

United States et al.
V.
Google, LLC

Testimony of
Kinshuk Jerath, Ph.D.

REDACTED FOR PUBLIC FILING

Redacted

Ex. No.

UPXD103

1:20-cv-03010-APM

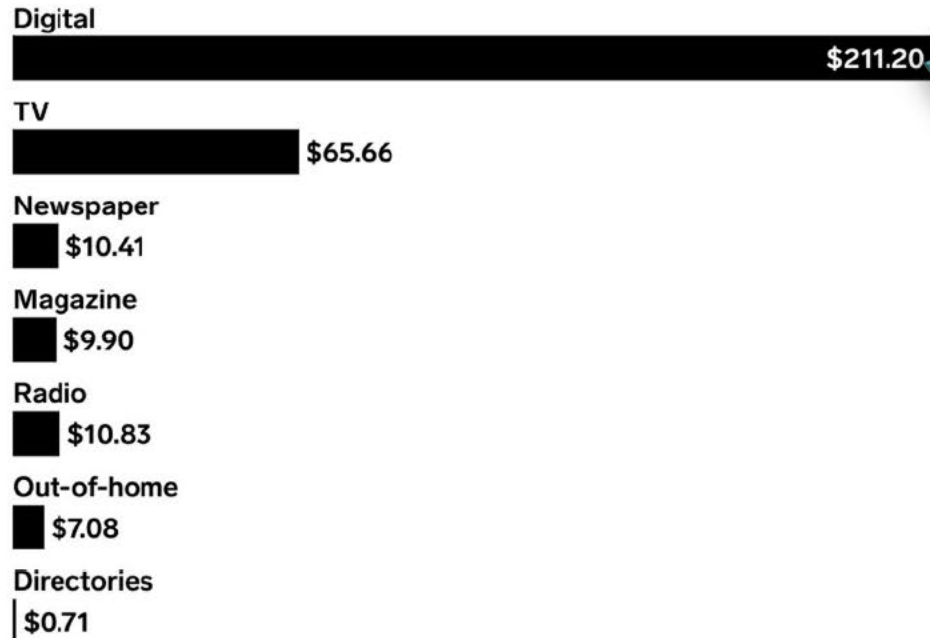
Opinions

- 1 General Search Text Ads are a distinct product category
- 2 Search Ads more broadly are a distinct product category
- 3 Effectively providing Text Ads and other Search Ads requires significant resources, and advertisers have few alternatives apart from Google
- 4 Google harms advertisers through its withholding of information and control of the ad auction

Advertising: Multi-Billion-Dollar Industry

Total Media Ad Spending, by Media

US, 2021, billions

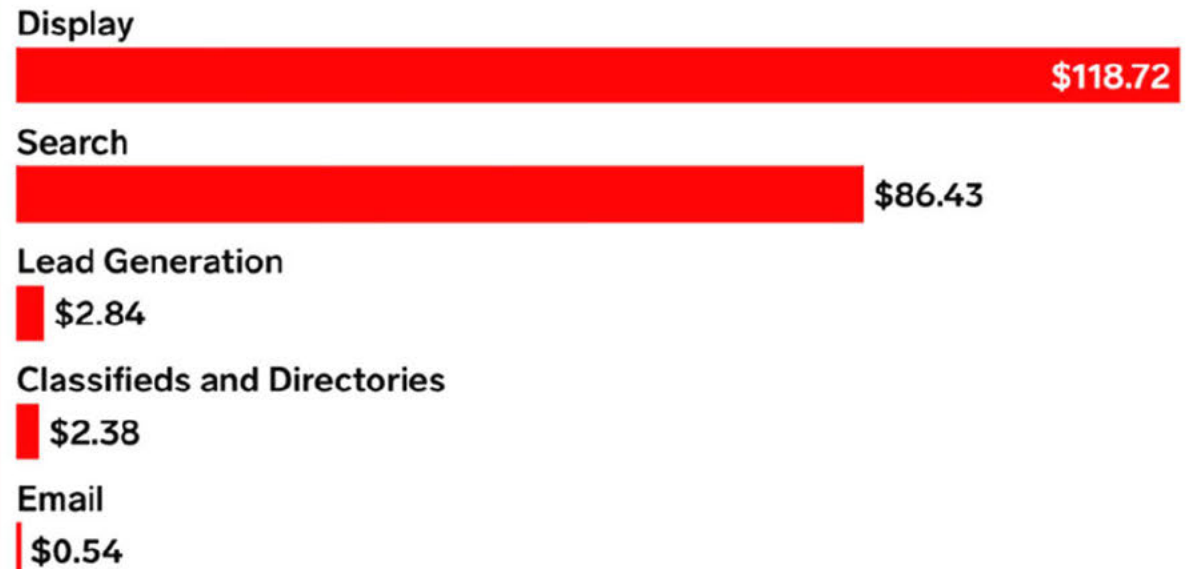


Source: eMarketer, March 2022

eMarketer | InsiderIntelligence.com

Digital Ad Spending, by Format

US, 2021, billions



Source: eMarketer, March 2022

eMarketer | InsiderIntelligence.com

Overview of Advertising Channels: Text Ads and Other Search Ads

Text Ads

- Shown in response to real-time query
- Shown on general SERPs
- Appear similar to organic results
- Primarily text

Organic Listings

The screenshot shows a Google search for "best gaming laptops". At the top, there are navigation links for All, Shopping, Videos, Images, News, and More. Below the search bar, it says "About 350,000,000 results (0.54 seconds)".

The first section is "Sponsored · Shop best gaming laptops". It contains eight product cards, each with an image, a "SALE" badge, the product name, price, and retailer. A green arrow points to this section from the right.

The second section is "Sponsored" and contains two text ads. The first is from Dell, titled "Innovation That Wins - Available w/ Windows 11". The second is from PC Magazine, titled "5 Best Gaming Laptops - Top 5 Gaming Laptops". A red arrow points to this section from the left.

The third section is "Organic Listings" and contains one article from PC Gamer, titled "Best gaming laptops in 2023: Portable powerhouses". A blue arrow points to this section from the left.

Other Search Ads – Shopping ads

- Shown in response to real-time query
- Shown on general SERPs, specialized SERP, app stores, etc.
- Include Shopping ads, Travel ads, etc.

Overview of Advertising Channels: Other Search Ads

The Amazon search results page for "brown shoes" shows a variety of product listings. A green box highlights a section containing several shoe products, including "Jousen Men's Dress Shoes Classic Mens Oxfords Formal Business...", "DREAM PAIRS Bruno Marc Moda Italy Men's Pince Classic Modern Forma...", "Clarks Men's Tilden Walk Oxford", and "Rockport Men's Eureka Walking Shoe". Below this, another green box highlights the "CUSTOMERS FREQUENTLY VIEWED" section, which features products like "Dockers Men's Shelter Plain-Toe Oxford", "TSIODFO Men's Dress Shoes Black Brown Genuine Cow Leather Oxford...", "Kenneth Cole Unlaced by Kenneth Cole Men's Half Time Oxford, Cognac, 10...", and "GIFFINISE Men's Dress Shoes Oxford Formal Leather Shoes for Men".

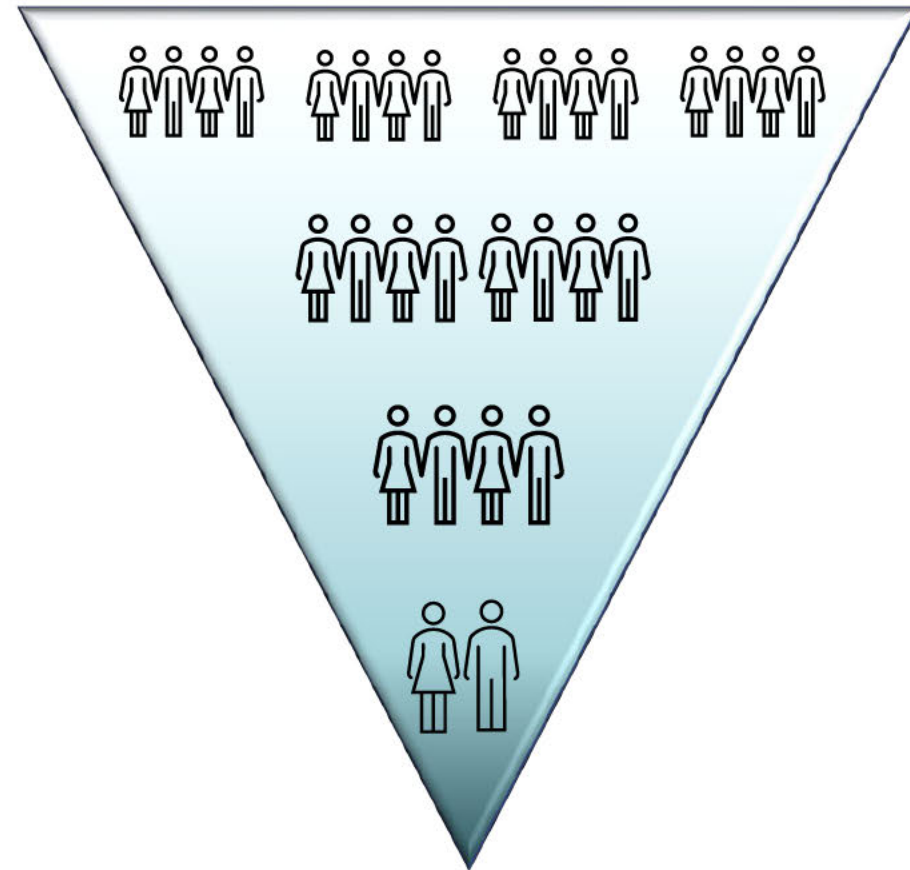
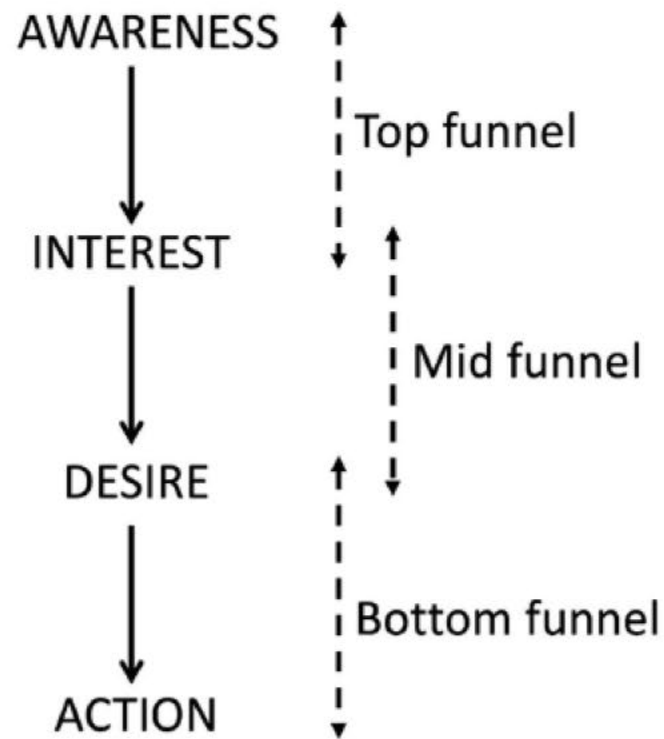
Other Search Ads

The Expedia search results page for "Cartersville, Georgia, United States of..." shows a list of hotels. A green box highlights a section containing several hotel listings, including "Courtyard by Marriott Cartersville", "Hilton Garden Inn Cartersville", "Hampton Inn by Hilton Atlanta Kennesaw", and "Microtel Inn & Suites by Wyndham Cartersville". A search bar at the top of the results section contains the text "e.g. Best Western".

Sources:
DOJ-JERREP-000019,
-111

Consumer Purchase Funnel is a Conceptual Model

(1) Stages, and (2) Successive Narrowing



Source: Prof. Jerath Teaching Slides

Characteristics Advertisers Consider When Building Ad Campaigns

1

Targeting

Inferred Intent* from Signals

- Expected audience composition (e.g., demographics)
- Behavioral profiles (based on online behavior)
- Context

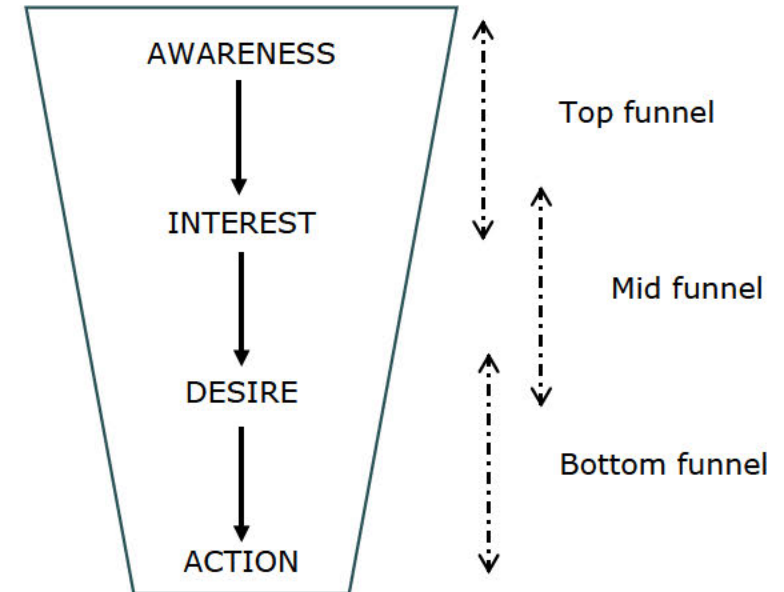
**inferences limited in accuracy*

Declared Intent, in Real Time

- Query

2

Funnel Goal(s) for which Ad Channel is Most Suited and Effective



Advertisers Attach a Unique Value to Text Ads and Other Search Ads

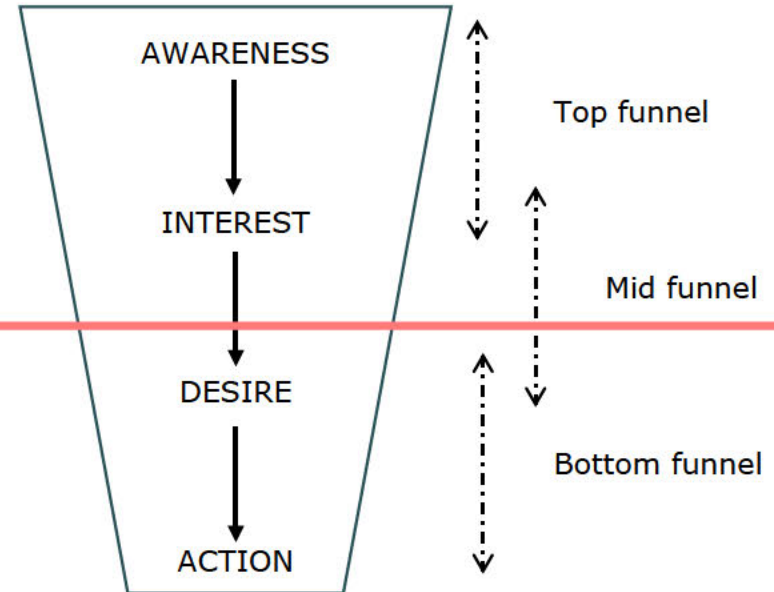
Ad Channel

Targeting

Funnel Goal(s) for which Ad Channel is Most Suited and Effective

Traditional, Display,
Social Media Ads

Inferred Intent from Signals



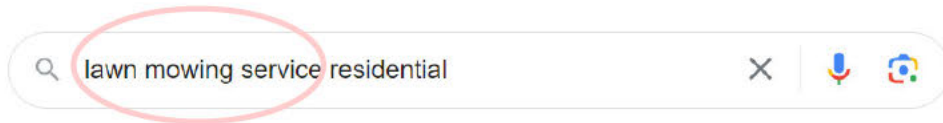
Text Ads and Other Search Ads

Declared Intent, in Real Time

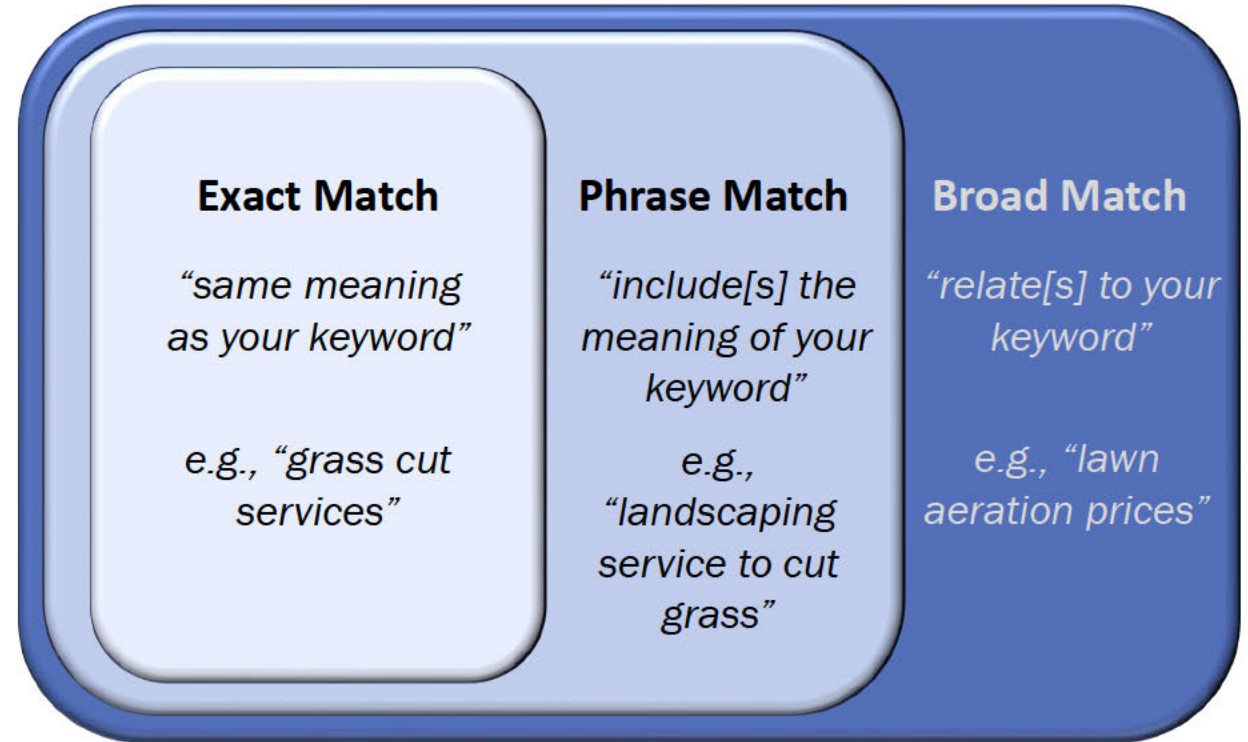
Opinions

- 1 General Search Text Ads are a distinct product category
- 2 Search Ads more broadly are a distinct product category
- 3 Effectively providing Text Ads and other Search Ads requires significant resources, and advertisers have few alternatives apart from Google
- 4 Google harms advertisers through its withholding of information and control of the ad auction

A Hallmark Feature of Text Ads: Keywords and Match Types



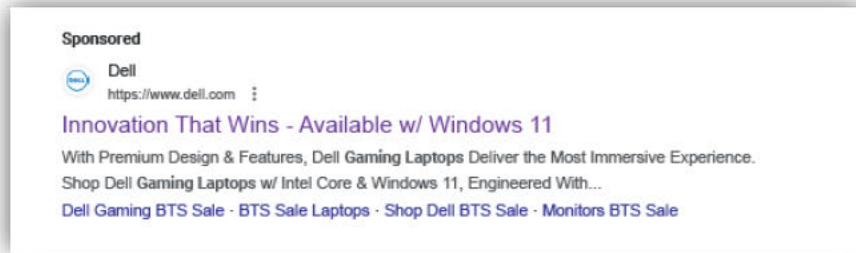
- Advertiser selects keywords and match types for their Text Ads
- Consumer enters query
- Google decides which Text Ads enter the auction and which ads are shown on the SERP



Source: Based on Google Ads Help, “About keyword matching options” (UPX8023, at -.001)

Options with Text Ads vs. Constraints on Other Search Ads

Text Ads



Sponsored

Dell
<https://www.dell.com>

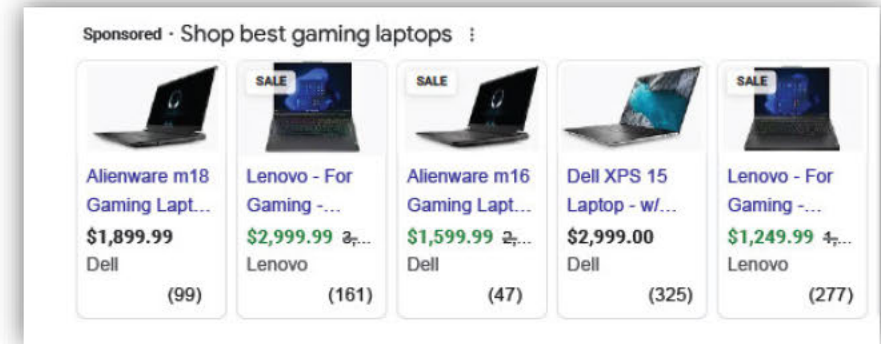
Innovation That Wins - Available w/ Windows 11

With Premium Design & Features, Dell Gaming Laptops Deliver the Most Immersive Experience. Shop Dell Gaming Laptops w/ Intel Core & Windows 11, Engineered With...






Dell Gaming BTS Sale · BTS Sale Laptops · Shop Dell BTS Sale · Monitors BTS Sale

- Advertise virtually anything
- Select keywords and match types
- Submit ad copy/components
- Have one or more focal points for ad

Other Search Ads



Sponsored · Shop best gaming laptops

 Alienware m18 Gaming Lapt... \$1,899.99 Dell (99)	 Lenovo - For Gaming -... \$2,999.99 Lenovo (161)	 Alienware m16 Gaming Lapt... \$1,599.99 Dell (47)	 Dell XPS 15 Laptop - w/... \$2,999.00 Dell (325)	 Lenovo - For Gaming -... \$1,249.99 Lenovo (277)
---	--	---	--	--

- Advertise only products
- Select product category
- Submit live inventory and pricing feeds
- Show only one product at a time
- Adhere to rigid content and informational restrictions

Broader Scope, Wider Range of Targeting Options, Greater Control

The screenshot shows a Google search for "best gaming laptops". The results include several sponsored product listings and text ads. The product listings are:

- Alienware m18 Gaming Lapt... \$1,899.99 Dell (99)
- Lenovo - For Gaming ... \$2,999.99 Lenovo (161)
- Alienware m16 Gaming Lapt... \$1,599.99 Dell (47)
- Dell XPS 15 Laptop - w/... \$2,999.00 Dell (325)
- Lenovo - For Gaming ... \$1,249.99 Lenovo (277)
- Alienware m18 FHD+ 480Hz... \$2,549.99 Best Buy (46)
- Alienware m16 Gaming Lapt... \$1,799.99 Dell (Free by 8/...)
- G16 Gaming Laptop - 16" ... \$1,399.99 Dell (Free by 8/...)

Below the product listings are two sponsored text ads:

- Dell:** Innovation That Wins - Available w/ Windows 11. With Premium Design & Features, Dell Gaming Laptops Deliver the Most Immersive Experience. Shop Dell Gaming Laptops w/ Intel Core & Windows 11, Engineered With... Dell Gaming BTS Sale · BTS Sale Laptops · Shop Dell BTS Sale · Monitors BTS Sale
- PC Magazine:** 5 Best Gaming Laptops - Top 5 Gaming Laptops. Lab Tested Reviews by PCMag.com. Read Reviews and Compare Prices on the... PCMag Editors' Choice · Best Cheap Gaming Laptops · Best Value Pick. Back to school: Up to 35% off Gaming Laptops
- PC Gamer:** Best gaming laptops in 2023: Portable powerhouses. Aug 7, 2023 — The quick list ; Lenovo Legion Pro 7i gaming laptop Best overall. 1. Lenovo Legion Pro 7i (Gen8) ; Gigabyte G5 RTX 4060 gaming laptop Best value.

Advertiser can—	Text Ads	Google Shopping ads?
Advertise virtually anything	✓	✗
Influence reach and frequency of ad via keywords, match-type options	✓	✗
Determine visual appearance and message of ad (e.g., include slogan as headline)	✓	✗
Select specific website for ad's main landing page	✓	✗
Include multiple additional focal points via extensions (e.g., to point to different product groups)	✓	✗

Google Views Text Ads as Distinct From Other Search Ads



prepared by diana adair 11/09/10

Prep - Product Ads Roundtable

Date: Thursday, 11/11/10
Time: 11am - 12pm
Where: University Theater, B40

Summary: We're organizing a small roundtable with advertisers and reporters for the launch of Product Ads. The goal is to host an intimate and conversational discussion that emphasizes the success of our advertisers who have been beta-testing this new ad format. We're also publishing the [Product Ads blog post draft](#) on the morning of that day.

Agenda:
11:00-11:15am
Buffer time

11:15-11:20am
Susan on New Ad Formats Initiative, vision, ads innovation

11:20-11:25am
Dennis to introduce beta advertisers, also on holiday retail shopping season

11:25-11:30am
Jerry/Jennifer on Product Ads, explanation of how it works, and live demo

11:30-11:40am
Nick from Campmor speaks about experience using Product Ads

11:40-11:50am
Michael from Diapers.com speaks about experience using Product Ads

11:50-12:00pm
Q&A with reporters

Talking Points for Jerry and Jennifer:

We'd suggest that you focus your remarks on the specifics of the product, including the video and demo. We'd also like you to highlight the one year anniversary. You'll also have a few general slides behind you. Here are some suggested talking points:

- Product ads has been in beta for one year, and we've made improvements over time based on feedback from advertisers such as Campmor and Diapers.com.
- Ran over 100 experiments. Some examples of how it's changed over the beta - ad quality, adwords integration, features.
- Available to all US Advertisers
- Short video and then live demo [Jiliu to send sample queries]

ive from

in a separate
y. We do not
ts, but simply
other and

ers only get to

gs to managed
Words, and it's
on Optimizer

the user query,
lo with this feed.
luct Search.

e each week,

ause each

oduct Ads?
if.

t be available

and have plans

nt Center feed
n. There are two
vartisers a way to
tly within the ad
text and offer

2. Do Product Ads participate in the AdWords auction?

Since **Product Ads are a very different product-based ad format**, we currently run a separate auction to determine the most relevant products to feature for a particular query. We do not displace any standard **AdWords text ads** from the first page of the search results, but simply show them addition to Product Ads -- as we believe that **both supplement each other** and provide useful information to the user.

Source: Internal Google Document,
"Prep - Product Ads Roundtable" (Nov. 11, 2010)
(UPX0440, at -590)

Google Views Text Ads as Distinct From Other Search Ads

Google

Product Ads "Tetris" Update

SVBU – September 16, 2011



Source: Google presentation,
"Product Ads 'Tetris' Update"
(Sept. 16, 2011)
(UPX0464, at -155)

Product Ads: A recap

- Incremental Opportunity: **Complements text ads** to increase an advertiser's "shelf space" on SERPs

August 2011

Google Confidential and Proprietary

Shipping

August 2011

Google Confidential and Proprietary

Google Views Text Ads as Distinct From Other Search Ads



*Testimony of Hal Varian,
Chief Economist at Google*

Q: Shopping ads, or PLAs - I'm sorry, you like PLAs.
PLAs are a **different species** than text ads; is that right?

A: Yes

Source: Trial Transcript, Sept. 13, 2023,
423:12-423:14 (emphasis added)

Google Views Text Ads as Distinct From Other Search Ads



Source: Trial Transcript, Sept. 19, 2023,
1355:03-1355:11 (emphasis added)



*Testimony of Jerry Dischler,
VP and General Manager of Ads at Google*

Q: Why would an advertiser want to have both a text ad and a shopping ad show up in response to the same query?

A: Because they can have **different information**.

And so -- shopping ads only refer to a specific product, but you can also, in text ad, have **more flexibility** to drive people to a category page or to a store.

In this case [DXD03, slide 1], Cole Haan wants to drive their user to a store with their text ad and to a specific product with their shopping ad.

Industry Views Text Ads as Distinct From Other Search Ads

Using Google as our frame of reference, “search” refers to two distinct products: **Shopping Ads** (f.k.a. Product Listing Ads) and **Google Ads [Text Ads]**. These two units are distinctly different in both how they are bought and consumer experience.

Google Search & Automotive - Summary

UPX0915, a 10 PM
type document

Google Search & Automotive - Summary

The purpose of this doc is to provide initial research and a POV on how to evolve and inbound into specific initiatives.

For questions, please feel free to reach out to Julia Mai or Kevin Chao

Executive summary

- For Automotive, search has built up a highly defensive offering by positioning itself as a CRM - it must be present if someone searches, otherwise it risks losing the sale. Deals - the most important thing is selling the car which is most easily accomplished by focusing on low funnel audiences.
- Last click attribution prevents given difficulty in measuring the offline transaction, amplified by the long purchase cycle. In light of this, measurement centers around efficiently driving from search to purchase.
- Clients still perceive Facebook as a reach and awareness social platform, as opposed to a low funnel intent capture channel, this means we are placed in separate critical budgets in order to meaningfully drive results.
- In order for us to shift search dollars we can not only focus on performance - rather we should think about addressing how we build confidence with advertisers on using our platform.
 - 1) Change perception of Facebook from a discovery and reach platform to one of intent capture
 - 2) Provide visibility on expected performance so clients able to better plan their campaigns by understanding how they can achieve their metrics on Facebook.
 - 3) Increase predictability of performance clients can with a degree of confidence, understand how budget changes will impact their campaign metrics.
- While precision, stability, and predictability will take time to shift, there are steps that we can take in the short term to move budgets by playing to the current perception of Facebook and extending existing solutions like DAA, Lookalike and Click based objectives.
 - 1) Furthermore, in the short term, rather than redefine perception of the Facebook feed, work with Marketplace and Search teams as placements of intent and ensure DAA is supported and drive adoption by positioning as alternative to Google Shopping Ads.

Why is search important to us

Across digital channels, Automotive search is expected to be a \$10.2B industry by 2022 with with the largest share spend with Google still capturing the majority of the budgets. For the purposes of this research, we will focus on Google when referring to search given they are still the dominant player in the space.

As advertisers move budgets away from mass media (diversify device to personal, changing consumer behaviors, and importance of digital in the customer journey), clients will be looking towards digital channels that allow them to accomplish their marketing objectives. The majority of these dollars are used to accomplish CRM objectives driving qualified site engagements, such as website configurator, dealer lookup, or dealer contact. As such these budgets tend to be centered at Tier 3 and the agencies and portals who support them (e.g. Edmunds, CarGurus, Autodata).

The majority of this spend is allocated towards the direct response objective of selling vehicles and concentrated at the Tier 3 audience and supporting agencies.

Sell Cars Objective Breakdown - 2022 (Source: IDC FI DAMM 2018)

CONFIDENTIAL TREATMENT REQUESTED BY FACEBOOK, INC

FBDOJGOOG_00381061

CONFIDENTIAL TREATMENT REQUESTED BY FACEBOOK, INC

FBDOJGOOG_00381061



Source: Facebook document,
“Google Search & Automotive – Summary”
(Oct. 25, 2018)
(UPX0915, at -063)

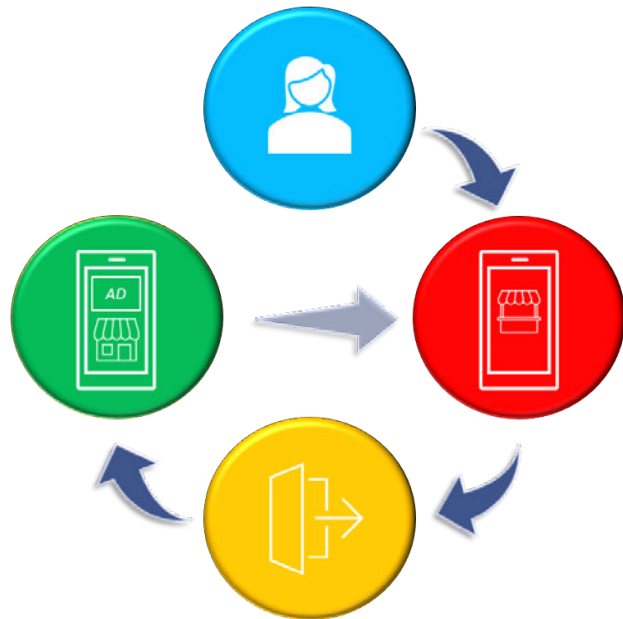
Opinions

- 1 General Search Text Ads are a distinct product category
- 2 Search Ads more broadly are a distinct product category
- 3 Effectively providing Text Ads and other Search Ads requires significant resources, and advertisers have few alternatives apart from Google
- 4 Google harms advertisers through its withholding of information and control of the ad auction

Full-Funnel Marketing: Search Ads and Other Ad Channels Achieve Different and Complementary Goals



Search Ads vs. Retargeted Display Ads



Characteristic	Search Ads	Retargeted Display Ads
Targeting based on:	Real-time, declared intent	Potentially stale, inferred intent
Able to target:	Any consumer who types a relevant query	Only consumers who already visited the advertiser's website
Ad reflects:	What consumer is actually searching for	Potentially different products or services than those previously viewed
Impact of ongoing changes in consumer tracking:	Uniquely unaffected	Expected to become substantially less effective

Search Ads are Distinct from Retargeted Display Ads



Online advertising primer

Hal Varian
August 2017
Updated Nov 2018

Executive Summary

Note: all numbers cited in this document are publicly available via the links provided.

1. Types of ads offline and online
 - a. There are two major kinds of offline ads, direct response and brand. Direct response ads such as direct mail, catalogs, and TV spots, aim to encourage users to make immediate purchases. Brand ads, on the other hand, aim to build brand recognition which may lead to purchases in the future. Though the properties of direct response ads are reasonably distinct, they have become more blurred over time. Brand ads help build brands, and display ads often generate a response such as a click-through to a website.
2. Search ads
 - a. Search ads are a form of advertising that is based on user interest and intent and is entered into a search engine.
 - b. Search ads are eligible to be shown when they match the user's query. Hence the advertiser, not the user, is responsible for the ad.
 - c. Advertisers can also use location targeting [pizza near me] and some demographic targeting on age and gender.
 - d. Only 6% of the clicks on major search engines are search ad clicks; the other 94% are (unpaid) organic clicks. The revenue from the ad clicks supports all other operations of the search engine.
3. Display ads
 - a. Since display ads use targeting mechanisms such as cookies, they are so on. These are described in detail below.
 - b. To oversimplify a little, publishers request an auction to assign ads to publishers using cookies.
 - c. The most valuable form of display ads are retargeted ads. An advertiser creates a list of user devices (e.g. mobile phones, desktops) that they have purchased, and instructs the ad exchange to show ads to those devices. The advertiser is targeting ads to devices not just based on the user's current location but also on their previous behavior.

Search ads are an effective form of advertising since queries are a strong signal of user interest and intent and the ads appear immediately after the query is entered.

Most of the value of **retargeted ads** occurs in the first hour or so after the user visits the advertiser's web page. Ideally the retargeted ad is seen by the user

Source: Internal Google report by Hal Varian,
"Online advertising primer" (updated Nov. 2018)
(UPX0026, at -764-65)

Google Recognizes Search Ads as Distinct from Other Ad Channels

From: Amir Najmi <@google.com> on behalf of Amir Najmi
Sent: Thursday, April 03, 2008 4:58 PM
To: Paul Todd
Cc: Hal Varian; Brian Armstrong; Nick F...@google.com
Subject: Re: Search advertising

Hal, Paul,
I didn't mean to suggest that display advertising is that purpose. The question is why is it that MSP? given the huge amounts of research (much of it to question the value of Search advertising (in some numbers (that I have seen) on the value of display advertising, especially from MSFT and YHOO is advertising. If I am right about there being no qu hammer away at this point when they spread their is an act of faith.
Amir

On Wed, Apr 2, 2008 at 5:46 PM, Paul Todd <@google.com> wrote:
Yes - I think success here is to demonstrate that in conjunction.

Moo! [thanks for the combined name Hal :)] clear of the current pie. While we clearly need to resp size of the pie by demonstrating positive ROI for both search and display advertising

On Wed, Apr 2, 2008 at 5:10 PM, Hal Varian <@google.com> wrote:
One way to think about the difference between search and display/brand advertising is to say that "search ads help satisfy demand" while "brand advertising helps to create demand."

When I see a display ad for a new fuel efficient Toyota, I might think "gee, maybe it's time to buy a new car". The display ad has stimulated some latent demand. When I go to Google and search for "toyota" I am now trying to satisfy that demand.

It is definitely hard to measure the impact of brand advertising since there is often considerable lag between exposure and purchase (at least for big ticket items like cars). But there are enough cases that indicate that at least some brand advertising is very effective. Paul Todd, Peter Kellis, Diane Lambert and others are working on ways to measure impact of brand advertising, but a big part of it is looking at how the brand exposure impacts search behavior.

Here's one of my columns on advertising impact in a market where it is relatively easy to measure conversions:
<http://people.ischool.berkeley.edu/~hal/people/hal/NYTimes/2006-06-01.html>
(However, I don't know how effective this particular sort of ad would be online.)

On Wed, Apr 2, 2008 at 5:10 PM, Hal Varian <@google.com> wrote:
One way to think about the difference between search and display/brand advertising is to say that "search ads help satisfy demand" while "brand advertising helps to create demand."

When I see a display ad for a new fuel efficient Toyota, I might think "gee, maybe it's time to buy a new car". The display ad has stimulated some latent demand. When I go to Google and search for "toyota" I am now trying to satisfy that demand.



Source: Internal Google email chain (Apr. 2, 2008)
(UPX0411, at -638)

Industry Recognizes Search Ads as Distinct from Other Ad Channels

Booking.com

Source: Booking.com document, "Booking.com Answers to Questionnaire for Advertisers by the European Commission" (Feb. 1, 2021) (UPX0435, at -058)

Confidential version
1 February 2021

Booking.com ANSWERS to QUESTIONNAIRE FOR ADVERTISERS
by the European Commission:
AT.40660 - Google Adtech, AT.40670 – Google Data-related practices
Deadline: 18/01/2021 extended to 1/02/2021

Contact details and information on your undertaking

In order to facilitate possible further enquiries, please indicate the person responsible for the replies to this questionnaire

Company:	Booking.com		
Contact person:	Anne-Claire Hoyng	Phone:	
Position:	Director, Global Competition and Consumer Law	Fax:	
e-mail:	@booking.com		
Address:	Rembrandtplein, 1017 CT Amsterdam	Country:	Netherlands
Company web-site:	www.booking.com		

Questions + Answers

DEFINITIONS

For the purpose of this questionnaire, the following definitions shall apply:

Ad format: specifies the way in which advertising content is displayed, rotated, non-video ad (such as a text, image, banner or overlay) or a video ad.

Ad inventory: the amount of space on a website, application or online platform displayed.

Ad servers: intermediaries in the online advertising value chain, which dynamically advertising campaigns across available digital platforms, by determining in real time when, where and when, then serving the ads, and measuring their performance. They act for advertisers as well as publishers.

European Economic Area ("EEA"): refers to Member States of the European Union and the European Economic Area, as amended over the period of the requested. EEA comprises the EU Member States together with Iceland, Liechtenstein and Norway.

Demand-Side Platform ("DSP"): demand-side platforms are intermediary technology to automatize the purchase of online ad inventory on behalf of advertisers or media agencies to buy advertising inventory from many sources.

Header Bidding: programmatic advertising technique that allows multiple DSPs to bid for ad inventory at the same time. In client-side header bidding, the auction is run on the advertiser's website.

¹ The United Kingdom withdrew from the European Union as of 1 February 2020. Union Law – with certain limited exceptions which are irrelevant for this questionnaire – will continue to be applicable to and in the United Kingdom and any reference to Member States in this questionnaire including the United Kingdom. Therefore, the United Kingdom is not a Member State of the EEA.

(b) whether you consider online search advertising and online display advertising as substitutes³ for each other or complements and for what reasons;

Confidential Reply:

We consider these as complementary rather than substitutes.

Search and Display Ads are not seen as substitutable to one another by Booking.com because they target users in very different situations/environments, providing a variety of contexts for influencing potential customers.

Search Ads are targeting users who are often in a high intent situation, who are actively seeking out an answer to a specific problem or need.

Display Ads are targeting users (audiences) who are, more often than not, doing something very different to the adverts they are being shown - therefore, a lower intent environment and exhibit lower engagement.

As a result of the different contexts the user engagement and resulting performance is very different between Search & Display advertising - further underlining why **they are not substitutable**. Both ad formats have their place in a balanced advertising portfolio, as they help to influence potential customers throughout their decision making journey and at various touchpoints.

Industry Recognizes Search Ads as Distinct from Other Ad Channels



*Testimony of Joshua Lowcock,
Global Chief Media Officer, Universal McCann
(part of Interpublic Group)*

Display advertising is primarily to drive awareness, what we would call brand advertising. Search advertising is lower funnel, primarily intended to capture intent.

I would not consider them substitutable.

Source: Trial Transcript, Oct. 3, 2023,
3824:20-3825:03, 3826:11-3826:18,
(emphasis added)

I would go so far as **search would be mandatory** in any advertising campaign.

Realities of ROI/ROAS

So you want to work on the

An introductory guide for Research collaborators and Thres

@

NB: All of the content and documents linked in this document are confidential. Please do not share any of this material with external parties. Auction and Prediction Stack SWEs/PMS without c

Introduction

Background

[Value Reserve Pricing](#)

[Format Pricing](#)

[Squeezing](#)

[Whole Page Auction](#)

[MIA](#)

[Quality Based Pre-Auction Disabling](#)

[Quality Tuning and Ads Blindness](#)

[How advertisers really use our product](#)

[Advertiser Response](#)

[The Budget Effect](#)

[Problems we are thinking about these days](#)

[Requirements for Auction design](#)

Introduction

The Thresholds team develops and maintains the Search Ad Auction. Our main concern is text ads on Google.com, but the auction also decides whether or not to show PLAs in the top slot based on expected revenue and utility. A version of our auction is also running on some Google owned and operated search properties (e.g. Play Store Search, YouTube viral) and AFS, but there are teams which manage a tweaked version of our auction for those properties.

The auction determines the following three key aspects for text ads on Google.com:

- Allocation: Whether ads get to show or not for the query, and what kind of UI (e.g. extensions) we show along with the ad
- Ranking: The order of ads on the page.
- Pricing: The price that advertisers have to pay for the ad (currently, always a cost per click, or CPC)

Advertisers do care about the incrementality of their advertising spend, but it is difficult to measure. For example, a common method is to turn off advertising in certain regions and observe sales differences between regions. There are no good tools to measure online incrementality for mid-size and below companies, but large companies can partner with Google to run special randomized studies. There is also a push towards building models to attribute the incremental value of spend and set bids and budgets based on this, but these models are extremely simplistic and often overly rely on correlation or strong modeling assumptions.



Source: Google document,
"So you want to work on the Auction" (Aug. 31, 2017)
(UPX0430, at -586)

Interpreting Shifts in Ad Spend: Conceptual Takeaways

1

Attempting to measure or use ROI/ROAS of different ad channels does not mean ad channels are interchangeable

2

Even moving spend across ad channels does not necessarily mean ad channels are interchangeable

Using ROI/ROAS Does Not Mean Ad Channels Are Interchangeable

Redacted

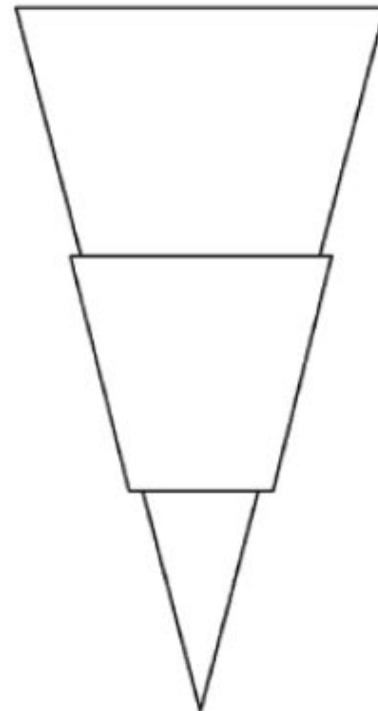
Redacted

Source: Apparel Company

Redacted

(May 28, 2020)
(UPX1017, at -395)

SEM/Shopping
Funnel



Channel	ROAS Target (Last Click)
Discovery/GDN	80%
Yahoo/Native	80%
Display/GDN	100%
Gmail Ads	120%
Non-Brand Search	70%
Brand Search	High ROAS - capture available demand
Shopping	200%
Overall	225%

"Focus less on % going to mid funnel channels and more on the mid funnel channel mix / how it impacts the entire business. . . . Give mid funnel channels room to operate at a lower ROAS knowing they drive quality new customers who convert through other channels (brand search, direct, organic, email)[.]"

Using ROI/ROAS Does Not Mean Ad Channels Are Interchangeable



Source: Trial Transcript, Oct. 3, 2023,
3980:04-3981:02 (emphasis added)



*Testimony of Joshua Lowcock,
Global Chief Media Officer, Universal McCann
(part of Interpublic Group)*

[T]he ability to substitute or shift spend between channels really depends on what you're trying to drive in the funnel. . . . So **you wouldn't necessarily move out of a channel that -- that might individually look like it's not performing** because you know it actually contributes to driving media performance everywhere.

Opinions

- 1 General Search Text Ads are a distinct product category
- 2 Search Ads more broadly are a distinct product category
- 3 Effectively providing Text Ads and other Search Ads requires significant resources, and advertisers have few alternatives apart from Google
- 4 Google harms advertisers through its withholding of information and control of the ad auction

Advertisers Perceive Limited Alternatives to Google

Booking.com

Confidential version
1 February 2021

Booking.com ANSWERS TO QUESTIONNAIRE FOR ADVERTISERS
by the European Commission:
AT.40660 - Google Adtech, AT.40670 - Google Data-related practices
Deadline: 18/01/2021 extended to 1/02/2021

Contact details and information on your undertaking

In order to facilitate possible further enquiries, please indicate the person responsible for the replies to this questionnaire

Company:	Booking.com	
Contact person:	Anne-Claire Hoyng	Phone:
Position:	Director, Global Competition and Consumer Law	Fax:
e-mail:	@booking.com	
Address:	Rembrandtplein, 1017 CT Amsterdam	Country: Netherlands
Company web-site:	www.booking.com	

Questions + Answers

DEFINITIONS

For the purpose of this questionnaire, the following definitions shall apply:

Ad format: specifies the way in which advertising content is displayed, notably whether the ad is a non-video ad (such as a text, image, banner or overlay) or a video ad.

Ad inventory: the amount of space on a website, application or online platform where ads can be displayed.

Ad servers: intermediaries in the online advertising value chain, which dynamically manage online advertising campaigns across available digital platforms, by determining in real time which ads should be placed and when, then serving the ads, and measuring their performance. Specific ad servers exist for advertisers as well as publishers.

European Economic Area ("EEA"): refers to Member States of the European Union, the United Kingdom¹ and the European Economic Area, as amended over the period of time for which data is requested. EEA comprises the EU Member States together with Iceland, Liechtenstein and Norway.

Demand-Side Platform ("DSP"): demand-side platforms are intermediaries which provide the technology to automatize the purchase of online ad inventory on behalf of advertisers. They allow advertisers or media agencies to buy advertising inventory from many sources.

Header Bidding: programmatic advertising technique that allows multiple DSPs to bid for the same inventory at the same time. In client-side header bidding, the auction is run by the user's browser

¹ The United Kingdom withdrew from the European Union as of 1 February 2020. During the transition period, Union Law – with certain limited exceptions which are irrelevant for this questionnaire – continues to be applicable to and in the United Kingdom and any reference to Member States in the Union law shall be understood as including the United Kingdom. Therefore, the United Kingdom is included in the scope of this questionnaire.

We feel there are a variety of platforms where we need to be present as this is where a lot of people are spending their time on. Google has by far the richest audiences and has the vast lion share of Search and Video [YouTube]. We deem it therefore essential to be present on Google Search and YouTube when running any type of campaigns. If we would not be able to advertise on these platforms, we would lack a Redacted alternative to reach the same number of users. This would likely lead to a Redacted reduction in bookings, and consequently a Redacted in turnover of our company.

Source: Booking.com document, "Booking.com Answers to Questionnaire for Advertisers by the European Commission" (Feb. 1, 2021) (UPX0435, at -062)

Advertisers Perceive Limited Alternatives to Google



Apple Search Marketing/Q&A
SEM, SEO & Google

19 January 2017
Prepared by AOS Demand Generation Team



Apple Confidential - Internal Use Only

Do we need to spend **Redacted** on Google?

-Google's dominance allows them to retain 90%+ market share in AMR, EMEA & RPAC.

Redacted

Redacted

Source: Apple document, "Apple Search Marketing/Q&A, SEM, SEO & Google" (Jan. 19, 2017)
(UPX1131, at -370-71)

Advertisers Perceive Limited Alternatives to Google



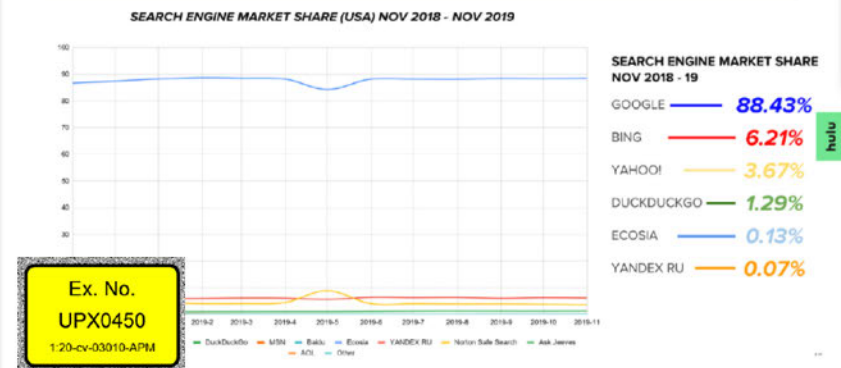
*Testimony of Joshua Lowcock,
Global Chief Media Officer, Universal McCann
(part of Interpublic Group)*

The primary purpose of advertising is to reach audiences and to reach people at scale like -- and "scale" means large audience sizes. And so **the more scale a search engine has the more important it is to buy advertising on that platform.**



Source: Trial Transcript, Oct. 3, 2023,
3831:09-3831:19, 3834:08-3834:11,
3834:22-3835:01 (emphasis added)

WHY DOES SEARCH BEHAVIOR DIFFER?
MARKET SHARE FOR SEARCH ENGINES IN THE USA... IT ISN'T EVEN CLOSE



The purpose of [the graph in UPX450, page 17] is to indicate why **we always buy Google Search ads.**

[B]ased on market share, there's a **limit** to the amount of keywords we could buy on Bing.

Opinions

- 1 General Search Text Ads are a distinct product category
- 2 Search Ads more broadly are a distinct product category
- 3 Effectively providing Text Ads and other Search Ads requires significant resources, and advertisers have few alternatives apart from Google
- 4 Google harms advertisers through its withholding of information and control of the ad auction

Google Harms Advertisers Through Its Withholding of Information and Control of the Ad Auction

Examples

1. Google restricts what advertisers can know about their own ad spend through Search Query Reports
2. Google controls the rules and influences the outcomes of its Text Ad and Search Ad auctions, which are a “Black Box” to advertisers

Significance

- ▶ Each example impedes advertisers’ ability to assess their ad spend and manage their costs
- ▶ Each example can result in higher prices to advertisers
- ▶ Advertisers have limited alternatives to Google

Google Restricts What Advertisers Can Know About Their Own Ad Spend



Google Ads Help

About the search terms report

Use the search terms report to know how your ads performed when triggered by actual searches within the [Search Network](#). This article describes the search terms report and how to use it.

How it works

The search terms report is a list of search terms that a significant number of people have used, and that resulted in your ad being shown. Depending on your keyword matching options, the search terms listed might be different from your keyword list.

Source: Google Ads Help, <https://support.google.com/google-ads/answer/2472708?hl=en>

Google Recognizes Impact of Its Restrictions on Advertisers

Redacted

Customer relations: Data loss from SQR will be substantial if 1-click clause is removed

Analysis of 3 months of data:

50% of all segments will see less than 16% of rows dropped

50% of all segments will see less than 33% of spend obfuscated

Overall ~86% of rows will be preserved

Potential mitigation: Provide more transparency by clustering queries (e.g. Contra concepts) (1 Contra eng FTE + BP FE/UX resources)

Customer relations: Some LCS advertisers may be resistant to this change, esp. during COVID + b/c of other changes that can reduce control and transparency

Data sharing dynamics and reduced control: Negative optics of Google expecting advertisers to share more data (e.g. conversion values) and moving towards more "black box" automation, while removing controls previously in place (e.g. changing match type behavior)

Performance and optimization

- Impact on internal tools or systems that rely on SQR, especially if not given advanced notice
- Inability to source negative keywords (more relevant to manual bidders)
- Risk that advertisers shift to SKAG and/or increased Exact match usage (+ more complex accounts) in attempt to increase control and data availability



Source: Excerpts of Slides from Google presentation,

Redacted

(UPX0526, at -545, -549)

Industry Perspective: Impact of Google's Restrictions

From: Paskalis, Louis
Sent: Thursday, October 29, 2020 12:04 PM
To: Stephen Arthur <@google.com>
Subject: FW: Google Limiting SQRs

WOW!

From: Martin, Kenny
Sent: Thursday, October 29, 2020 11:55 AM
To: Paskalis, Louis <@bofa.com>
Subject: RE: Google Limiting SQRs

Well the article just gives the context. We learned about it from GC, I believe, who discovered it in our accounts. So I'm pretty sure Google did not notify them or us.



Kenny Martin
SVP, Digital Marketing / Search CoE lead
Redacted
Redacted @bofa.com



From: Paskalis, Louis
Sent: Thursday, October 29, 2020 10:36 AM
To: Martin, Kenny <@bofa.com>
Subject: RE: Google Limiting SQRs

Are you telling me that our team learned about this from a 45 day old article and not directly from Google?

From: Martin, Kenny
Sent: Thursday, October 29, 2020 11:31 AM
To: Paskalis, Louis <@bofa.com>
Subject: FW: Google Limiting SQRs

See below - one of the more egregious examples of Google removing transparency from advertisers under the banner of 'privacy', IMO. Search Query Report data has always inherently anonymized and aggregated.

Subject: Google Limiting SQRs

Found this article regarding Google limiting SQRs after we spoke yesterday ...

<https://searchengineland.com/google-ads-to-limit-search-terms-reporting-citing-privacy-340137>

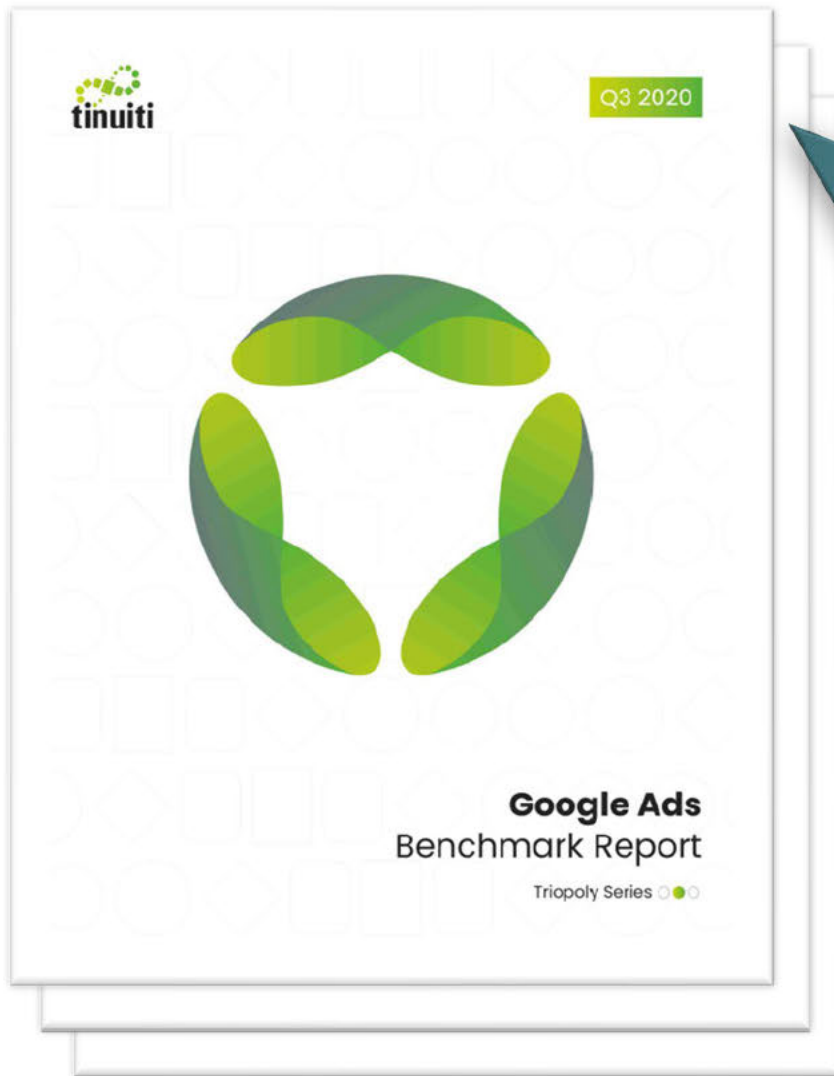
Incredibly disappointing when we know user privacy is already protected in legacy reports & this will inhibit advertisers from being able to weed out clicks and mismatched intent.

See below - one of the more egregious examples of Google removing transparency from advertisers under the banner of 'privacy', IMO. Search Query Report data has always inherently anonymized and aggregated.

BANK OF AMERICA 

Source: Internal Bank of America email,
subject line "Google Limiting SQRs" (Oct. 29, 2020)
(UPX0983, at -162-163)

Industry Perspective: Impact of Google's Restrictions



The Fallout from Google's September Search Terms Update

Taking a look across dozens of long-standing Tinuiti advertisers spending millions on Google search ads per month, there was **a significant drop** in the share of spend attributed to search queries across ad formats and device types from August to September.

This is a **massive decrease in query visibility**, making it more difficult for paid search marketers to effectively identify poor-matching queries to weed out via keyword negatives. It also makes it more difficult to identify new query variations driving traffic which might be performing well and should be launched as new keywords.

Source: Tinuiti presentation,
"Google Ads Benchmark Report" (Q3 2020)
(UPX0987, at -124-126)

Industry Perspective: Impact of Google's Restrictions

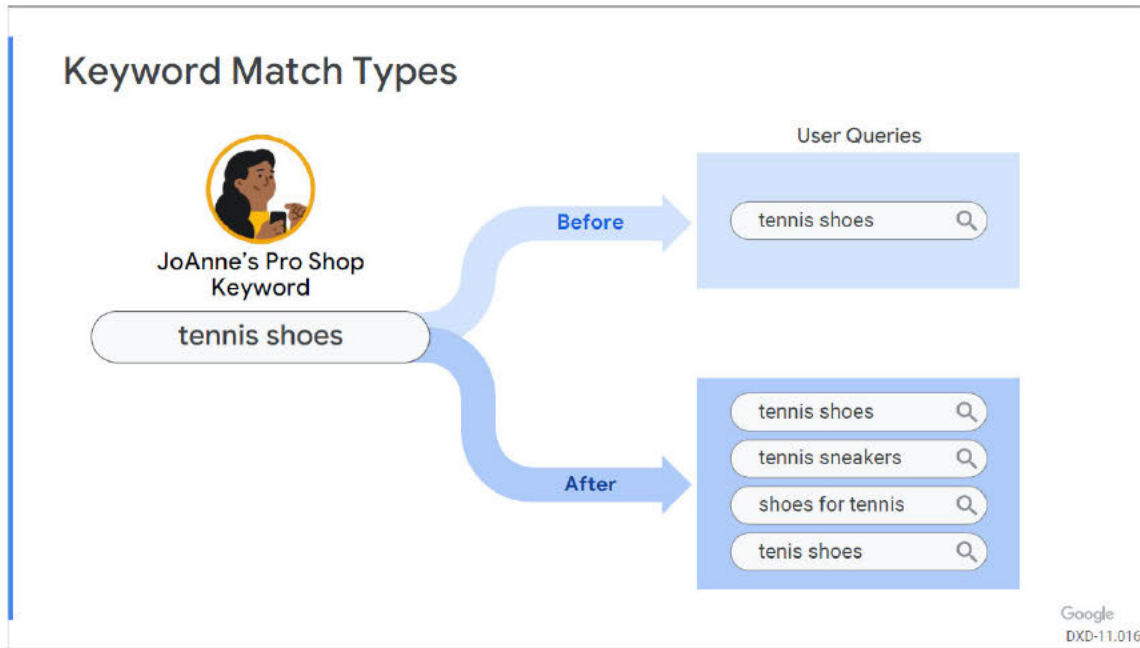
Redacted

Redacted

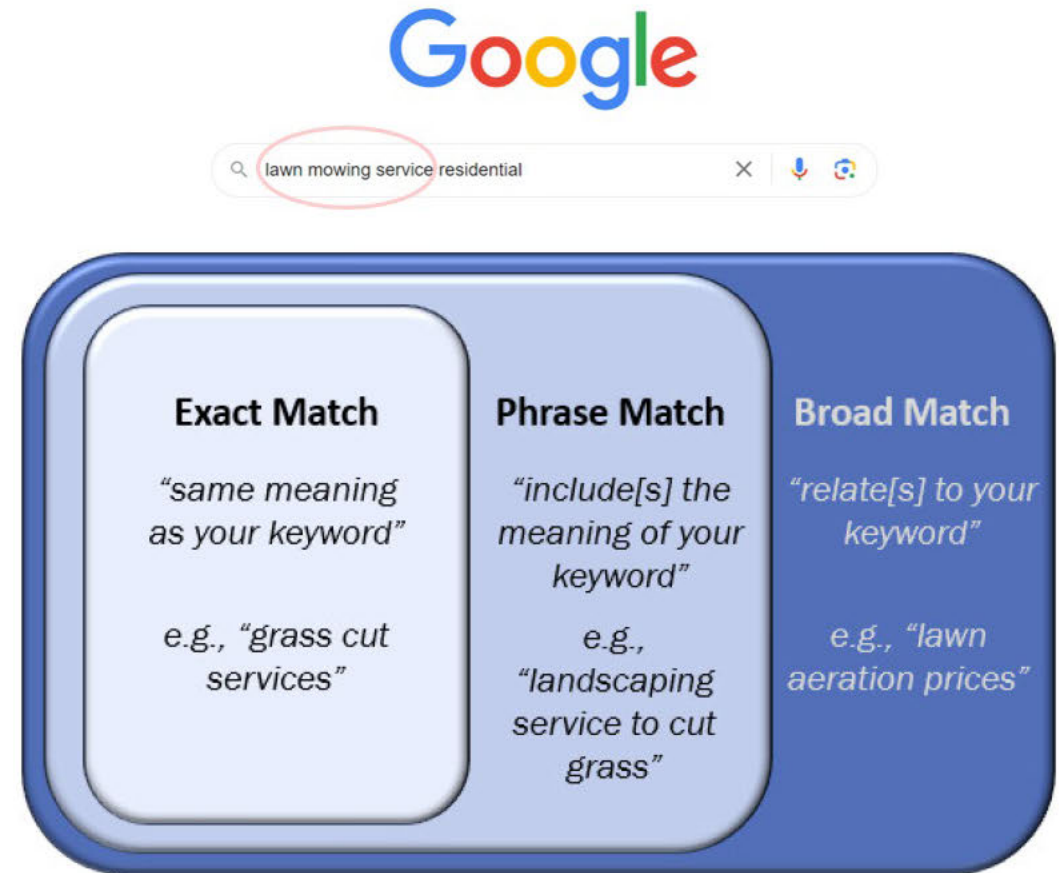
Redacted

Source: Internal [Redacted] document,
[Redacted] (Apr. 1, 2021)
(UPX0511, at -611)

Comparing Dr. Juda's Demonstrative to Google's Match Types



Source: DXD-11.016



Source: Based on Google Ads Help, "About keyword matching options" (UPX8023, at -.001)

Generalized Second-Price (GSP) Auction

Ad	Bid
Ad A	\$0.9
Ad B	\$1.2
Ad C	\$0.8
Ad D	\$0.6

Reserve price = \$0.25

Pos1	Ad B	\$1.2	Price = \$0.91	Ads
Pos2	Ad A	\$0.9	Price = \$0.81	
Pos3	Ad C	\$0.8	Price = \$0.61	
Pos4	Ad D	\$0.6	Price = \$0.26	

Organic Results

Source: Prof. Jerath Teaching Slides

Google's Ad Rank and Quality Score Metrics are a "Black Box"

Ad Rank
*(Long-Term Value to Google,
on ad basis)*

*Google does not tell
advertisers--*

- ▶ *How Ad Rank is
actually calculated*
- ▶ *The actual Ad Rank
for any of their ads*

Quality Score
(1-10, on keyword basis)

- ▶ *Aggregation of
already aggregated
components*
- ▶ *Not actually used
in any individual
auction*

**pCTR, Ad Relevance,
Landing Page Quality**
*(Below Average, Average,
Above Average)*

- ▶ *Coarse*
- ▶ *Based only on exact
matched queries*
- ▶ *Aggregated over
extended period*

Google Influences the Outcomes of Its “Black Box” Auctions

Pricing Knob: rGSP

Google artificially inflates Ad Rank of Runner-Up

*e.g., Winner’s Ad Rank is 32;
Runner-Up’s Ad Rank was
originally 20; Google inflates
Runner-Up’s rank to be above 20*

Winning Ad may lose

*Depending on difference in
Ad Ranks of the Winner and
Runner-Up, Google may switch
their ad positions, e.g.:
Runner-Up ad in 1st position
and Winning Ad in 2nd position*

Winning Ad’s price increases

- ▶ *When Winning Ad is not swapped,
inflated Ad Rank of Runner-Up ad
results in higher price of Winning Ad*
- ▶ *Winning ad’s price*
 - *is not based on Runner-Up ad’s
actual bid or Ad Rank*
 - *is now set at amount needed to
equal inflated Ad Rank*

Cumulative Effects of Google's Control

Redacted

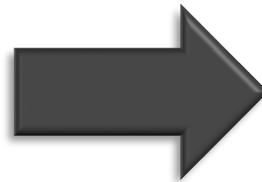
Redacted

Redacted

Source: Internal [Redacted] document,
[Redacted] (Apr. 1, 2021)
(UPX0511, at -619)

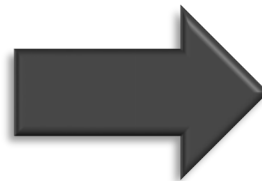
Effects of Google's "Black Box" Auctions and Reporting Restrictions

Google Restricts What Advertisers Can Know About Their Own Ad Spend
(e.g., removing data previously provided in SQRs)



*Thicker Auctions/
Higher Ad Prices*
Unwanted Ad Spend

Google controls the rules and influences the outcomes of its "Black Box" auctions
(e.g., how Ad Rank calculated; pricing knob of rGSP)



Higher Ad Prices

