

EXCERPT

THE COMPREHENSIVE GUIDE TO **ECONOMIC DAMAGES**

Edited by

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With Jimmy S. Pappas, William Scally, and Steven M. Veenema

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The Comprehensive Guide to Economic Damages

VOLUME ONE

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Chapter 34.

Profit Apportionment in Intellectual Property Infringement Damages Calculations

CONTENTS

1.0 Abstract	641
2.0 Introduction	641
2.1 An Apportionment Situation	641
2.2 Definitions	642
2.3 IP Damage Remedy Statutes and Apportionment	643
3.0 The Profit Apportionment Analysis	645
3.1 Step 1. Identify the Sources of Revenue at the Subject Business	646
3.2 Step 2. Analyze the Financial Performance of Each Revenue Source	646
3.3 Step 3. Identify the Key Assets the Subject Business Owns and Uses	647
3.4 Step 4. Assess the Relative Importance and Contribution of the Identified Assets to Each Revenue Source	648
4.0 Tools and Techniques for Step 4—Asset Contribution and Profit Apportionment	649
4.1 Analytical Tool: Management Interviews	650
4.2 Analytical Tool: Surveys, Reviews, and Feedback	651
4.3 Analytical Tool: Financial Analysis	653
4.4 Analytical Tool: Internet and Social Media Analytics	653
4.5 Analytical Tool: Marketing and Communications Language	654
4.6 Combining the Five Analytical Tools	655
5.0 Conclusion	655

Chapter 34.

Profit Apportionment in Intellectual Property Infringement Damages Calculations

By Brian Buss, CFA, and Doug Bania, CLP

1.0 Abstract

When calculating damages in intellectual property cases, many circumstances require a profit apportionment analysis. Specifically, profit apportionment is needed in cases where the damages calculation involves determining the portion of the defendants' ill-gotten gains due to use of the disputed intellectual property in unjust enrichment claims, or the portion of the plaintiff's losses related to use of the disputed intellectual property in lost profit claims. While profit apportionment is not appropriate for every damages calculation, when it is, analysts often find themselves in a quandary as to how to complete such an analysis.

While the concept of apportioning profits has been used to value intellectual properties in many other contexts, few, if any, established processes apply to profit apportionment for damage calculations in intellectual property (IP) infringement litigation. When damages analysts are asked to apportion profits in litigation, they lack a consistent framework to do so in an orderly, effective, and ultimately convincing way.

This chapter outlines a four-step process for addressing the question of profit apportionment when developing a damages calculation in IP litigation. The process described offers a framework for assessing the specific portion of reported profits that the infringing use of the disputed IP contributed. This framework is intended to enable damages analysts to consistently analyze the economic contribution IP assets made and clearly present profit apportionment conclusions.

2.0 Introduction

2.1 An Apportionment Situation

Consider the following situation: Two companies compete for sales in the same market. Company A has copyright protection for software code used in the delivery of its business services. Company B offers similar software-based services but does not own IP related to the software. Both Company A and Company B are well known in the industry and use their own distinct trade names and proprietary solutions. Company A has proven that some of the software code Company B uses infringes its copyrights.¹ Company B has provided data indicating the amount of revenue and profits it achieved from sale of the accused services.

¹ For this chapter, the discussion assumes the plaintiff has been able to prove liability and that the defendant is liable for economic damages. The analyst tasked with quantifying economic damages is not considering whether the plaintiff is liable, only the amount of damages. This chapter addresses only the calculation of economic damages, and the process presented does not address the issue of liability.

Company A demands a damages award based on recovering 100% of the profits Company B reported. Even if it has been proven that Company B infringed upon Company A's copyrights, it does not mean that Company A deserves to recover 100% of Company B's reported profits. To complete a damages calculation, the damages analyst will need to address questions such as:

- Was the claimed IP infringement the sole reason for the observed change in financial performance?
- Did either Company A or Company B rely on other IP or proprietary assets to achieve its sales and profits?
- Was the observed financial performance due specifically to the disputed software, or were other technologies, the trademarks, or other assets and resources partially responsible for the sales and profits achieved?

There are many circumstances when an apportionment of profits is necessary to develop a reasonable calculation of economic damages. Also, there are circumstances where profit apportionment is not required. Facts, circumstances, and jurisdictional issues will dictate when a profit apportionment analysis is appropriate. This chapter offers an analytical framework that can be used for conducting a reliable profit apportionment analysis.

2.2 Definitions

For the purposes of this chapter, we use the following definitions.

Profits are the amount of economic benefit either the plaintiff in a lost profits calculation or the defendant in an unjust enrichment calculation achieved. In damages calculations, typically, profit is a measure of product-level profits such as gross profit, incremental profit, or operating profit. *Gross profit* is sales less cost of goods sold. *Incremental profit* is gross profit less other variable or direct costs, and *operating profit* is gross profit less operating expenses. *Cash flow* is a measure of economic benefit often used in valuation calculations and represents operating profits adjusted for noncash accounting accrual charges, and sources (i.e., loan proceeds) and uses (i.e., capital expenses) of cash at the business. The circumstances of the case, the type of business involved, and the amount of financial data available will dictate the specific measure of profit used in a damages calculation.

Profit apportionment is the analytical process of quantifying the portion of profits derived from use of an asset or resource. Profit apportionment is a key concept in the valuation of intellectual properties (IP). For IP owners, understanding the value the IP assets they own contributed requires an understanding and calculation of the amount of profit earned from sale of a product or service that can be attributed specifically to the subject IP asset. IP owners can rely on their financial reports to identify that their product achieved a specific amount of profit, say \$100. However, IP owners likely do not track or calculate, in the ordinary course of business, how much their patent, trademark, or copyright contributed to the \$100 as their business also relied on its tangible assets, IP, and intangible assets to procure, manufacture, distribute, and sell the product. However, in IP litigation, only one of these assets, the *subject IP*, is the basis for the infringement claim.² Therefore, the subject IP potentially contributed some amount less than 100% of the reported \$100. For IP valuation, profit apportionment is the process of identifying how much of the reported \$100 is due to the contribution of the subject IP. The concept of the subject IP contributing a portion less than 100% of the cash flows the total business achieved is summarized in Exhibit 1.

Tangible assets are the physical assets a business owns or uses such as inventory, property, plant, and equipment. *Intangible assets* are the nonphysical assets a business owns. *Intellectual property* (IP) consists of legally protected nontangible properties: patents, trademarks, copyrights, and, in some circumstances, trade secrets.

² Many cases involve multiple claims of IP infringement. In such cases, the contribution to financial performance each of the claimed IP assets made should be analyzed separately.

Exhibit 1. Profit Apportionment Framework

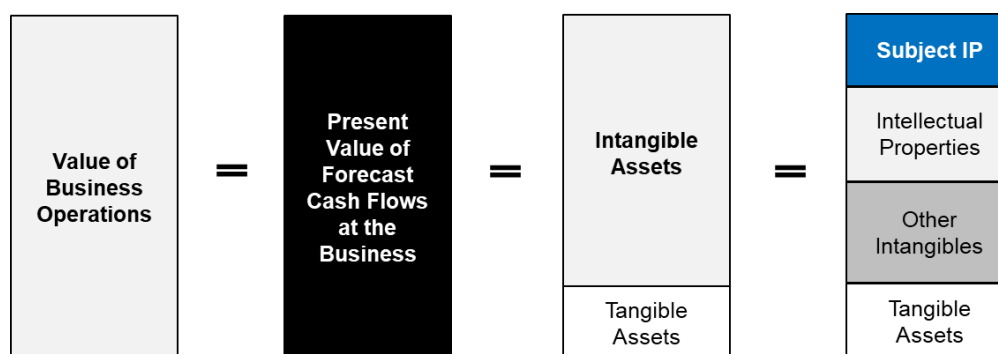


Exhibit 2. Damages Remedies in IP Cases

	Lost Profits	Unjust Enrichment / Disgorgement	Reasonable Royalties	Ongoing Royalties	Enhanced Damages	Statutory Damages	Injunction	Attorneys' Fees
Utility Patents	X		X	X	X		X	X
Design Patents	X	X	X	X	X		X	X
Trademarks	X	X	X		X	For use of counterfeit marks / If willful	X	X
Copyrights	X	X	X		X	For registered works	X	For registered works
Trade Secrets	X	X	X	X	X		X	X

Damages are the economic damages in civil litigation that result from the harm the defendant caused to the plaintiff or the ill-gotten gains the defendant achieved. In this chapter, the term refers to economic damages rather than statutory or punitive damages. For cases involving intellectual property disputes, the available damage remedies are summarized in Exhibit 2. The remedies related to economic damages are highlighted in the blue box.

Lost profits is a calculation of the amount by which the plaintiff was harmed, or the profits not achieved by the plaintiff due to the infringing action of the defendant. *Unjust enrichment* is the amount of economic benefit the defendant achieved as a result of the defendant's actions. One common measurement of unjust enrichment is the ill-gotten profits the defendant earned through use of the plaintiff's IP. *Reasonable royalties* and *ongoing royalties* as damages remedies are another form of unjust enrichment calculation that assumes the defendant benefited only in the amount of licensing compensation, or royalties, not paid to the IP owner or plaintiff. A royalty payment the defendant will pay to the plaintiff is a calculation typically based on comparable licensing transactions and typically results in an amount equal to a percentage of sales or a portion of the profit the defendant achieved. Reasonable royalties are covered in Chapter 28.

2.3 IP Damage Remedy Statutes and Apportionment

United States civil code provides guidance for calculating damages in cases involving IP infringement. The purpose of a damage calculation is to repair the harm the infringement caused, which varies according to the type of IP, as summarized in Exhibit 3. Depending on the circumstances of the case, profit apportionment may need to be considered in

Exhibit 3. Guidance on Damage Calculations From IP Statutes

Utility Patent	35 USC Section 284	Damages to compensate for the infringement, but in no event less than a reasonable royalty
Design Patent	35 USC Section 289	Liable to the extent of infringers' total profit
Copyright	Copyright Act 17 USC Section 504	Owner entitled to recover actual damages suffered and any profits of the infringer attributable to the infringement
Trademark	Lanham Act 15 USC Section 1117	Plaintiff entitled to recover: (1) defendant's profits and (2) any damages sustained by the plaintiff

developing the damages calculation. In addition to these statutes, a number of courts have provided rulings relevant to apportionment. Some of these cases can be found in Volume 2 of this guide.

Apportionment is a more commonly used principle in calculations of unjust enrichment than it is for calculations of lost profits. For example, in *Mentor Graphics*,³ a case involving a utility patent, the court ruled that meeting the *Panduit* factors⁴ was sufficient and the lost profits calculation did not need to consider apportionment. The *Mentor Graphics* case involved a unique set of circumstances that eliminated the need for profit apportionment. There have been, and will likely be more, cases where the circumstances differ from those in *Mentor Graphics*. Circumstances in a future lost profit calculation may require the damages expert to consider the impact on lost profits specific to the plaintiff's other assets—thereby requiring a profit apportionment analysis. In developing an unjust enrichment calculation, one measure of a reasonable royalty may be a split of the defendant's profits that would have been paid to compensate the patent owner in a hypothetical license transaction. Further, many circumstances require the royalty base used in the damage calculation to be established on the smallest salable patent practicing unit. The damages expert may need to apply a profit apportionment analysis in order to determine an appropriate level of sales, or royalty base, in an unjust enrichment damages calculation.

Regarding design patents, the design patent statute uses the term “infringers’ total profit.” Many courts have interpreted total profit to mean the plaintiff is entitled to recover all of the profits generated from the infringing product and no apportionment is needed. In 2018, the Supreme Court of the United States ruled that the term “article of manufacture” may be an end product or a component thereof.⁵ This case and ruling did not fully address application of profit apportionment in damages calculations; thus, design patent cases remain unique in not requiring any consideration of the other product features not covered by the patent. However, in design patent cases where the patent covers a product component, some consideration of profit apportionment principles is likely warranted.

For copyright infringement claims, the Copyright Act specifies that unjust enrichment should consider “any profits of the infringer that are attributable to the infringement” and that “the infringer is required to prove his or her deductible

³ *Mentor Graphics Corporation v. Eve-USE, Inc. et al.* (Fed. Cir. 2017).

⁴ *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995).

⁵ *Samsung Electronics Co., Ltd, et al. v. Apple, Inc.*, Supreme Court of the United States, 137 S.Ct. 429.

expenses and the elements of profit attributable to the factors other than the copyrighted work.”⁶ Thus, unjust enrichment damages calculations in copyright cases should typically include an apportionment analysis.

For trademarks, the Lanham Act allows recovery of the defendant’s profits. While the statute does not specifically mention apportionment or a reasonable royalty, the damages award is intended to be compensation rather than a penalty.⁷ In some circumstances, the damages calculation may need to consider other assets the company used to generate sales.⁸ Apportionment in trademark matters may involve consideration of the contributions made by other assets used by the subject product, other product functions, geographical limitations, and other issues.

Again, the purpose of this chapter is to provide a thought process for developing an apportionment analysis once the circumstances dictate that such an analysis is appropriate. In addition to understanding the statutes and case law guiding damages calculations, the damages analyst should confer with counsel early in the assignment to determine whether an apportionment analysis is required.

3.0 The Profit Apportionment Analysis

Profit apportionment is the process of analyzing and quantifying the portion of profits that is due to the subject IP. A general framework for this process includes four steps:

1. Identify the subject business’s sources of revenue;
2. Analyze the financial performance of each revenue source;
3. Identify the key assets the subject business owns and uses; and
4. Assess the relative importance of the identified assets to each revenue source by converting facts, observations, calculations, and analyses into a conclusion regarding the contribution to financial performance the subject IP provided.

Completing this four-step process will require analyzing financial results, understanding what business activities generate revenue at the business, understanding the relevant industry and marketplace, and identifying the assets the business used. These steps are all requirements for any damages calculation, due diligence investigation, business analysis or valuation, and are likely conducted by experts and analysts on a recurring basis.

The apportionment analysis and conclusion will differ depending on the circumstances of the case and the amount and type of information available to the damages expert. In some circumstances, the apportionment conclusion may be a qualitative assessment of the contribution the subject IP made relative to other assets. In such circumstances, the analytical conclusion may identify the subject IP as the driving factor for financial performance of the subject products and that it is unlikely any other asset made a meaningful contribution. Alternatively, this analysis may conclude some asset other than the subject IP drove financial performance and that the subject IP made no meaningful contribution. This level of qualitative conclusion still requires undertaking the four-step apportionment analysis. If the subject IP is identified as the primary factor contributing to financial performance, the damages analyst may eliminate the possibility that any other asset has contributed.

⁶ 17 U.S.C. § 504(b).

⁷ 15 U.S.C. § 1117(a).

⁸ See Chapter 31 of this guide, “Lost Profits (and Other Damages) in Trademark and Copyright Cases.”

In other case circumstances and when sufficient information is available, the apportionment conclusion could provide a calculation of the portion of total profits that the subject IP contributed. Such a calculation requires an analysis of the profit the subject products achieved and sufficient data, observations, facts, and analysis to apportion the total profit among all of the identified assets contributing to financial performance. Often, use of an independently conducted survey facilitates such analysis as discussed later in this chapter and in chapter 32. For this calculation, the analyst should be able to understand and communicate the contribution every type of asset identified at the business made to total profits. When conducting this quantitative analysis, the apportionment framework can be used to identify the assets the business used and quantify the contribution to financial performance each identified asset made.

3.1 Step 1. Identify the Sources of Revenue at the Subject Business

Identifying the subject business's sources of revenue involves identifying the products or services that contribute to 100% of that business's reported revenues. Most businesses generate revenue from more than one business activity. The subject IP may not be relevant to some sources of revenue; therefore, as a first step, the analyst should, when possible, gain a thorough understanding of the various revenue-generating activities the business undertook. Assuming the information is discoverable and available to the analyst, this can typically be completed by obtaining and reviewing the company's financial reports and business segment accounting records and by interviewing management. Depending on the size and complexity of the company involved, identifying all of the revenue-generating activities can be simple or complex. Regardless of business size and complexity, the first step in an apportionment analysis is identifying those activities that constitute 100% of the subject business's reported revenues and which of the identified activities utilize the subject IP as illustrated in Exhibit 4.

3.2 Step 2. Analyze the Financial Performance of Each Revenue Source

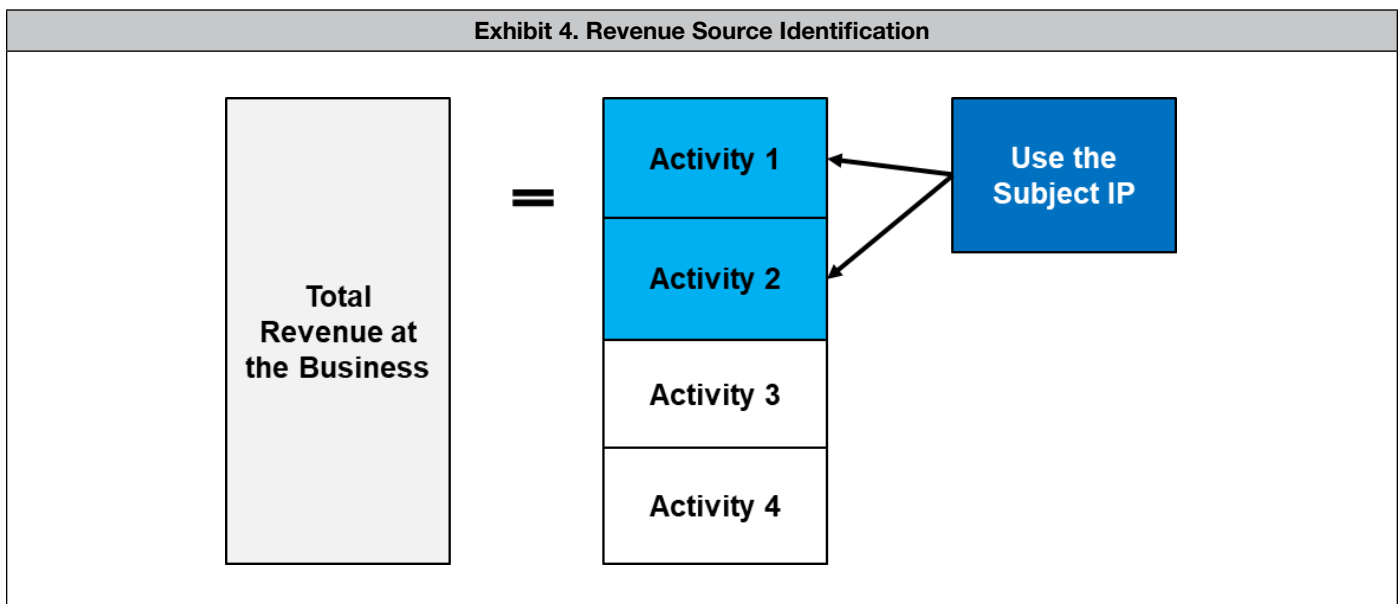
Analyzing the financial performance of each revenue-generating activity involves gathering and examining information regarding revenues, costs, and expenses specific to each of the identified revenue sources. The goal is to understand how much profit, or economic benefit, each activity contributes. The subject IP may not be used by, or relevant to, some activities.⁹ However, a thorough analysis of the company involved should include identification of the business units making larger or smaller contributions to total earnings and the extent to which the subject IP is relevant to each of those business activities. Companies typically track the performance of different products, services, business units, or divisions and can provide accounting records indicating the amount of revenue and profitability each business activity achieved. The available information may report gross profit, operating profits, or even a net profit after allocation of overhead expenses. Step 2 in the apportionment process involves calculating and analyzing comparable measures of financial performance across all of the identified revenue sources.

The following questions can assist in identifying and analyzing the sources of revenue at a business:

- What types of revenues are reported on the company's profit and loss statement or in financial results provided to stakeholders?
- How is the company's accounting system and general ledger organized? What are the company's revenue recognition policies? Can copies of the general ledger be provided?
- What caused revenue to increase or decline?
- How does management of the company track and compare intracompany performance—is performance tracked and compared by product line, customer set, geography, etc.?
- How were gross profits calculated, monitored, and compared?

⁹ For cases involving larger corporations, the relevant business may be a division or operating unit of the corporation.

Exhibit 4. Revenue Source Identification



- Has the company performed activity-based costing analyses—if so, what reports or analyses are available?
- Did the company receive any royalty income, license payments, or nonoperating income?

Addressing these questions may require involvement by the damages analyst early in the discovery process. While addressing each question is not a requirement, these questions can serve to start a conversation with the company's management and provide the analyst with a more detailed understanding of the company's financial performance. Additional questions may be necessary based on the operations and complexity of the company.

3.3 Step 3. Identify the Key Assets the Subject Business Owns and Uses

The third step in the apportionment process is identification of the key assets the subject business owns and uses. The analyst will typically rely on conversations with management, the company's financial reports, stakeholder communications, marketing materials, and website business descriptions to compare the company's assets to the list of various categories of assets businesses presented in Exhibit 5 often use. A review of comparable and guideline companies can also help identify assets that may exist at the subject company.

If evidence indicates a category of assets exists at the business, the analyst can seek clarification from management; examine patent, trademark, and copyright office filings and registrations; the Whois registry;¹⁰ and discuss these details with in-house and outside counsel to further understand what assets the business owns and whether any assets have been subject to potential or actual litigation. If possible, the analyst should confirm that relevant registrations and ownership paperwork are up to date. At this identification stage, the goal is to identify what types of assets do and do not exist at the subject business. The result of this step is essentially a checklist of the assets the subject business owns.

At this step, due diligence is important to confirm and support the information management provides as the existence of IP at a business is often not at the front of managers' and executives' minds. For instance, management might indicate that a product has patent protection when only a patent application has been filed or the team is still preparing the application. It is not uncommon for trademark and copyright registration filings to occur after the product has been launched. Thus, due diligence should include a review of relevant patent, trademark, and copyright office filings. The United States Patent and Trademark Office website has search tools that can identify the registration details for patents and trademarks, and numerous free and fee-based patent, trademark, and copyright search services can verify management's IP statements

¹⁰ Whois.net.

Exhibit 5. Assets That Might Exist at the Subject Business

<i>Category</i>	<i>Possible Assets</i>	<i>Considerations</i>
Tangible Assets	Cash Current Assets Inventories Property, Plant & Equipment Investments Contracts, Agreements, Leases	Some cash may be required to fund operations Cash and efficiency ratios may differ by revenue source, impacting the amount of economic benefit achieved at each revenue source
Technology Assets	Patents Trade Secrets Copyrights Procedures and Processes Other Technology Intangibles	Patents can be grouped by type or function How are the trade secrets being preserved and protected?
Marketing Assets	Trademarks and Brands Copyrights Domain Names and Social Media Accounts Trade Secrets Customer Lists and Data Publicity / Endorsement Rights Customer / Distributor Relationships	Consider both corporate and product or service-level brands Does the company own the domain names for its key brands? Are the customers lists and customer data proprietary and how are they protected?
Other Intangibles	Supplier Relationships Other Relationships Assembled Workforce	Relationship assets can exist without providing any value to their owner – need to identify how relationships provide an advantage Consider any value provided by volunteers, donors, board members, etc.

or indicate a need for further questions and discovery. The Whois registry provides information regarding website domain name registrations that may support or indicate potential issues with website ownership claims. A search of court records using PACER¹¹ or other services may indicate disputes and litigation related to the identified IP assets.

When analyzing companies with larger portfolios of IP assets, grouping similar assets can simplify Step 3 of the apportionment process. For example, the subject business may own hundreds or thousands of patents, but the patents can likely be grouped together by type or function. Similarly, the company may own both corporate and product trademark registrations. The registrations that are not related to the subject IP can be grouped together as “other product marks” or something similar.

At the conclusion of this step in the process, the analyst should have identified the business’s sources of revenue and the key assets the subject business owns.

3.4 Step 4. Assess the Relative Importance and Contribution of the Identified Assets to Each Revenue Source

The fourth step in the apportionment process is to assess the relative importance and contribution of the identified assets to each revenue source. In other words, determine which of the identified assets are crucial to the company’s ability to achieve sales, profits, and economic benefit from each of its revenue sources.

¹¹ Pacer.gov.

This assessment is a combination of qualitative and quantitative analysis, requiring an understanding of the business, its industry, and marketplace and application of several analytical tools. The goal is to convert analytical observations into a supportable conclusion regarding the contribution of the subject IP to those revenue sources that utilize the subject IP. The observations and analysis may indicate a negligible or a substantial contribution. The following section presents a framework that analysts can employ to produce consistent, intelligible, and defensible analysis of asset contribution and profit apportionment.

4.0 Tools and Techniques for Step 4—Asset Contribution and Profit Apportionment

The fourth and most challenging step in an apportionment analysis is to convert the facts, observations, calculations, and analyses from Steps 1 through 3 into a conclusion regarding the contribution to financial performance the subject IP provides. In other words, conclude what portion of the profit is due specifically to the subject IP. The framework described here provides a consistent and transparent process for addressing the profit apportionment question.

As presented in the appendix and summarized in Exhibit 6, the framework consists of 17 sets of contribution questions, grouped into five subsets based on the question topic.¹²

Exhibit 6. Asset Contribution Questions	
The Contribution Question Sets	
Demand	Where was the product purchased? How and where was the product shelved & displayed? How did customers find the product and what Internet search terms connected customers to the point of sale? Was the product sold in conjunction with other products?
Marketing	What product features were promoted, emphasized and explained? What price breaks, discounts, rebates or promotional pricing were used?
Financial	Did the product achieve a price premium? Did the product achieve greater unit volumes? Did the product benefit from cost reductions, cost less to market or produce? Were there differences in cash flows, working capital use or capital expenditure?
Comparables	What other products did consumers consider? What products and services provided similar benefits? What products competed for consumer attention and unit sales?
Other Assets	What was the company's competitive advantage? What other IP did the company own or use and what was its IP strategy? How did the company develop new products and did it make acquisitions? Did the company invest in protecting its proprietary assets?

¹² The questions listed here have been posed in the past tense as most damage calculations focus on past financial performance. If damages are expected to continue beyond the analysis date, the analyst may need to consider both past and future financial performance and consider that the answers to these questions may change over time.

The term “Offering” is used to indicate the product or service offered that allegedly mis-used the subject IP. The apportionment framework has been used to analyze the contribution of intellectual properties in litigation involving both sale of physical products and provision of services. In the contribution questions, the term “Offering” refers to the product or service offered using the subject IP.

These contribution questions can be addressed in any order using any information and research available to the analyst. As discussed below, these questions can be addressed using a combination of five analytical tools:

1. Management interviews;
2. Surveys, reviews, and feedback;
3. Financial analysis;
4. Internet and social media analysis; and
5. Marketing and communication language analysis.

Each of these analytical tools is discussed in turn below. Applying them in combination provides an understanding of: (a) how the subject IP contributes to financial performance; and (b) whether other assets make a more substantial contribution to financial performance.

The purpose of the apportionment analysis is to identify and quantify the portion of profits due specifically to the subject IP and, when possible and relevant, the portion of profits other identified assets contributed. The appendix, found at the conclusion of this chapter, presents an overview of the analyses that can be conducted to address each of the contribution questions. This framework is intended to facilitate collection and communication of the analysis and observations to support an apportionment opinion. Through addressing the contribution questions, the damages expert should develop a clearer understanding of the contribution the subject IP and, if relevant to the analysis, the business’s other assets made.

Further details for using the five analytical tools to address the contribution questions are discussed in the following sections. As not all of the above analytical tools will be relevant in addressing all of the contribution questions, the following discussions will look at just those questions for which we have found each particular analytical tool to be particularly helpful.

4.1 Analytical Tool: Management Interviews

Management can provide the analyst with information and observations essential to evaluating the contribution of an identified asset to financial performance. While management often has the greatest understanding of its own business, interviewing management is not always feasible in civil litigation. Damages analysts the plaintiffs engage may not have the ability to interview management of the defendants and vice versa. Damages analysts should review the contribution questions with their client and, if possible, include them in information requests, interrogatories, and discovery requests.

Some of the contribution questions are a stronger fit for input from management than others, and addressing all of them may not be appropriate in every assignment. The appendix includes an indication of the usefulness of each analytical tool and identifies those contribution questions where management information has proven helpful in past analyses. Three of the contribution questions where management input has proven helpful are presented in Exhibit 7.

Exhibit 7. Three of the Contribution Questions for Which Management Input Has Proven Useful

Contribution Questions - Best Fit for Management Input					
Topic	Questions	The Analysis		Typical Factors Impacting Apportionment to the Subject IP	
		Why Analyze	How to Analyze	Greater %	Lower %
Demand	Was the product sold in conjunction with other products?	Understand if the subject product was the key driver in customer decisions.	Management and marketing team input. Review of retailers sales practices. Review of company's data for other products. Review marketing and promotional materials.	IP-protected product drove the purchase decision	IP-protected product was a follow-on purchase
Marketing	What price breaks, discounts, rebates or promotional pricing were used?	Determine if price, discounts, or favorable sales terms impacted sales and profitability.	Discussions with marketing and management teams. Compare gross sales to net sales, compare pricing over time. Consider both customer discounts and B2B sales terms.	Little or no use of discounts	High use of discounts, coupons, favorable payment terms and promotions
Comparables	What products competed for consumer attention and unit sales?	Determine the impact of competing and substitute products. Understand what other products appeared in searches for key product features.	Internet Analytics. Customer surveys & feedback. Management Input. Guideline company research.	Competing products had little impact on the Subject Product's performance	Competing products did impact the Subject Product's performance

As shown in Exhibit 7, whether or not other products or services were sold in conjunction with the subject offering is a question that management should be able to address based on its marketing and distribution strategies. All other factors being equal, if the subject offering relied upon the sale of another product or service, the subject IP may not be driving sales of the subject offering. Assuming that the subject IP is not a component of the primary offering, the subject IP may not be a primary factor in consumers' decisions to purchase the subject offering. Thus, the damages analyst would conclude that the subject IP has made a lower contribution to the financial performance of the subject offering than other assets the company used.

Where possible, observations and statements management provides should be confirmed through the expert's research and due diligence. In several cases, management told us that a product had patent protection or that publications were protected by registered copyrights when, in actuality, the patent applications had not yet been filed or claimed registrations did not exist. Management may indicate that a product feature is crucial to its success, but customer feedback and surveys might indicate something different. Therefore, when possible, the analyst should attempt to verify the statements management made with other sources of information.

4.2 Analytical Tool: Surveys, Reviews, and Feedback

When appropriate and available, customer and market surveys, customer and user reviews and marketplace feedback can provide useful insights into the relative contribution of identified assets and provide support for apportionment conclusions. In some circumstances, a survey may be conducted as part of the litigation and occasionally survey data and market research companies conducted for other purposes can be used in the profit apportionment analysis. Many

businesses regularly survey and receive feedback from their customers after product purchases. The damages analyst can also visit review websites and user forums to collect comments and observations.

Third-party surveys can identify the relative strength of brand assets, identify which product features influence customer demand, and indicate the relative recognition and contribution of corporate brands relative to product brands. In addition to third-party surveys, many products and services are reviewed and commented upon at user websites, social media pages, and review websites. For example, an analysis of Yelp reviews may indicate that a restaurant's clientele loves the food but hates the décor and service. If the restaurant is claiming its décor and service model are proprietary and were infringed by a competitor, those Yelp reviews would suggest that the amount of profit apportioned to the claimant's décor or service model could be relatively low. Similarly, if surveys indicate brand recognition is low, the amount of profit apportioned to trademark and brand assets will likely be low. In one recent trademark infringement case, a survey indicated the claimed trademark had no customer recognition in the relevant market territory. Customers who purchased the product had no awareness or recognition of the claimed mark and purchased the product due to its features and recognition of the retailer's brand. Based on this finding, the apportionment analysis identified other assets as the key contributors to financial performance and the plaintiff was awarded \$0 in unjust enrichment damages.

Three of the contribution questions where surveys, reviews, and feedback have proven helpful are presented in Exhibit 8.

The information and observations from surveys, feedback, and user reviews should be combined with observations from other analytical tools. Careful attention should also be given to the form, context, and objective of the survey or any biases evident in user reviews. Nonetheless, information from customers and the marketplace often prove useful in identifying the relative contribution of key assets to financial performance.

Exhibit 8. Three of the Contribution Questions for Which Surveys, Reviews, and Feedback Have Proven Useful

<i>Contribution Questions - Best Fit for Surveys, Reviews & Feedback</i>					
<i>Topic</i>	<i>Questions</i>	<i>The Analysis</i>		<i>Typical Factors Impacting Apportionment to the Subject IP</i>	
		<i>Why Analyze</i>	<i>How to Analyze</i>	<i>Greater %</i>	<i>Lower %</i>
Demand	How did customers find the product? What Internet search terms connected customers to the point of sale?	Determine which assets allowed customers to find the product: brand, features, innovation, solving a problem, etc.	Internet Analytics. Customer surveys & feedback. Review and comparison of marketing materials.	The key factors identified are related to the Subject IP	The key factors identified are not related to the Subject IP
Marketing	What features were promoted, emphasized and explained?	Determine if IP-related product features received the most marketing effort.	Review and comparison of marketing materials. Customer surveys (what features drove their interest?)	Features related to the Subject IP were highlighted and headlined in marketing and promotional materials	Features related to the Subject IP were not marketed
Comparables	What other products did consumers consider?	Understand which customer needs drove demand. Determine if customers were loyal to a brand, looking for certain features, drawn to a design, or influenced by marketing or referrals.	Customer Surveys & feedback. Market share data. Industry reports.	The Subject IP was related to customer's needs	The Subject IP was not related to features desired by customers

4.3 Analytical Tool: Financial Analysis

A review of financial reports and comparison of reported financial results with guideline company results and industry metrics often provides support for an apportionment conclusion. The use of IP can impact financial results through the price of products and services, the volume of products sold, the cost to procure products, and marketing, operating, or financing expenses. For an apportionment analysis, the financial analysis seeks to identify whether any of the following occurred.

- Offerings using the subject IP were sold at higher prices;
- Offerings using the subject IP were sold in greater volume;
- The company using the subject IP was able to procure its products at a lower cost, or spend less on marketing, production, or financing; and
- The subject IP generated some additional income due to the use of the IP, possibly through licensing.

The damages analyst should review available financial reports looking for indications of these financial benefits. As possible, the financial performance of the subject offerings should be compared to that of similar or comparable products or services either the same company or other companies sold. An outside party may have previously developed an evaluation or valuation of some of the identified assets. The subject IP or other IP the business used may be the subject of a license agreement, or a valuation may have been conducted in relation to an acquisition. If available, prior analyses, agreements, and reports should be considered.

In a recent assignment, the plaintiff claimed that the defendant had used the plaintiff's copyright-protected art on products sold through a network of retailers. The defendant also sold similar products that did not include the claimed art and reported a positive gross profit on both the alleged infringing product and the comparable products. Financial analysis indicated that the company-level profit margins the defendant achieved were not greater than those guideline companies achieved. At the product level, the alleged infringing product was sold at a lower price and sold fewer units than the defendant's similar products although the cost to produce the alleged infringing and comparable products were identical. Therefore, the financial analysis showed no indication that the claimed art was enabling the defendant's alleged infringing products to outperform other products the company sold. Therefore, the apportionment observations from the financial analysis indicated that the copyright-protected art was not providing a contribution to the defendant's financial performance and the apportionment conclusion could not be a high apportionment percentage.

Observations from financial analysis should be combined with those from other analytical tools. Comparable product data and useful guideline company financial data are not always available. However, reviewing financial results and comparing financial results with comparable and guideline company data can provide useful insights to support an apportionment conclusion.

4.4 Analytical Tool: Internet and Social Media Analytics

Businesses today rely on the internet and social media for a wide range of sales, marketing, and operational activities that generate a great deal of data and information that can be used to support an apportionment conclusion. Further descriptions of many of the internet and social media analytical tools can be found in Chapter 33.¹³ For an apportionment analysis, many of the contribution questions can be addressed using these tools.

¹³ See Chapter 33 of this guide, "Using Internet Analytic Tools for Valuation and Damages Calculations in Internet IP Infringement and Defamation Cases."

In trademark infringement cases, for example, website analytics can be used to quantify the number of internet search users who included the trademarked term in their search queries. Website analytics can also indicate the amount of e-commerce conducted as a result of those searches. Reviewing website source code can indicate whether the defendant's website used the claimed term in its search engine optimization tactics and, thus, whether the claimed term made a meaningful contribution to commerce and financial results.

The Wayback Machine¹⁴ also provides archived versions of most websites, which can show whether the information that companies publish about themselves has changed, perhaps indicating a change in the relative contribution different assets made. For example, a plaintiff's patent infringement claim may relate to certain product features that past versions of the defendant's website made little or no mention of, possibly suggesting that the disputed features were not key contributors to the defendant's financial performance and thus should receive a low apportionment percentage.

Although the results of the internet and social media analysis should be reconciled and compared with those developed using the other analytical tools, a damages analyst should not ignore the vast amount of data and information available from internet analytics, websites, and social media pages.

4.5 Analytical Tool: Marketing and Communications Language

From company websites and marketing materials to annual reports and investor presentations, companies large and small publish a great deal of information describing their business activities. This information can be read and reviewed to gain insight into the relative contribution of the assets identified earlier in the apportionment process. Company history and "about us" website pages and annual reports to shareholders often identify the company's business strategies and

Exhibit 9. Three of the Contribution Questions for Which Marketing and Communications Language Analysis Has Proven Useful

Contribution Questions - Best Fit for Marketing & Communications Language Analysis					
Topic	Questions	The Analysis		Typical Factors Impacting Apportionment to the Subject IP	
		Why Analyze	How to Analyze	Greater %	Lower %
Marketing	What features were promoted, emphasized and explained?	Determine if IP-related product features received the most marketing effort.	Review and comparison of marketing materials. Customer surveys (what features drove their interest).	Features related to the Subject IP were highlighted and headlined in marketing and promotional materials	Features related to the Subject IP were not marketed
Other Assets	What was the company's competitive advantage?	Identify the factors cited by the company as keys to its success. Identify how the company has differentiated itself from competitors.	Management input. Company Language Analysis. 3rd Party research and studies.	Competitive advantage is linked closely to the Subject IP	Competitive advantage is not related to the Subject IP
Other Assets	What other IP does the business own or use? What was the overall IP strategy?	Consider how the Subject IP fits within the Company's IP strategy. Determine if the Subject IP a key component of the IP portfolio and IP strategy.	SWOT analysis. Management input. USPTO and USCO filings. IP plans and strategy documents.	The Subject IP is a key component of the Company's IP strategy	The Subject IP is not a key component of the Company's IP strategy

¹⁴ archive.org.

competitive advantages. Websites, brochures, and marketing materials can point analysts to key features and benefits of products and services. Annual reports and investor presentations can identify competing and comparable companies, products, and services. Marketing materials may compare key features of the company's offerings with competing offerings. Three of the contribution questions for which a review of company marketing and communication language has proven helpful are presented in Exhibit 9.

In one of our assignments, the plaintiffs claimed their corporate brand and trademark were highly valuable and that infringement had reduced their sales and profits. However, the company's annual report identified its technologies and innovation investments and its relationships with well-known, branded retailers and distributors as key competitive advantages. The marketing materials focused on product features rather than the company's corporate brand and trademarks. Investor presentations touted the company's ability to reduce and manage costs. None of its public documents indicated an effort to develop or build its own brand. These answers to the contribution questions indicated a low contribution from the claimed brand and trademark, with relatively greater contributions from the company's technology and relationship assets.

The language a company uses to describe and promote itself can also change over time, indicating a change in the relative contribution of the subject IP. The information and observations gathered from a review of company publications should be combined with those from other analytical tools, and the damages analyst may need to review and compare the language found in published documents over time. A thorough review of a company's published materials and communications should be a component of any damages calculation, valuation, due diligence, or apportionment analysis.

4.6 Combining the Five Analytical Tools

Observations from each of the analytical tools should be combined in addressing the contribution questions. When conducting an apportionment analysis, damages analysts become detectives, searching for any available clues, facts, evidence, and observations, while applying their experience, expertise, and judgment to develop their apportionment conclusion. The art of developing an apportionment analysis requires an investigative mindset—including gathering data through interviews, conducting thorough research, and reconciling evidence or observations that may be contradictory to other fact evidence and observations. The goal of the framework presented here is to provide damages analysts with a consistent procedure for conducting these investigations.

5.0 Conclusion

When analyzing damages in IP infringement cases, many circumstances may require a profit apportionment analysis, and this chapter offers a framework that damages analysts can reasonably employ to conduct such an analysis in an orderly, effective, and ultimately reliable manner. The four-step process, contribution questions, and analytical tools offered here are intended to provide a guide rather than a rulebook or calculator for damages calculations and profit apportionment analyses. The process can be used to consistently present and communicate the information used and how the apportionment conclusion was reached.

As case law and guidance on damages calculations is continuously evolving, the process of profit apportionment is evolving as well, and thus this framework is designed to be flexible enough to be modified to reflect the unique circumstances of each case. No process should be so rigid that it removes the need for analysts to apply their own judgement and professional skepticism in developing damages opinions. If additional questions are relevant to the circumstances of the case, they should be added to the framework and communicated clearly by the damages analyst. Analysts can adopt the framework offered here for the circumstances of their case while ensuring they have considered all of the available information in forming their apportionment conclusion.

Appendix: Contribution Questions for Profit Apportionment Analyses

The Contribution Questions		The Analysis	
Questions	Topic	Why Analyze	How to Analyze
Where were the products purchased?	Demand	Determine which assets were used to sell the product. Consider contribution of other factors such as retailer's brands, location, distributor relationships, etc.	Store visits, sales by channel/distributor/customer. Website conversion ratios, retailer data, etc.
How and where were the products shelved? What displays or in-store advertising were used? Was it an impulse purchase?	Demand	Determine which assets and market factors contributed to the sale of products to end users.	Store visits. Retailer interviews. Surveys and feedback. Marketing materials.
How did customers find the product? What internet search terms connected customers to the point of sale?	Demand	Determine which assets allowed customers to find the product: brand, features, innovation, solving a problem, etc.	Internet analytics. Customer surveys and feedback. Review and comparison of marketing materials.
Was the product sold in conjunction with other products?	Demand	Understand whether the subject product was the key driver in customer decisions.	Management and marketing team input. Review of retailer's sales practices. Review of company's data for its other products. Review marketing and promotional materials.
What product features were promoted, emphasized and explained?	Marketing	Determine whether IP-related product features received the most marketing effort.	Review and comparison of design documents and marketing materials. Customer surveys (what features drove their interest?).
What price breaks, discounts, rebates, or promotional pricing were used?	Marketing	Determine whether price, discounts, or favorable sales terms impacted sales and profitability.	Discussions with marketing and management teams. Compare gross sales to net sales, compare pricing over time. Consider both customer discounts and B2B sales terms.
What products competed for consumer attention and unit sales?	Comparables	Determine the impact of competing products. Understand what other products appeared in searches for key product features.	Internet analytics. Customer surveys and feedback. Management input. Guideline company research.
What products and services provided similar benefits?	Comparables	Understand the other ways that consumers could meet their needs. Determine whether workarounds, substitutes, or noninfringing alternatives existed.	Product comparisons. Customer surveys and feedback. Retail placement (what is sold in the same area). Internet search and traffic analysis. Products reviews and ratings.
What other products did consumers consider?	Comparables	Understand which customer needs drove demand. Determine whether customers were loyal to a brand, looking for certain features, drawn to a design, or influenced by marketing or referrals.	Customer surveys and feedback. Market share data. Industry reports.
Did the product achieve a price premium?	Financial	Understand how the product was priced relative to comparables. Identify any other factors that contributed to product pricing.	Product price comparisons. Use of discounts, rebates, coupons, etc. Consider gross and net prices.

Usefulness of Analytical Tools					Typical Factors Impacting Apportionment to the Subject Asset	
Management Interviews	Financial Data	Surveys	Internet and Social Media	Marketing and Communications Language	Greater %	Lower %
Data are preferred	Unlikely	Possible	Possible if e-commerce exists	Data are preferred	Multiple sales locations or diverse sales channel (can indicate greater influence of the product rather than the retailer)	Concentration in one channel, retailer had greater brand recognition
Helpful, but seek additional information	Not	Helpful	Online or social media promotions	Data are preferred	Lower use of in-store promotions, displays, placement	Higher use of in-store promotions, displays, placement
Helpful, but seek additional information	Not	Helpful	Helpful	Not	The key factors identified were related to the subject IP	Key factors were not related to the subject IP
Helpful	Possible (review invoices and sales reports)	Possible	Helpful	Possible	IP-protected product drove the purchase decision	IP-protected product was a follow-on or convoyed purchase
Helpful, but seek additional information	Unlikely	Helpful	Website text and Wayback Machine	Helpful	Features related to the subject IP were highlighted and headlined in marketing and promotional materials	Features related to the subject IP were not marketed
Helpful	Gross v. net revenue; cost of goods sold line items	Unlikely	Website text and Wayback Machine, email campaigns	Possible: look for terms such as value, discount, price match, etc.	Little or no use of discounts	High use of discounts, coupons, favorable payment terms, and promotions
Helpful	Not	Helpful	Review internet search results	Does the company mention competitors	Competing products had little impact on the subject product's performance	Competing products did impact the subject product's performance
Helpful	Not	Helpful	Review internet search results	Product comparisons	Substitutes had little impact on the subject product's performance	Substitutes greatly impacted the subject product's performance
Helpful	Not	Helpful	Traffic analysis, search results, review sites and forums	Product comparisons	The subject IP was related to customer's needs	The subject IP was not related to features customers desired
Data are preferred	If price and volume data are available	Surveys can indicate consumer's willingness to pay a higher price	Unlikely	Not	The subject product achieved better pricing and the difference in pricing is related to the subject IP	Lower prices or no price premium, heavy use of discounting or promotional pricing

Continued on next page

The Comprehensive Guide to Economic Damages: Volume One

The Contribution Questions		The Analysis	
Questions	Topic	Why Analyze	How to Analyze
Did the product achieve greater unit volumes?	Financial	Determine whether sales volumes greater or less than comparables. Identify whether other assets or factors impacted sales volumes.	Market share data. Unit sales data and comparisons. If sales are connected/convoyed with other products or services.
Was the product benefiting from cost reductions? Did the product cost less to market or produce?	Financial	Determine whether and how the subject IP was providing a financial benefit to the IP user. Determine which assets drove lower costs, higher margins, reduced marketing costs, etc.	Financial analysis. Guideline company ratios and margins. Industry metrics. Consider lower tax and financing costs.
Were there differences in cash flows, working capital use, or capital expenditure?	Financial	Determine whether the subject IP yielded cash flow benefits.	Consider impacts beyond the P&L: cash conversion, investment in fixed assets, etc.
What was the company's competitive advantage (innovation, location, service, low-cost, etc.)?	Other Assets	Identify the factors the company cited as keys to its success. Identify how the company has differentiated itself from competitors.	Management input. Company language analysis. Third party research and studies.
What other IP did the company own or use? What was the overall IP strategy?	Other Assets	Consider how the subject IP fits within the company's IP strategy. Determine whether the subject IP a key component of the IP portfolio and IP strategy.	SWOT analysis. Management input. USPTO and USCO filings. IP plans and strategy documents.
How did the company develop new products? Have there been acquisitions?	Other Assets	Understand whether and how the IP was acquired or developed, or the amount invested to launch the product.	M&A research, R&D activities, management input. The amount invested can indicate its relative worth to its owner.
How did the company protect its proprietary assets? How much spent protecting assets?	Other Assets	Determine how the company invested in prosecuting, managing, and protecting the subject IP. Understand this investment relative to investments for other IP.	Financial analysis. Guideline company ratios and margins. Industry metrics. Management interviews. IP plans, budgets and investments.

Chapter 34. Profit Apportionment in Intellectual Property Infringement Damages Calculations

Usefulness of Analytical Tools					Typical Factors Impacting Apportionment to the Subject Asset	
Management Interviews	Financial Data	Surveys	Internet and Social Media	Marketing and Communications Language	Greater %	Lower %
Data are preferred	If price and volume data are available	Unlikely	Unlikely	Any language about market share?	The subject product is outperforming, and the key difference is related to the subject IP	No indication of better performance, heavy use of discounting or promotional pricing to drive volumes
Data are preferred	Review expenses and margins over time and against guideline companies	Unlikely	Unlikely	Is cost mentioned as a competitive advantage?	The subject product is outperforming, and the key difference is related to the subject IP	No indication of better performance, margins are equal to or worse than guideline companies
Data are preferred	Balance sheet and cash flow statement items	Unlikely	Unlikely	Discussion of investments	The company's ratios are better than guideline companies	No indication of better performance. Financial ratios are equal to or worse than guideline companies
Helpful	Guideline company analysis	Surveys can indicate which assets yielded the advantage	Website and SM text comparisons	What competitive advantages are mentioned?	Competitive advantage is linked closely to the subject IP	Competitive advantage is not related to the subject IP
Helpful	Balance sheet, R&D expenses, investments	Unlikely	Unlikely	Annual reports and investor presentations	The subject IP is a key component of the company's IP strategy	The subject IP is not a key component of the company's IP strategy
Helpful	P&L or ledger data	Unlikely	Unlikely	Annual reports and investor presentations	Acquisition was relatively expensive, and owner paid substantial amount to acquire the subject IP	The subject IP was acquired for a small amount, and the damages claim would represent an outsized ROI
Helpful	P&L or ledger data	Unlikely	Unlikely	Litigation history	A relatively high amount has been invested to prosecute and protect the subject IP	The company has not invested effort or money to protect the subject IP

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