Profit Apportionment in Intellectual Property Infringement Cases—Part I: A Comparative Analysis Using Google Ads and Conversion Ratios

By Doug Bania, Edgar Bustillos, and Joe Grekoski

■ Doug Bania,
Founding Principal,
Nevium Intellectual Property Consultants,
E-mail: dougbania@nevium.com

■ Edgar Bustillos,
Director,
Nevium Intellectual Property Consultants,
E-mail: edgarbustillos@nevium.com

■ Joe Grekoski,
Director,
Nevium Intellectual Property Consultants,
San Diego, California
E-mail: joegrekoski@nevium.com

Abstract

Intellectual Property (IP) infringement cases often require examining the financial impact of unauthorized IP use. In these cases, profit apportionment must be considered to determine the financial contribution related to the unauthorized use of the IP. Although experts use various approaches to determine profit apportionment, this article explores one objective and quantitative approach using Google Ads analytics. Specifically, we employ a comparative analysis to assess the additional profits, or incremental profits, related to paid keywords that incorporate a disputed trademark in online advertising compared to paid keywords that do not include the disputed trademark.

The methodology analyzes the defendant's conversion ratios as a key performance indicator. If the conversion ratio is higher for the paid keywords incorporating the disputed trademark, it suggests a contribution to incremental profits attributable to the infringement. This implies that consumers may be more inclined to search for the disputed trademark and engage with advertisements triggered by these terms, leading to higher conversion rates and increased profitability.

With a data-driven approach to profit apportionment, this article provides insights into the financial implications of trademark infringement cases. The findings offer a quantitative perspective on the apportionment of profits, thereby contributing to a more comprehensive understanding of economic consequences for a defendant.

I. Introduction

In trademark infringement cases, profit apportionment determines the extent to which a defendant's incremental profits can be attributed to the use of a disputed trademark. Distinguishing between the value of the infringing trademark versus the value of the infringer's other assets is often challenging. These assets might include physical infrastructure, human capital, brand equity, operational efficiency, other IP assets, and strategic partnerships. While IP is important, it is not the only contributing factor to a company's financial performance.

Profit apportionment in trademark infringement cases is widely discussed; however, little literature specifically discusses determining an appropriate profit apportionment rate. In profit apportionment, the Federal Circuit has expressed that it *"never required absolute precision in this task; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty."* [1] This article offers one approach to alleviating some of that uncertainty.

Experts should employ additional methodologies to determine profit apportionment, including pricing differentials, customer review analysis, and promoted features analysis, among others. The most thorough strategies typically include a combination of multiple approaches. This article focuses on using paid keywords in Google Ads—an approach that can complement other apportionment techniques.

II. E-Commerce Businesses and Pay-Per-Click Advertising

E-commerce is defined as the marketplace for online transactions, which encompasses the exchange of goods and services over the internet. According to a study by Statista, e-commerce sales in the United States are expected to reach $925 billion in 2023, a 14 percent increase from 2022. The study projects this upward trajectory to continue and anticipates e-commerce sales to reach around $1.4 trillion in the United States by 2027.[2]

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

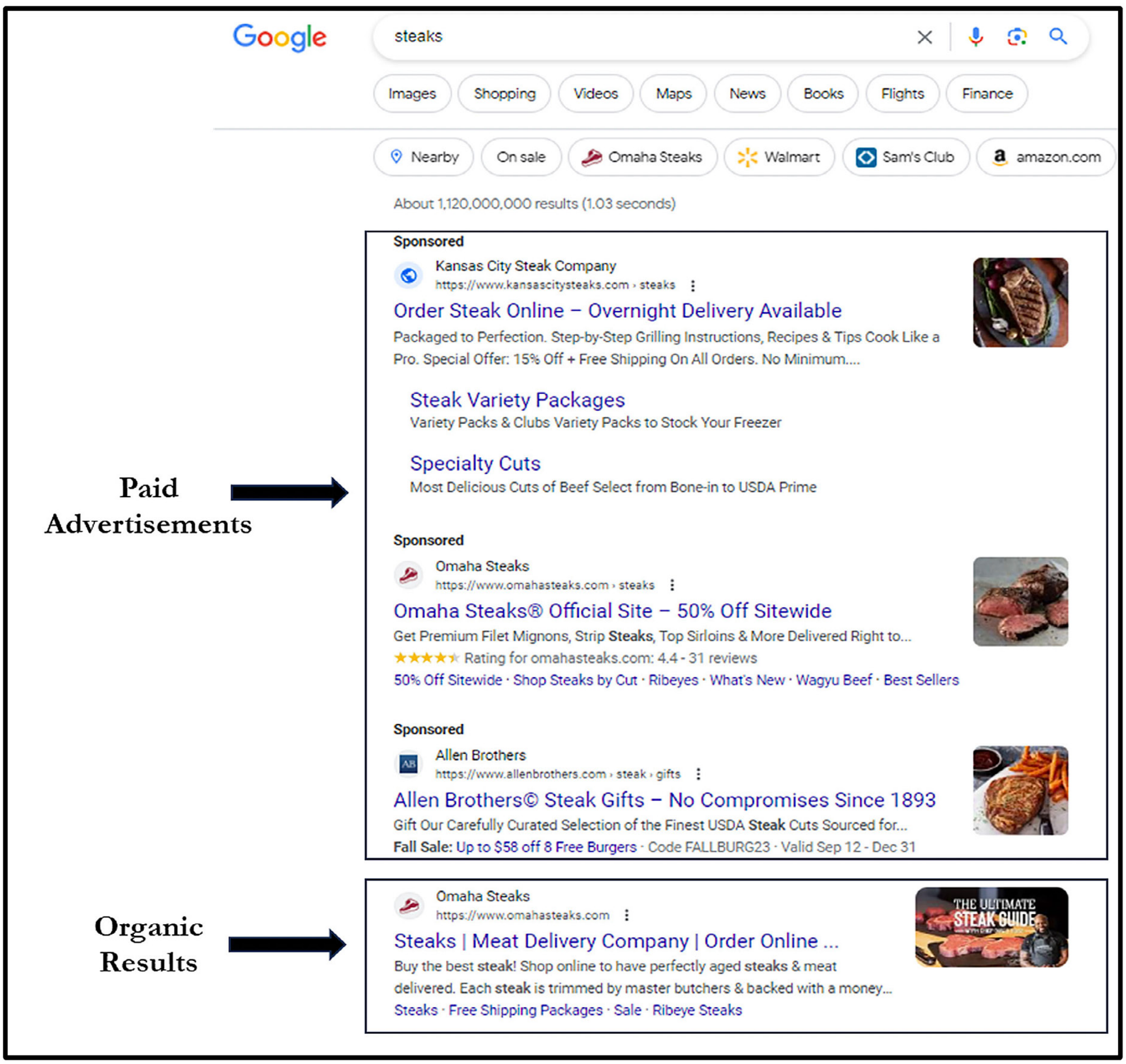
2. *www.statista.com/statistics/272391/us-retail-e-commerce-sales-forecast/#:~:text=The%20revenue%20in%20the%20E,a%20new%20peak%20in%202027.*

Companies have increased their online marketing efforts in response to the increasing prevalence of e-commerce sales. A common advertising strategy among e-commerce businesses is purchasing advertisements through Google Ads. Google Ads is an online advertising platform where businesses create advertisements to promote their business, help sell products or services, drive leads, raise awareness, and increase traffic to their website.[3] Google Ads uses a Pay-Per-Click (PPC) advertising technique where businesses bid on specific keywords that trigger their ads. When a keyword is searched, the company's advertisements corresponding to that keyword are typically displayed above Google's organic search results.[4] Subsequently, when the advertisement is clicked, Google charges the company that owns the advertisement.

An example of how paid advertisements and organic search results are displayed on Google is presented below in Exhibit A.

For the example above, the term "steaks" was entered in the Google search query. The top three search

Exhibit A: Google Advertisements Example



3. *https://support.google.com/google-ads answer/6319?hl=en.*

4. Additionally, advertisements can appear within Google's organic search results, on Google Play, in the Shopping tab, and in Google Maps.

results are paid advertisements for "steaks." In other words, Kansas City Steak Company, Omaha Steaks, and Allen Brothers engage in competitive bidding for the keyword "steaks." Consequently, every time one of the Google advertisements is clicked, the company incurs a PPC charge. Kansas City Steak Company has the top advertisement spot for the keyword "steaks" because it has the highest Ad Rank, which is determined by a combination of bid, budget, time of day, user profile, device, advertisement quality, advertisement formatting, and other factors.[5]

Companies pay for Google advertisements because it has the potential to generate more traffic to their websites, increasing the likelihood of converting that traffic into customer purchases. According to a 2023 survey by WordStream, 65 percent of small-to-mid-sized businesses are running advertisement campaigns on Google.[6] Google's Chief Economist, Hal Varian, estimates that PPC advertising can generate a 2x return on investment.[7] To achieve these results, selecting relevant keywords that match what potential customers would most likely use to find the products or services offered is important.[8]

III. Using Google Ads Analytics to Analyze Keywords

While numerous companies invest in Google advertising, understanding the keywords that trigger those advertisements is equally vital. The Google Ads platform provides analytics and insights about the performance of paid advertisements and how effectively keywords trigger the most appropriate advertisements that ultimately drive traffic to their sites. For instance, companies can determine the exact number of people who clicked on an advertisement, such as the "steaks" advertisements in Exhibit A above, and then identify how many purchased a product.

When choosing keywords, Google suggests you should "think like a customer" and "target specific customers."[9] Paid keywords, even if they do not appear in the online advertisement itself, play an important role in triggering the advertisements. To analyze a business's paid keywords, an analyst must obtain access to the business's Google Ads account. Google Ads provides various keyword reports, and one example is found at:

- Campaigns > Audiences, Keyword, and Content > Search Keywords

Google Ads analytics will include the keywords used in Google searches within a specified timeframe. The data also provides insights into metrics such as clicks, conversions, and conversion rates for each keyword. A definition of each is below:

- **Clicks:** Total number of times people have clicked on an advertisement to reach the website.
- **Conversions:** An action taken by a consumer that a business has defined and determined to be valuable, such as adding an item to the check-out cart, making a purchase, or submitting a contact information form.[10]
- **Conversion Rates:** Calculated by dividing the number of conversions by the number of total advertisement clicks. For example, if an e-commerce business defines a conversion as a purchase of a product, a conversion rate of five percent means that for every 100 visitors, the company can expect five of them to make a purchase.

All three metrics provide valuable insights for a business owner. However, conversion rates are particularly significant for e-commerce businesses, given their direct connection to customer engagement and interactions.

According to IRP Ecommerce Market Data, the average e-commerce sales conversion ratio as of September 2023 is 1.99 percent.[11] Conversion rates vary by industry, so this overall average should not be the only—or primary–benchmark. For example, "Food & Drink" businesses in the e-commerce sector maintained an average conversion rate of 1.22 percent in September 2023,[12] whereas "Health and Wellbeing" companies achieved an average conversion rate of 4.18 percent.[13] With industry-specific information, companies can use Google Ads analytics to benchmark their online advertising conversion rates against industry averages.

IV. Conversion Rates and Profit Apportionment for Trademarks

With the dominance of e-commerce today, the un-

5. *https://support.google.com/google-ads/answer/1722087?hl=en.*

6. *https://www.wordstream.com/blog/ws/2022/04/19/digital-marketing-statistics#:~:text=65%25%20of%20small%20to%20mid,revenue%20comes%20from%20Google%20Ads.*

7. *https://economicimpact.google/methodology/.*

8. *https://support.google.com/google-ads/answer/1704371?hl=en.*

9. *https://support.google.com/google-ads/answer/2453981?hl=en.*

10. *https://support.google.com/google-ads/answer/10995103?hl=en.*

11. *www.irpcommerce.com/en/gb/ecommercemarketdata.aspx.* The Conversion Rate is the number of buyers by session—and is calculated using the formula: Total Transactions/Total Sessions * 100. Note that sessions are used in this calculation and not visitors. Thus, if a visitor comes back three times it is three sessions—this lowers the conversion rate but is the most consistent measurement to use.

12. *www.irpcommerce.com/en/gb/ecommercemarketdata.aspx?Market=9&Segment=.*

13. *www.irpcommerce.com/en/gb/ecommercemarketdata.aspx?Market=2&Segment=.*

authorized use of trademarks in connection with online sales is particularly important to understand. As discussed, many online companies invest financial resources in Google advertising due to its substantial return on investment.

This article proposes that conversion rates are one factor in apportioning incremental profits. The underlying theory is straightforward: if a company can increase its conversion rates by incorporating a disputed trademark in its paid advertisement keywords, it implies that using the disputed trademark contributes to incremental profits.

A. Example Trademark Dispute

To illustrate this analysis, let's assume a trademark dispute exists between two fictitious companies. Company A is an online retailer selling protein bars and owns the trademark "Discovery Bars." Meanwhile, Company B sells candy bars, and one of the candy bars is also called "Discovery Bars." Company A has filed a trademark infringement lawsuit against Company B. The lawsuit asserts that Company B infringes Company A's trademark by promoting and selling candy bars using the term "Discovery Bars." As a remedy, Company A is seeking disgorgement of Company B's profits.

Company B sold its "Discovery Bars" product from January 1, 2022, through December 31, 2022. Thus, the damage period for this example is one year. Through discovery, Company B produces its financial information, which indicates it generated $1,000,000 in sales and $200,000 in cost of goods sold, resulting in gross profits of $800,000. Additionally, Company B reported $300,000 in deductible expenses or operating expenses directly related to the sales. As a result, Company B generated $500,000 in incremental profits from selling "Discovery Bars" during the Damages Period. A calculation of Company B's incremental profits from selling "Discovery Bars" is presented in Exhibit B.

Exhibit B: Company B "Discovery Bars" Incremental Profits

Discovery Bars Performance	
Sales	$1,000,000
Cost of Goods Sold	200,000
Gross Profit	800,000
Deductible Expenses	
PPC Marketing	100,000
Direct Marketing	100,000
Other Deductible Expenses	100,000
Incremental Profits	**$500,000**

The critical question here pertains to the amount of incremental profits attributable to the use of the "Discovery Bars" trademark, as opposed to other assets and resources that contributed to generating sales of Company B's "Discovery Bars." Our analysis will focus on Company B's use of keywords in Google advertisements.

B. Comparative Conversion Ratio Analysis

Company B's Google Ads analytics showed that Company B paid for 5,000 keywords during the Damages Period. However, since Company B offers many products that do not incorporate the "Discovery Bars" trademark, not all of these keywords are related to Company A's trademark infringement allegation. Of the 5,000 paid keywords, 1,000 include "Discovery Bars." Keywords containing "Discovery Bars" included various iterations of the disputed trademark, such as "Discovery Bars Chocolate" or "Discovery Bars 12-Pack." The remaining 4,000 paid keywords do not use "Discovery Bars."

The data further indicates that by incorporating "Discovery Bars" in its paid keywords, Company B achieved a conversion rate of 4.2 percent. On the other hand, when not using "Discovery Bars," keywords resulted in a conversion rate of 2.0 percent. The 2.2 percent difference between these conversion rates represents the incremental benefit Company B achieved by including the term "Discovery Bars" in its Google advertisement keywords.

A summary of these findings is in Exhibit C.

Reiterating our earlier discussion, conversion rates are indicative performance metrics given their relationship to revenue. In this specific instance, the apportionment rate, as determined through the comparative analysis of conversion rates, stands at 2.2 percent.

Exhibit C: Company B's Paid Keywords

Keyword Type	Total Keywords	Total Conversions	Total Clicks	Conversion Rate
Keywords that include "Discovery Bars"	1,000	500	12,000	4.2%
Keywords that do not include "Discovery Bars"	4,000	900	45,000	2.0%

Applying this 2.2 percent to Company B's incremental profits of $500,000 indicates that Company B's profits subject to disgorgement would be $11,000.

On certain occasions, this analysis may indicate that keywords containing the disputed trademark have a lower conversion rate than keywords without the disputed trademark. In such cases, one should not necessarily conclude that no incremental profits are attributable to the disputed trademark. Instead, experts should consider multiple apportionment approaches, as trademarks can contribute to financial performance in many ways.

V. Conclusion

This article demonstrates how a comparative analysis of conversion rates can help determine the contribution of a trademark for profit apportionment, particularly in e-commerce cases. It is important to note that each trademark infringement dispute presents its own facts and circumstances. The approach discussed in this article is most informative for e-commerce businesses. Regardless of the case, experts should always consider multiple methodologies when determining an appropriate apportionment rate.[14] ■

14. The methodology discussed throughout this article is intended to help experts calculate the monetary value associated with using a particular keyword related to a trademark. This article does not provide insight on what constitutes infringement.