product *marking*. Generally, it is only after the patent was issued, but the expert may need to consider several possible start dates, the damages generally begin at the date of infringement and after a patent is issued. Protection length is 20 years from filing patent application (a utility patent), or 14 years after a design patent was issued.[5]

– Punitive damages may also be awarded by the court as a multiple of compensatory damages (up to three times compensatory damages).

– A damages award in a patent infringement case tries to make the injured party whole, which is not unlike other types of cases. But-for the infringement, how would the market have regarded the patented item? What would be plaintiff's costs, prices, market sales, etc. had there not been an infringement? The expert needs to consider these and related issues.[6]

3 Lost Profits in Patent Infringement Cases: Providing Causality

Historically, establishing causality in a patent infringement case, can be linked to (a) a set of four factors put forth in the *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.* case,[7] and (b) arguments about the nature of the market for the patented product (or patented technology). To establish causation under the Panduit test, a patentee must prove:

1. Demand for the patented product

2. Absence of acceptable noninfringing products

3. Manufacturing and marketing capacity to exploit the demand, and

4. The amount of profit it would have made. (estimated in a reasonable, non-speculative way)

Proof of demand is made based on past product sales. Implicit is the assumption that both infringer and patentee face the same product demand. An even stronger argument is if the patent owner says demand for the product is mostly attributable to features of the patented technology. One extension of this argument is if there are only two suppliers in the product market. If plaintiff makes this argument, they still need meet Panduit factors 3 and 4, however.

A further extension of a plaintiff's argument about the special nature of the patented technology is such Panduit Factor #1 extends to the entire market, even though the product sold in the market may also include non-patented features. While the general the idea is that the patented technology is what consumers consider the most important feature correctly isolating that feature for damages estimation is not clear. What does econometric analysis say is consumer demand for the patented feature? What if the feature is only sold with non-patented features in a *functional unit?*[8]

A great deal of attention has been focused on Panduit factor #2, the absence of acceptable noninfringing products. The court in Panduit narrowed the market definition such that the plaintiff had to argue it could have made all the defendant's sales of the infringed product but for the infringement. In later cases, this view has been reconsidered by taking a broader view of the market and available substitutes. The point is that substitution is a matter of degree and varies by product with some products having many substitutes and others having few.[9] As such, Panduit #2 alone offers limited guidance to an expert's damages measurement.

Several cases after Panduit focused on the nature of the market for the patented product when considering Panduit #2. These cases and the issues they addressed are as follows:

– **Market Share Damages.** In situations where it is difficult to prove the absence of acceptable noninfringing substitutes *ala* Panduit #2, the patent owner may argue instead for an approach which considers the market share each competitor held before the infringement. Say, if not for the infringement, each competitor would have sold its market share worth of the infringer's sales ("but-for market share").[10] In the 1989 case – State Industries v. Mor-Flo Industries, State Industries argued that there were many water heater manufacturers without the patented feature competing in the market. All these different heaters (with or without the patented feature) were acceptable to the consumers. It argued that, in the but-for world, State Industries would have received ***only*** its share of the infringer's water heater sales (and not all of infringer's sales). The court agreed and awarded lost profits on State Industries' but-for market share. On the remaining infringing sales, it was awarded reasonable royalty damages. As an example of the calculation of a but-for market share, please see the table below. In this hypothetical market example, the patented holder would be awarded lost profits on its market share of unit sales (after excluding the infringing sales of 2,000 units). On the remaining infringing sales (44 %), it would receive reasonable royalty damages.

Firm	Unit Sales	Actual Market Share	Firm	Unit Sales	But-For Market Share
X	10,000	50 %	X	10,000	56 %
Y	2,000	10 %			
Z	8,000	40 %	Z	8,000	44 %
Total	20,000	100 %	Total	18,000	100 %

- **Patent owner's products.** Product quality and price can be argued to create market segments such that an infringer can argue that its customers would not have bought the patent owner's product even if the infringing product did not exist.[11] In such a case, the patent holder is entitled to a reasonable royalty on all the infringer's sales.
- **Infringer's Options.** An underlying assumption in Panduit is that the infringer would not try to avoid infringing if lawful options were available to maintain its market share. However, the value of the patented technology is the incremental value it provides over the next best option.[12] This was the main argument in the *Grain Processing* case. The market value of the patent owner's exclusive right was measured by comparing the patented invention to the next best alternative available to the infringer. The infringer was able to develop a substitute process in two weeks. Factors to consider in asking if an alternative noninfringing product could have been effectively available include:
  - Time needed to develop the alternative.
  - Cost of needed material and equipment.
  - If technical know-how exists to design noninfringing substitute product.
  - The effect on sales of the product, if any. (Is the non-infringing product 'acceptable' to the consumers?)
- **Apportionment and Panduit Factors.** In a recent case, *Mentor Graphics*, the infringer argued that the lost profits associated with its infringement for the patented product 'emulator system', should be apportioned down to the level of the patented feature. That is, the infringer argued that the lost profits damages should be based ONLY on the value of the patented feature and not on the profits associated with the value of the entire patented product. The court held that the Panduit framework is a useful but non-exclusive method for establishing lost profits entitlement. It held that the Panduit requirements (factors 1 and 2) tie lost profits damages to worth of patented features. Therefore, the satisfaction of the Panduit factors satisfies the principles of apportionment in this case, and there is no need for any further.[13]

Panduit #3 on patent owner's ability to have made and sold its products in lieu of the infringer's sales might be overlooked by the damages expert: if so, that is a mistake. The argument needs be made that the plaintiff owner could have financed expanded production, produced the added products, and distributed and provided service for all expanded production – not simply manufacturing capability.

Panduit #4 is the profit the patentee would have made (if not infringed). This is not an exercise done with mathematical certainty. Instead, the patent owner need only provide a reasonable estimate of potential profits based on reliable data and non-speculative assumptions. The steps involved are as follows:

- Count the sales by the defendant of the infringed product
- Consider the average price the patent owner would have charged for the diverted sales (Expert needs to consider a downward sloping demand curve)
- Compute the incremental costs the patent owner would have incurred due to the increased sales
- Adjust for any price adjustments the patent owner was forced to make due to competition from the infringer on patented goods[14]

4 Lost Profits in Copyright Infringement

A copyright grants the creator of an original work, the exclusive right to use and distribute it. Unlike a patent, a copyright does not protect an actual idea, but a copyright protects the method of expression of the idea. The U.S. Copyright Act grants five exclusive rights to copyright owners: the rights to reproduce their works, to adapt them, to perform in public, display, and distribute their works. Technology changes impact copyright rights. Remedies for Copyright Infringement include:

The copyright owner's actual damages and any additional profits of the infringer which are attributable to the infringement which are not included in computing actual damages of the owner.[15]

5 One of 2 Bases of Lost Profits Damages to Copyright Owner

Lost profits of copyright holder,[16] if owner and infringer compete in same market, is another infringement remedy. Determining lost actual profits calls for considering the following factors:

a. But-for sales (projected minus actual sales for appropriate time), less

b. Incremental expenses associated with estimated lost sales (usually this refers only to variable expenses, not overhead)

c. Consider semi-variable expenses if infringement continues beyond a short period and/or involves changes in scales of operations

d. May need to apportion lost sales of copyright owner and infringer for the infringed item

e. Adjust for possible impact on lost profits of other or 'external' factors like changes in industry, competition, economic factors, regulatory issues, technology, etc.

6 Two of 2 Bases of Lost Profits Damages to Copyright Infringer

According to the Copyright Act, in addition to lost profits of the copyright owner from the infringement, plaintiff damages may include profits of the infringer not considered in computing actual damages to the plaintiff. Here are a few items for the expert to consider in assessing lost profits of the infringer.

a. The copyright owner must prove the infringer's ill begotten sales

b. Once infringer's wrongful sales are proven, the burden shifts to the infringer to prove deductible expenses.[17] If infringer fails to prove deductible expenses, then gross revenues of infringer is unjust enrichment. Exactly how to allocate infringer's costs is left for expert to decide. One can consider a portion of all common costs of the infringer and apportion some costs to the infringing item or measure only those incremental costs associate with the infringing item.

c. Overhead costs should be considered but the courts vary as per inclusion or not of overhead expenses in measuring the infringer's profits.

d. Apportioning profits attributable to an infringed copyright as opposed to other products may be needed, depending on the nature of the infringement and the items sold by the parties. The key is the relative value of the infringed item not some mathematical formula such as a percent of total words in a song or lines of code within a software algorithm: *What is the relative value of the infringed part* … of the entire item, this is the key issue.

e. In addition to requesting an apportioning of profits, the infringer is likely to argue that other factors than the infringed item accounted for much of their lost profits. Such factors might include economic and management expertise of the infringers, industry changes, differences between the copyright owner and infringer in product pricing, operating expenses, and competitive positioning of each – such need be addressed and given relative value by the expert.

f. Other items of concern in computing an infringer's profits may be profits derived indirectly or value in use. Value in use is similar in type to the cost of a reasonable royalty not paid as it impacts operating costs.

7 Lost Profits in Trademark Infringement

A trademark is defined as "a word, phrase, symbol, or design, or a combination thereof, that identifies and distinguishes the source of the goods of one party from those of others.[18]

Trademark-intensive industries are the largest in number and contribute the most employment with 23.7 million jobs in 2014 (up from 22.6 million in 2010). Copyright-intensive industries supplied 5.6 million jobs (compared to 5.1 million in 2010) followed by patent-intensive industries with 3.9 million jobs (3.8 million in 2010).[19]

Demand for registered U.S. trademarks has grown substantially over the past 25 years in absolute terms and relative to overall economic growth. Trademark filings grew at an average annual rate of 6.5 % between 1985 and 2011, outpacing real GDP growth and implying intensified use of trademarks in the U.S. economy.[20]

The **Lanham (Trademark) Act** (PL. 79–489, 60 Stat. 427, enacted July 5, 1946, codified at 15 U.S.C. § 1051 et seq. (15 U.S.C. Ch. 22)) is the primary federal trademark statute of law in the United States. The Act prohibits a number of activities, including trademark infringement, trademark dilution, and false advertising.

*Trademark infringement is the **unauthorized use** of a trademark or service mark **on or in connection with goods and/or services** in a **manner that is likely to cause confusion**, deception, or mistake about the source of the goods and/or services.*[21] As originally conceived, trademark law was set up to protect the public and protecting commercial interests of the trademark holder was a secondary concern.[22] For instance, if a nineteenth century English grocer said a box of crackers were fresh when he knew they were stale, the customer could sue for legal relief against this lie and later laws prevented 'passing off' the quality and source of the goods. If cracker box said it held goods made by Jones firm, a high-quality concern, but Smith firm (with less quality) really made the crackers, the trademark rights of Jones firm would be violated by this deceit.

As Paul Goldstein has noted, trademark law rests on the economics of information and not the economics of public goods associated with patent and copyright law.[23] Patent and copyright laws incentivize the producer to generate new items and services, whereas trademark law is intended to assure the public that what they believe they are buying is in fact correct.

8 Criteria for Economic Damages Issues in Trademark Infringement Cases

Economic damages are not the only remedies with a proven trademark violation. Injunction and destruction of infringing material and means of making them may also be granted by the court. Criteria for an award of monetary damages may also face requirements of customer confusion and/or bad faith as defined in case law as fraud or passing off; deliberate deception; disregard to mark holder's right. Absent proof of bad faith may limit a remedy to only injunction. If, however bad faith is established, then the plaintiff's amount of damages needs to be proved with reasonable inference, which means reliable data and well-established methods, not requiring precise measurement, are employed in estimation of these damages.

9 Plaintiff's Actual Damages in Trademark Is Not Limited to Lost Profits

1. Diverted sales (especially if both firms sell same products); choice of methods

   a. Before/after comparison, e. g. project each with regression models

   b. Compare with similar firms in same market ('market method')

   c. Market Share approach

2. Loss of price for plaintiff products[24]

10 Another Source of Trademark Infringement Damages in Trademark Infringement Cases: Infringer's Profits

As in copyright cases, the trademark owner can be awarded both its actual damages AND the infringer's profits so long as infringer's profits are not duplicative of those measured as mark owner's lost profits. Another similarity is that after the IP owner has established sales by the infringer of protected products, the burden shifts to the infringer to prove costs of production. Three such theories:

a. **Unjust enrichment** … infringer yields profits to trademark owner

b. **Deterrence** … court may award infringer profits to make infringement unprofitable

c. **Proxy for owner's damages** ... if infringer's actions prevented owner from making enough sales, then court may use infringer's profits as damages basis

No matter which theory of damages is used, apportionment of sales and profits to the infringing product or service may be argued. This burden is on the infringer but how do so is an open issue.

11 Methods Used by Infringer to Measure Costs in Trademark Infringement Cases

Exactly how to deduct production costs of the infringer to arrive at a measure of lost profits varies by experts and by venue. Two main theories are incremental and percentage methods. In the short run, if the scale of production has not changed, the incremental method is generally preferred.

a. *Incremental method* of costs is to assess only those extra costs of production which are associated with marginal sales. The focus is on changes in costs and changes in sales. To take the average of each is incorrect. Some experts merely 'eyeball' costs and 'guesstimate' which costs are variable in the short run. A better approach is to conduct some sort of statistical analysis and select those expenses which vary significantly with sales. This is the marginal cost theory approach and comports to align with economic marginal analysis, but-for sales, etc.

b. *Fully allocated cost approach*. The underlying debate often involves what to do about overhead expenses. Clearly, the infringer would like expenses to be greater and therefore to include all production expenses, even fixed costs like insurance, officer salaries, and rent, not just variable expense items. A compromise may be to include expenses which are quasi-variable, meaning expenses which vary with scale of production, especially if it changed. Fully allocating all expenses (including fixed, overhead costs, etc.) on a percentage basis is accepted by some courts, even though it does not fit with marginal analysis preferred by most economists in lost profits litigation.[25]

12 Trade Secrets: An Introduction

According to the Uniform Trade Secrets Act ("USTA"), a 'trade secret' is '*information, including a formula, pattern, compilation, program, device, method, technique, or process that derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.*' The trade secret owner is required to make *reasonable efforts* to maintain secrecy, where reasonable efforts vary according to norms within the industry and firm's size. Three other ways to define trade secrets are offered by James Pooley, a leading authority on trade secrets, in his *Secrets*, Versus Press, 2015:

a. Anything you don't want the competition to know

b. Commercially useful ideas

c. Any information that gives your business a competitive advantage, is not generally known, and that you take reasonable efforts to protect. (op cit. p.29)

13 Trade Secrets: Statutes

In May 2016, President Obama signed into law the Defend Trade Secrets Act of 2016 ("DTSA"). This was the first federal law in the United States for a civil cause of action for trade secret misappropriation. Previously, civil trade secret law in the U.S. had happened exclusively under state law and in state courts as many states adopted the Uniform Trade Secrets Act. It is expected that passage of DTSA along with UTSA puts trade secret protection on par with other forms of intellectual property.[26]

14 Trade Secrets: Damages

Remedies are available for trade secret misappropriation under both UTSA and DTSA (which mainly codifies remedies available under common law tort concepts). Compensatory damages, often lost profits, may be available in business tort cases involving actual lost profits. However, in contrast, in trade secret cases a plaintiff is not required to prove actual harm. (*loc cit.* Rowe, p 159). The misuse of a trade secret or mere threat of disclosing a trade secret can yield injunctive relief or establish liability. However, to obtain monetary damages, such as plaintiff's lost profits, a showing of actual harm is needed.

15 Trade Secrets: Misappropriation Remedies

Remedies may include injunction, actual damages of plaintiff, infringer's profits (if not double-counted by infringer's profits), punitive damages, reasonable royalties, and attorney fees. In addition, damages for trade secret theft were recently increased under the Foreign and Economic Espionage Penalty Enhancement Act of 2013.[27] For an individual, these involve 15 years of prison time and fines of $5 m while a corporation must pay $10 m or 3 times the value of the trade secret to the plaintiff. The DTSA also increased penalties for fines and prison time.

The empirical results of the study by Professor Rowe of federal cases of trade secret damages is revealing of key information. As per limits, the study included only federal cases that went to trial from 1994 to 2012 in which a verdict was issued. There were 2,795 filed cases but only 6 % had verdicts, settlements are excluded. While issues of small sample size, and presence of several outliers makes it a challenge to summarize the results, here are a few:

- The number of trade secret claims has risen over time. In 2000–2003, there were 4.25 cases per year; but, by 2010 to 2014, the cases were about 15 per year. (Two months after DTSA passage in 2016, there were over 20 cases filed.)
- The range of damage verdicts for trade secret cases was $0 in 2000, $135,856 in 2001, $12,393,916 in 2004 and a whopping $115,607,294 average for the 9 verdicts in 2011 (...due mainly to the $919 million verdict in the *E.I. Dupont de Nemours v. Kolon* case.)
- The average trade secret damages are less than but comparable to damages in patent litigation and larger than trademark litigation.

16 Trade Secrets Misappropriation Damages: Similar to Other Non-Patent Infringement Damages

The methods of assessing economic damages in trade secret cases are like measuring economic damages in trademark or copyright cases. Namely, the IP owner in each type of case needs provide the fact of damages and a causal connection between actual damages and the infringer's actions. A trade secret owner may claim lost profits due to several possibilities: diverted sales, price erosion, remedial costs, future lost profits, development costs, or harm to reputation. Reasonable royalties can also serve as a trade secret misappropriation remedy.[28] Moreover, the trade secret owner can claim *both* lost profits and the infringer's gains, so long as double recovery is excluded.[29]

17 Conclusion

Assessing lost profits in IP infringement cases is one of several remedies available to the owner of the Intellectual Property. Guidelines discussed here are intended to enable the damages expert to proceed in building a lost profits claim. In Patent cases, proving causality ala *Panduit* is critical to a credible lost profits case and different approaches which have been developed in key cases are presented here. The IP owner in non-patent cases may be able to claim both lost actual damages and the unjust enrichment of the infringer, if double counting of damages is avoided.[30] Courts generally consider an estimate of reasonable royalty as a basis for assessing damages in lieu of lost profits.[31] Many courts permit use of *Georgia Pacific factors*.

(While not discussed herein, the IP damages expert needs be very familiar with these factors. See Appendix A for a listing of these factors.)

Appendix

A The 15 Georgia Pacific Factors used to determine a Reasonable Royalty Rate under the construct of Hypothetical Negotiation in estimation of IP Reasonable Royalty Damages

IP Experts often rely on the factors listed below to estimate reasonable royalty damages. One is advised to look at other factors as well that may impact a hypothetical licensing negotiation between the IP owner and the infringer. The hypothetical negotiation is assumed to occur sometime before the infringement began.

1. Royalties paid for the patents	9. Advantages of the patent
2. Royalties for similar patents	10. Benefits to the user
3. Scope of thelicense	11. Evidence probative of value
4. Established licensingpolicies	12. Customary industry practices
5. Relationship of the parties	13. Profits attributable to patents
6. Collateral or convoyed sales	14. Expert opinions
7. Duration of the license	15. Construction of a hypothetical negotiation
8. Established profitablility	

Notes

1 Perhaps in recognition to the different remedies in IP litigation, several recent articles and extensively-researched book chapters have appeared, including Richard Bero, "Patent Infringement Damages: Lost Profits and Royalties" (chapter 26. Nancy Fannon and Jonathan Dunitz, 4th ed. Economic Damages, BVR, pp.615–648, 2016; Rick Hoffman, Mark Glick, and Milan Politi "Lost Profits (and other Damages) in Trademark and Copyright Cases" (chapter 27, also in Fannon Dunitz book, pp.651–667); Douglas G. Smith, "Application of patent law damages analysis to trade secret misappropriation claim: 25 *Seattle U.L. Reve*. 821 (2001–2002); Elizabeth Evans and Peter Simon "Economic Analysis of Non-Patent Intellectual Property Rights and Damages Measures" Chapter 19 in Roman Weil, Daniel Lentz, and Elizabeth Evans *Litigation Services Handbook*, 6th ed. Wiley, 2017, pp. 19.1–19.57;; and, Landan Ansell, John Holzwarth, Vincent O'Brien, William Scally "Patent Infringement Damages "Chapter 20 also in Weil, Lentz, Evans book, pp.20–1 to 20–48.

2 An excellent discussion of these issues is by Jonathan M. Dunitz and Tyler L. Farmer "Context of the Lost Profits Damages Claim" Chapter 9 in Fannon Dunitz book, *loc cit.* pp. 213–225. Also see cases cited therein.

3 (1) Causality in patent litigation is discussed below; (2) apportionment of damages, an issue first mentioned in *Garretson v. Clark*, 111 U.S. 120, 121 (1884), namely that damages be measured by apportioning the defendant's profits and patentee's damages between the patented feature and the unpatented features and recently cited by Microsoft in *Lucent Techs. Inc. v. Gateway, Inc*. 580 F. Suppl. 2d 1016, 1028 (S.D. Cal. 2008), 580 F3d 1301 (Fed. Cir. 2009). The jury found Microsoft had infringed (MS a co-defendant) by including an infringing feature in Microsoft Outlook. **But how best to compute damages?** Use entire market value ("EMV") of Microsoft Office, in which Outlook was bundled with Word and Excel? Isolate the market value of just the infringing component, a method of selecting dates in a calendar by touchscreen? Pay royalties on non-infringing elements? (3) 'Unjust enrichment' and defendant's overhead may also involve apportionment issues in computing lost profits in IP cases. (In this paper, we discuss handling of overhead when discussing trademark damages. Also see footnote #25. Unjust enrichment in equity arises in IP cases but is beyond the scope of this paper.

4 Patent rights are granted by the United States Patent and Trademark Office (USPTO), following a patent application. Once granted, the inventor has exclusive right to make, use, or offer for sale their invention for a certain period. Filing for a patent, means the inventor must disclose the invention. Patents filed and approved after June 8, 1995 are granted for 20 years after the application date. Exceptions for this 20-year term may be granted in some situations, especially pharmaceutical patents or design patents where FDA drug tests and design approval may take several years.

5 An industrial design rights/design patent protects the visual design of objects that are not only utilitarian. An industrial design includes the shape, composition of pattern or color in a three-dimensional form containing esthetic value. For design patents (patents based on decorative, non-functional features), for design applications filed on or after May 13, 2015 the patent term is 15 years from the issue date. For design applications filed before May 13, 2015, the term is 14 years from the issue date.

6 The issues being raised here involve causality and foreseeability. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d at 1545 (citing *Aro Mfg.Co. v. Convertible Top Replacement Co.*, 377 U.S. 476,507 (1964). The patent owner need only show a reasonable likelihood that the patent owner would have made the sale absent the infringement.

7 *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*575 F.2d 1152, 1164 (6th Cir.1978)

8 Again, See *Lucent Techs. Inc. v. Gateway, Inc.*,580 F.3d 1301, 1336 (Fed.Cir.2009) and ftn. #2. Recently, the courts have struggled about an easy application of the entire market value rule to lost profits damages. In addition, apportionment arguments have been extended to 'reasonable royalty' measure of damages, an issue discussed below. (Brian Love, *Patentee Overcompensation and the Entire Market Value Rule*, 60 Stan. L. Reve. 263, 293 (2007). In *Cornell Univ. v. Hewlett-Packard Co.*,609 F. Supp. 2d 279 (N.D.N.Y. 2009), the issue was use of a technology to make a computer processor more efficient. Patentee's damages expert first tried to use the entire PC's value as a royalty base. The court

objected noting the expert failed to show the processor drove demand for the entire PC. Ultimately, Judge Radner accepted the infringer's argument that EMVR be replaced by '*the smallest salable patent-practicing unit*' in the device.
9 See Landan J. Ansell, *loc cit.*, p.20.8 which references *Mahurkar Double Lumen Hemodialysis Catheter Patent Litigation*, 831 F. Supp.1354 (N.D. Ill. 1993) ("Competition is not an all or nothing process. There are degrees of substitutability").
10 *State Industries v. Mor-Flo Industries*, 883 F. 2d 1573, 1577–80 (Fed.Cird.1989), cert. denied, 493 U.S. 1022 (1990). The patent owner in this approach can receive lost profits on its portion of infringer's sales and reasonable royalty on the remaining portion of infringer's sales that other competitors would have made but for the infringement.
11 *BIC Leisure Products, Inc. v. Windsurfing International, Inc.* 1 F.3d 1214 (Fed.Cir.1993)
12 *Grain Processing v. American Maize Products, Co.,* 185 F.3d 1341 (Fed.Cir.1999). See discussion in Richard Bero, *op cit*. pp. 626–627, in Dunitz/Fannon book.
13 *Mentor Graphics Corporation v. Eve-USA, Inc.* (Fed. Cir. September 1, 2017)
14 The methodology suggested here, focuses on incremental profits, is similar in kind to that often suggested in computing lost economic profits from some other event like a contract breach. **"**Computing Lost Profits in Business Interruption Litigation: A General Model**"** by Stanley P. Stephenson, Ph.D., David Macpherson, Gauri Prakash-Canjels, *Journal of Business Valuation and Economic Loss Analysis* Volume 7, Issue 1,
15 Elizabeth Evans and Peter Simon in Roman Weil, et al. (*Litigation Services Handbook*, 6th ed. Wiley, 2017, pp. 19.20–19.24)
16 Aside from reasonably royalties, an added remedy of copyright losses may be the cost to create or duplicate the copyrighted item. This is similar to design around costs in a patent case. (Also, this is a 'fallback' approach as it ignores time to develop and focuses only on infringer's cost savings. Furthermore, this cost approach focuses only on the economic cost to develop the IP but does not consider the potential of this IP to generate future income.)
17 This burden is not applicable in patent cases, except for design patents. The defendant bears the burden in non-patent cases.
18 See p.8 in 2016 report by United States Patent Office, https://www.uspto.gov/sites/default/files/documents/IPandtheUSEconomySept2016.pdf
19 https://www.uspto.gov/sites/default/files/documents/IPandtheUSEconomySept2016.pdf
20 "What is Behind the Growth in Trademark Filings? An Analysis of United States Data" Amanda Myers *USPTO Economic Working Paper 2013-1* October 9, 2016.
21 https://www.uspto.gov/page/about-trademark-infringement.
22 See Stephenson and Prakash-Canjels, "Proving Damages in Trademark Cases", *Business Valuation Update*, October 2012.
23 Paul Goldstein, *Intellectual Property*, Portfolio, 2007, p.99.
24 Other types of trademark infringement plaintiff damages: Reputational harm due infringer's inferior copy of plaintiff's product … loss of goodwill. Hard to prove by the expert; Cost of corrective advertising; Reasonable royalty. While owners in Lanham Act cases are not given reasonable royalties by statute, such have been granted in several cases (see Appendix A). Courts have allowed use of the 15 Georgia-Pacific factors from a patent case to be used in Lanham Act cases. In addition, a reasonable royalty may be permitted as not just an aspect of lost profits to the mark owner, but a proxy for unjust enrichment by the infringer as an avoided cost related to the infringed property.
25 *Again, the message to the reader is to check with client/lawyer as per venue rules and policies about what the court accepts or not.* In particular, the issue of calculating infringer's profits using incremental costs or not is mentioned here for trademark lost profits but may apply for other non-patent IP cases as well and design patent cases. The expert needs to know the difference and know the rules used in the case venue because there is no consensus amongst the courts on which is 'correct'. George Roach, in "Counting the Beans: Unjust Enrichment and the Defendant's Overhead", *Texas Intellectual Property Law Journal*, Spring, 2008, reports a survey of 11 circuits as how to courts choose incremental costs or fully allocated costs or something between. "The federal circuits are roughly spit between supporters of the full-absorption approach, who advocate offsetting allocations of attributable fixed costs (principally, the 1st, 2nd, and 9th Circuits), and advocates of the incremental approach, who exclude allocations of fixed costs (principally, the 5th, 7th, and 11th Circuits", As included in Fannon and Dunitz, *op. cit.* p.614.
26 Elizabeth Rowe, "Unpacking Trade Secret Damages", *Houston Law Review*, 2017 p.157.
27 See https://www.congress.gov/bill/112th-congress/house-bill/6029
28 (See *Litigation Services Handbook, 6th ed*. Wiley, 2017, pp.19.34–19.36).
29 Alternatively, as noted, a reasonable royalty for trade secret misappropriation has been used in some courts for the same reasons as found in Lanham Act cases for copyright and trademark cases.
30 As noted, before, disgorgement of unjust enrichment is available as an economic remedy in design patent cases.
31 According to 2018 Patent Litigation Study, PriceWatersCooper, "*Among Practicing Entities (PEs), reasonable-royalty-only awards continue to be the type of damages most frequently awarded – more than 3 times as often as lost-profits-only awards*" *… 0.60 % royalties only vs. 19 % lost profits only vs. 21 % both lost profits and royalties. This composition of damages awards for patent cases has been about the same since 1998.*