United States, et al. v. Google LLC



































United States, et al. v. Google LLC











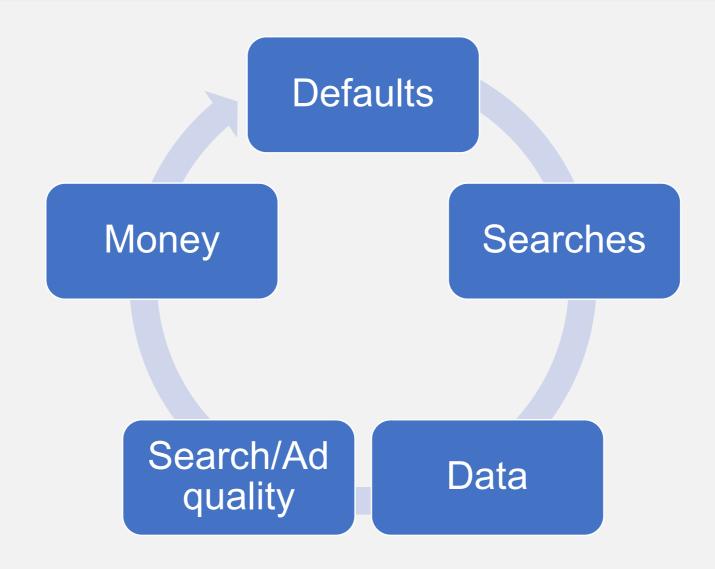
United States, et al. v. Google LLC







United States, et al. v. Google LLC





Roadmap

- 1 General Search Industry Overview
- 2 General Search Mechanics
- 3 Search Distribution
- 4 Google's Search Distribution Contracts
- 5 Search Advertising Industry Overview

Case 1:20-cv-03010-APM Document 94 Filed 01/15/21 Page 1 of 65 IN THE UNITED STATES DISTRICT COURT Washington DC 20530 Case No. 1:20-cv-03010 HON, AMIT P. MEHTA Little Rock, AR 72201 STATE OF CALIFORNIA 455 Golden Gate Avenue San Francisco, CA 94102 1 Page 3 of 65 STATE OF FLORIDA PL-01. The Capitol nder Section 2 of the STATE OF GEORGIA 40 Capitol Square SW Atlanta, GA 30334 nlawfully maintaining ing, and general search text STATE OF INDIANA 302 West Washington Stree IGCS - 5th Floor nary practices, and to Indianapolis, IN 46204 COMMONWEALTH OF KENTUCKY on Valley as a scrappy oogle is long gone. The STATE OF MICHIGAN ceeding \$160 billion. For P.O. Box 30736 Lansing, MI 48909 xtend its monopolies in the STATE OF MISSISSIPPI arch text advertising—the P.O. Box 220 Jackson, MS 39205 oust find an effective path distributed primarily on laptops). These devices contain web browsers (software applications for accessing information on the internet) and other "search access points" that call on a general search engine to respond to a user's query. Over the last ten years, internet searches on mobile devices have grown rapidly, eclipsing searches on computers and making mobile devices the most important avenue for search distribution in the 3. For a general search engine, by far the most effective means of distribution is to be the preset default general search engine for mobile and computer search access points. Even where users can change the default, they rarely do. This leaves the preset default general search

United States, et al. v. Google LLC

I. NATURE OF THIS ACTION

1. Two decades ago, Google became the darling of Silicon Valley as a scrappy startup with an innovative way to search the emerging internet. That Google is long gone. The Google of today is a monopoly gatekeeper for the internet, and one of the wealthiest companies on the planet, with a market value of \$1 trillion and annual revenue exceeding \$160 billion. For many years, Google has used anticompetitive tactics to maintain and extend its monopolies in the markets for general search services, search advertising, and general search text advertising—the cornerstones of its empire.

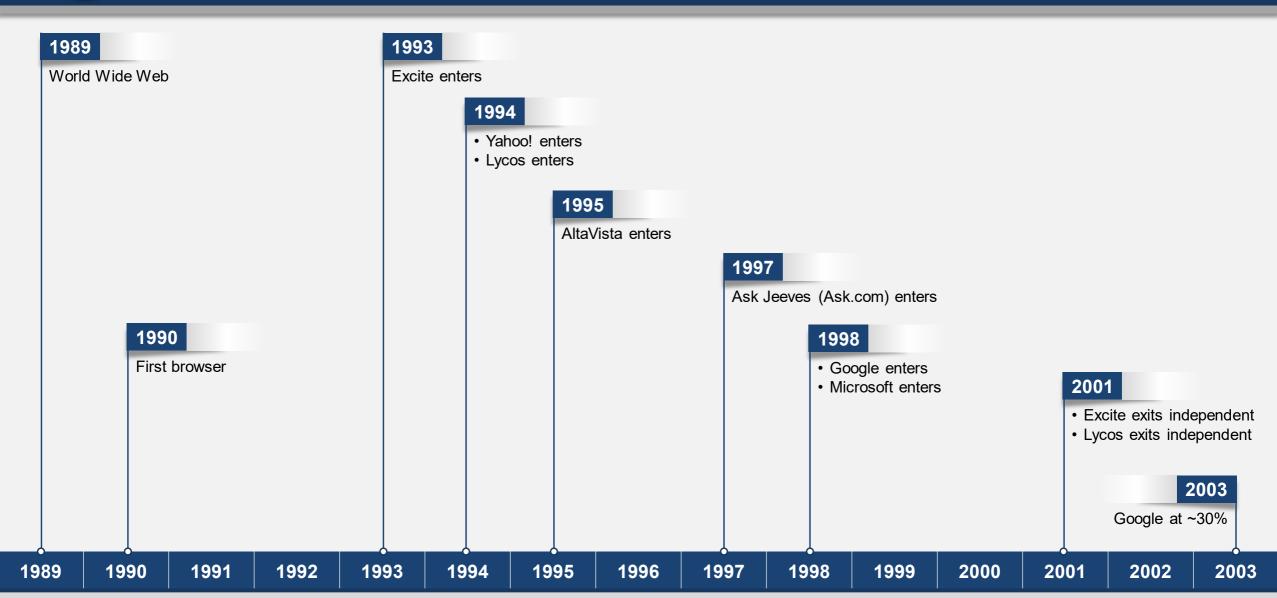


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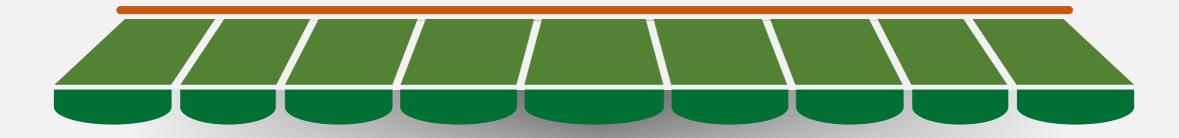
Search Timeline



What is general search?



One-Stop Shopping



Capable of answering all types of queries

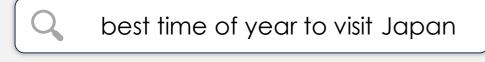
Reduces mental costs and time

Answers from a broad variety of sources

Habit formation

Easy to access on mobile devices and browsers





Sumo wrestling tickets

Q best hotels in japan

Q direct flight to Japan from Dulles

Q best suitcase for Japan travel

Q Visiting Japan

things to do in Ryokan

Cell phones in Japan

Q Japan rail pass v. daily tickets

Q learning basic Japanese

Group backpack trip in japan

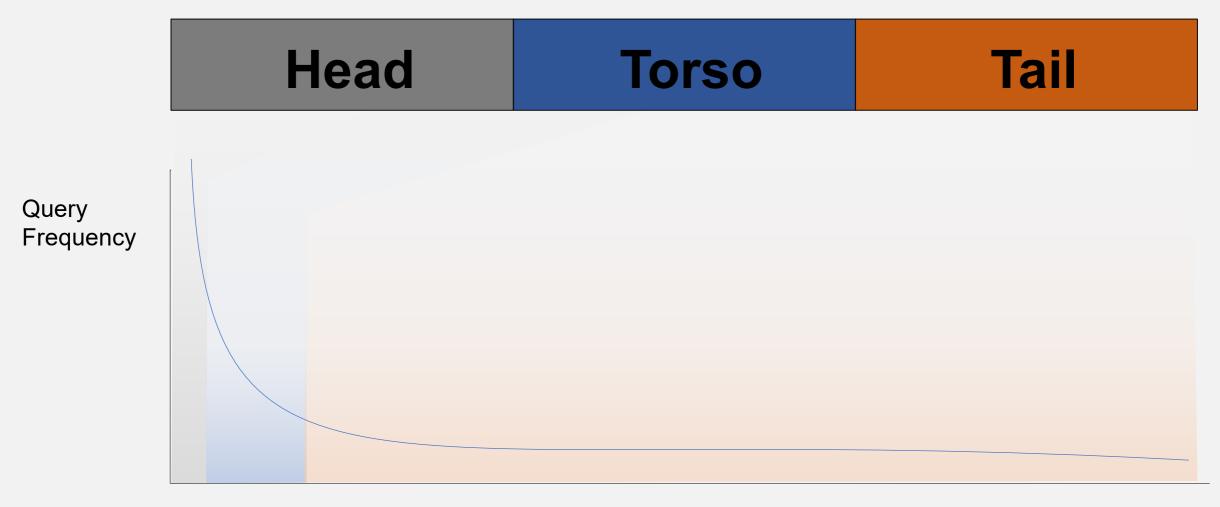




VISITING JAPAN







Query Distinctness



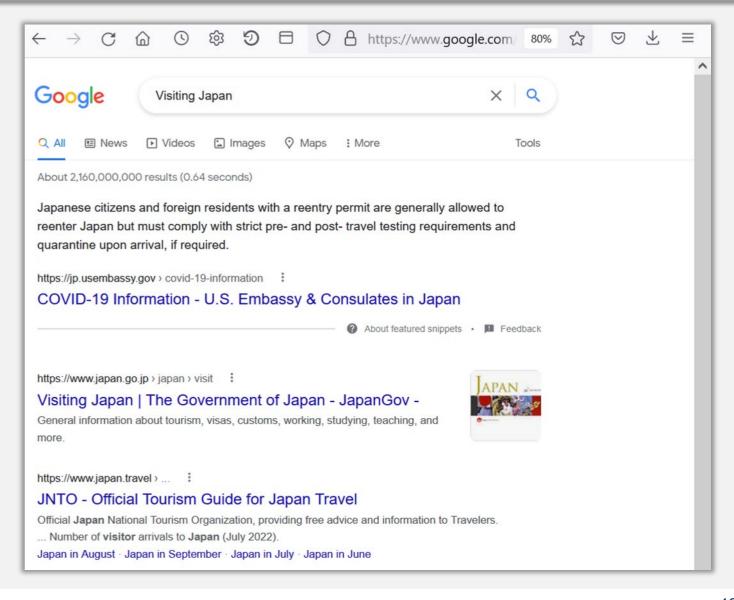
Queries				
Head	"United Airlines"			
Torso	"Train Schedule From Tokyo to Kyoto"			
Tail	"Ramen restaurant in Hakone japan with red awning"			





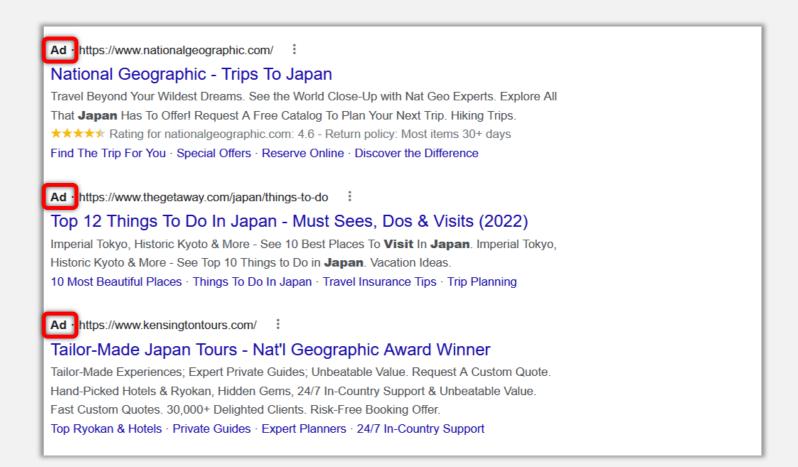


SERP Organic results





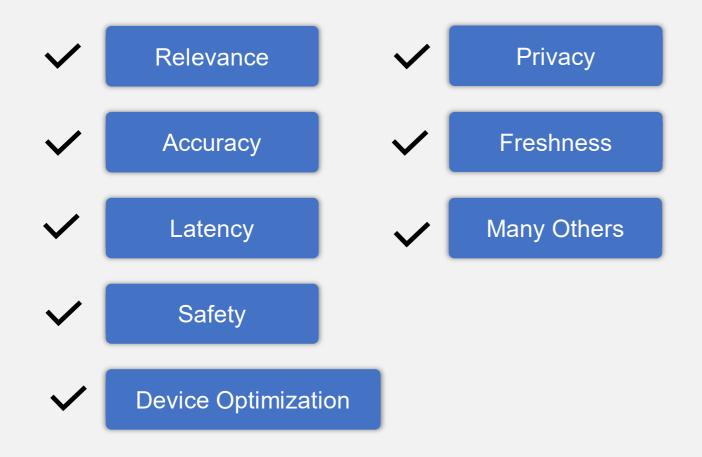
SERP Advertising



What are dimensions of quality in general search?



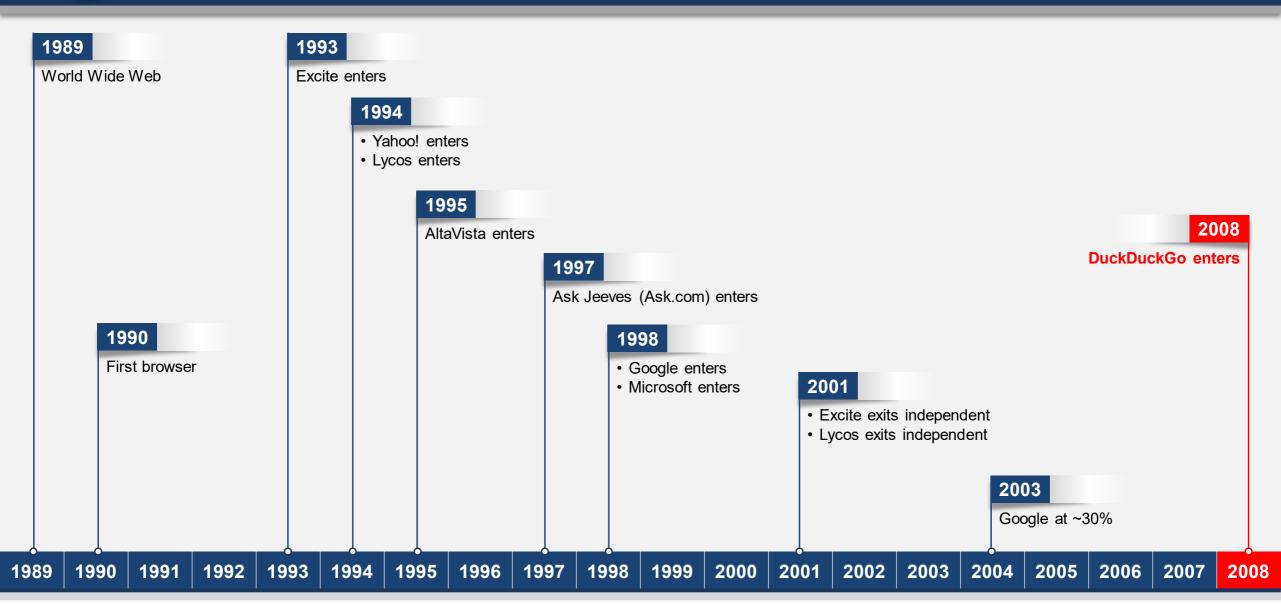
Search Quality







Search Timeline



Who provides general search in the US?



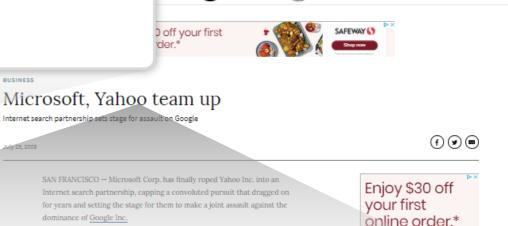
General Search Providers

Independent vs. Syndicated



General Search Providers

Microsoft, Yahoo Team Up to Ding Google With Bing



Space Needle

onors anniversary

seattle

Scientists say PNV

wildfires are



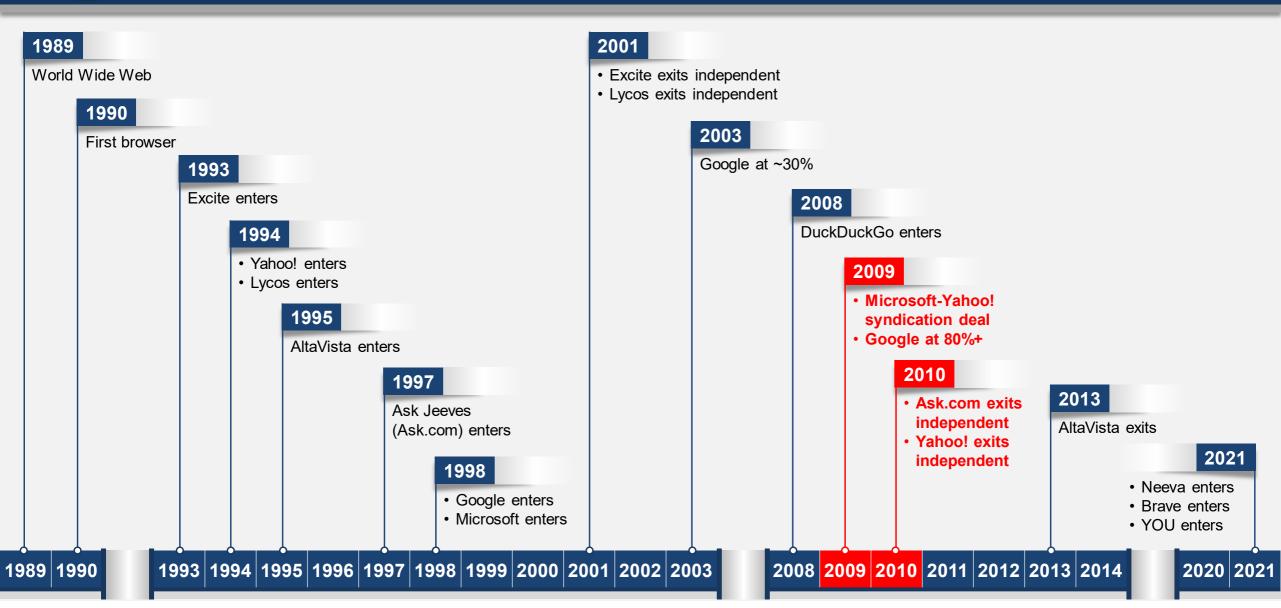
Microsoft, Yahoo team up

Internet search partnership sets stage for assault on Google

Q

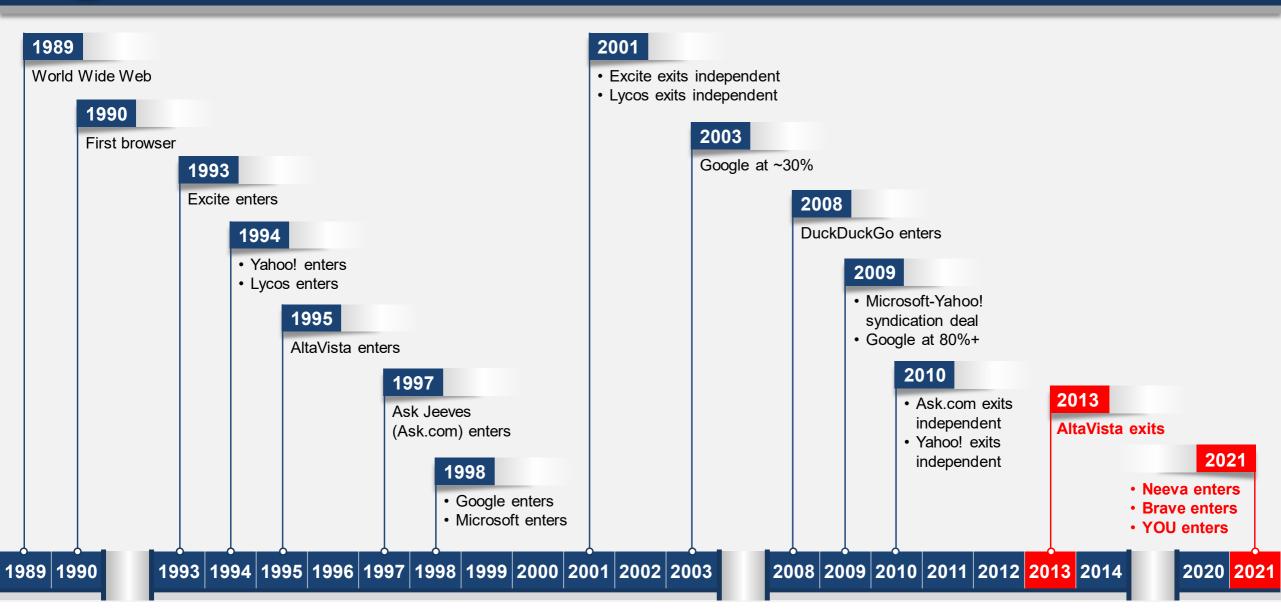


Search Timeline





Search Timeline





General Search Providers

Independent General **Search Services**







Syndicated General **Search Services**















General Search Providers



[REDACTED]

What is *not* a general search engine?



Specialized Search Services & Other Websites



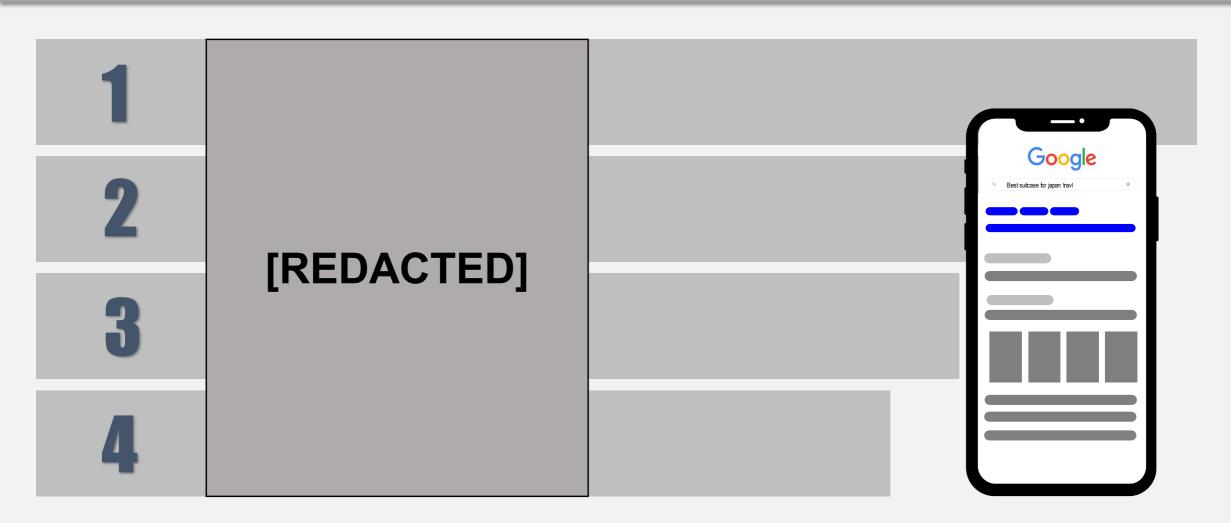












Note: Google data includes advertisers from Google's O&O properties.



Specialized Search Services & Other Websites











Voice Assistants











Specialized Search Services & Other Websites











Voice Assistants



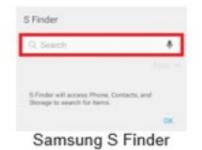






Device Search







Product	AMZN	AAPL	GOOG	FB	MSFT
operating systems	√	✓	✓		√
browsers		\checkmark	✓		√
productivity tools		✓	\checkmark		✓
email and messaging		\checkmark	\checkmark	\checkmark	√
ebooks	✓	\checkmark	\checkmark		
smartphones and devices	✓	✓	\checkmark		 ✓
video and music distribution	\checkmark	\checkmark	\checkmark		
streaming video	\checkmark		\checkmark	✓	
video conferencing		\checkmark	\checkmark	\checkmark	 ✓
home delivery services	✓		\checkmark		
general purpose search engines			√		\checkmark
special purpose search engines	√	✓	✓		√
digital assistants	✓	✓	\checkmark	✓	 ✓
social networks			\checkmark	✓	
advertising platforms	\checkmark		\checkmark	✓	 ✓
maps		\checkmark	\checkmark		 ✓
cloud services	✓		✓		✓

Table 1: Competition among internet companies

Is general search free?



It's free, but . . .



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What data does Google collect on the search side?



General Search



About 73,900,000 results (0.47 seconds)

All travelers permitted to travel to Japan, regardless of age, **must receive a negative**COVID-19 test within 72 hours of departure of the international leg of their trip.

Domestic travel prior to the international flight is NOT counted within the 72 hours. 4 days ago

https://jp.usembassy.gov > covid-19-information

COVID-19 Information - U.S. Embassy & Consulates in Japan

About featured snippets • III Feedback

https://www.japan.travel > government-measures

Coronavirus (COVID-19) Travel Restrictions - Japan- Travel

1.1.529), validity of visas already issued by December 2, 2021 is suspended except for the status of residence of "Spouse or Child of a **Japanese** National ...

Europe: Bosnia and Herzegovina, Bulgaria, Ky... Africa: Algeria, Angola, Cameroon, Central ...

https://www.mofa.go.jp > fna

Border measures to prevent the spread of novel coronavirus ...

Border measures to prevent the spread of novel **coronavirus** (**COVID**-19). August 26, 2022. **Japanese** ... **Restrictions** on airport/ports for arrival; 7.



General Search



Covid restriction Japan





- Queries
- Clicks (including duration)
- Hovers
- Scrolls
- Attention

Language

Location

In-session search history

Much more . . .

How does general search work?



General Search

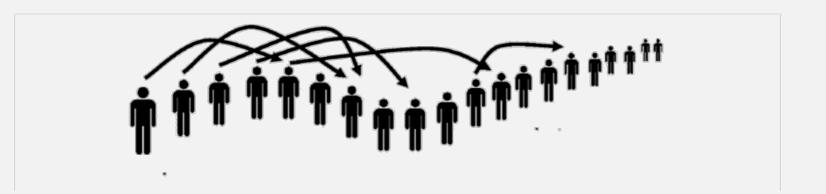
"Every year, there are trillions of searches on Google . . ."

Source: Alphabet, Inc. 2021 10-K at 4.

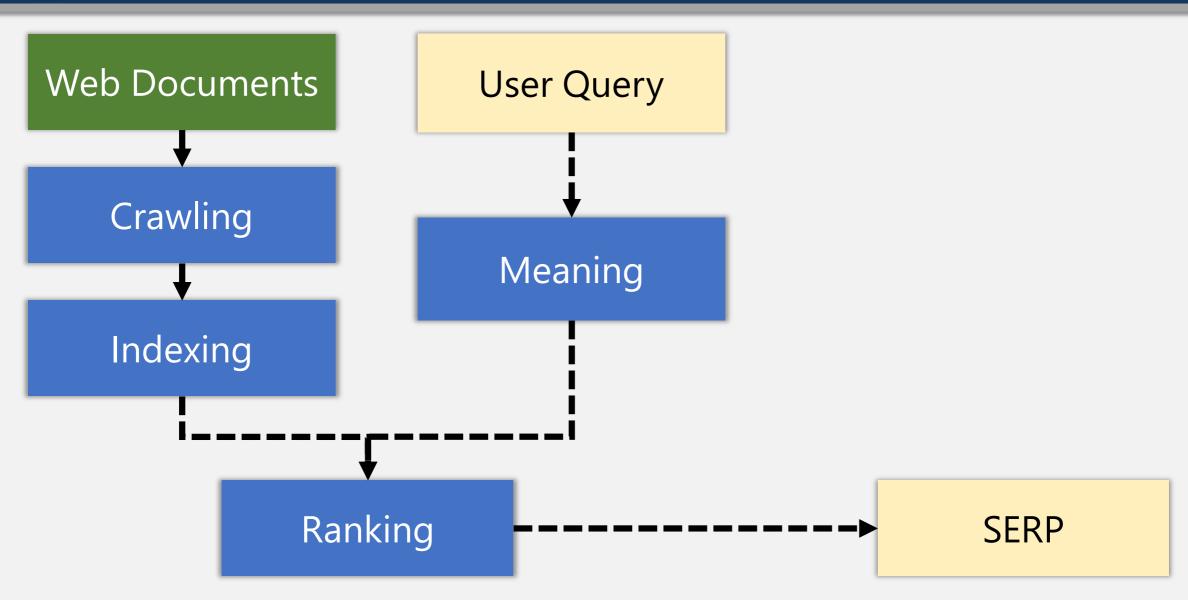


How Does It Work?

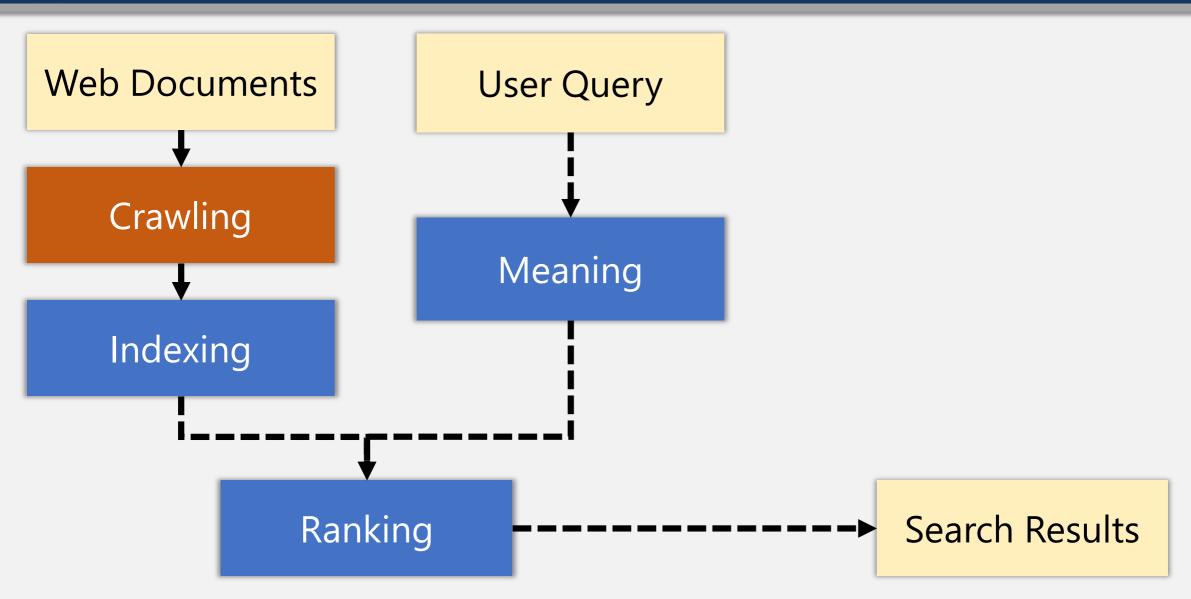
"In effect, Google is a mechanism for transferring knowledge from each user to those who follow."





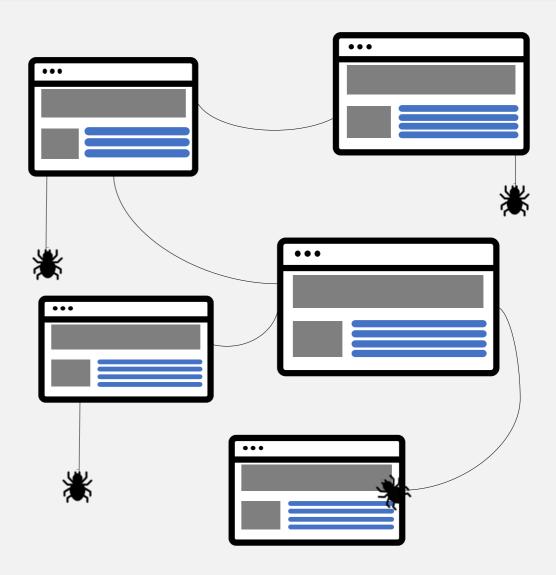




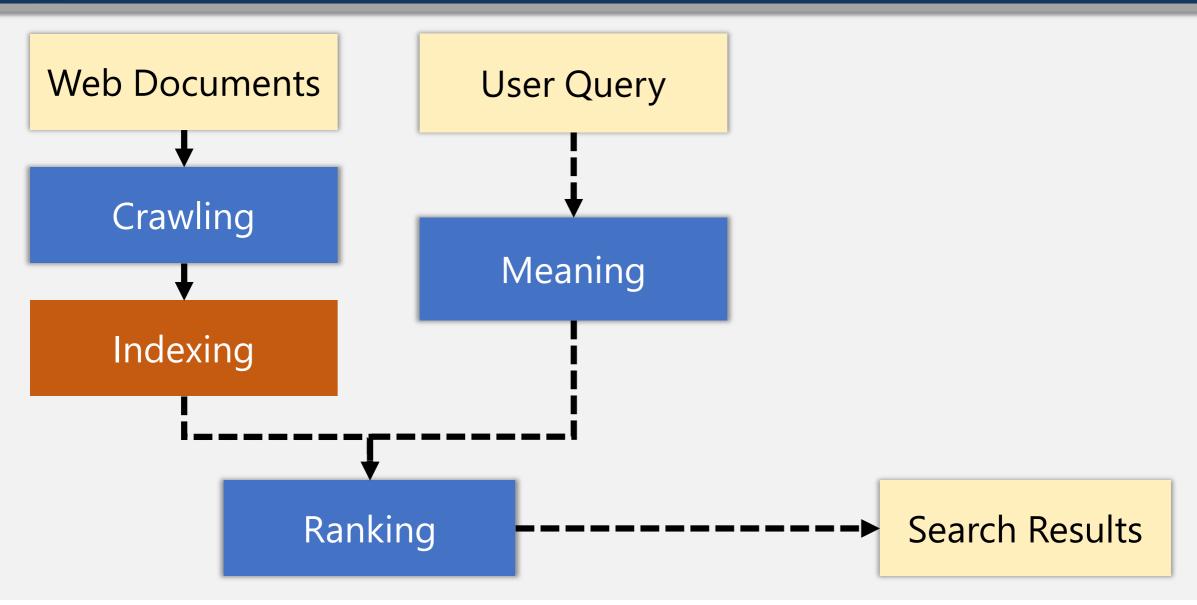




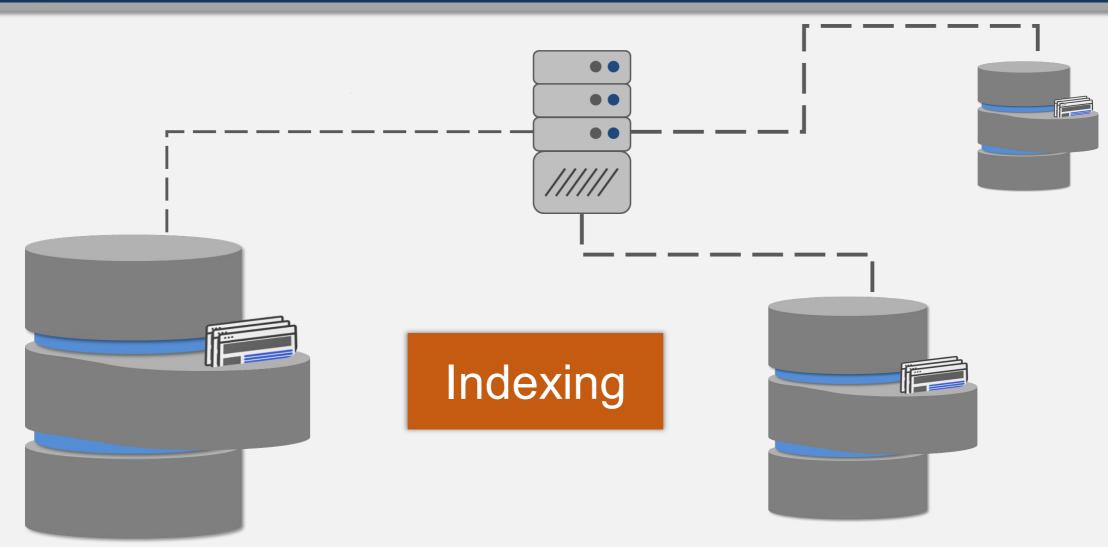
Crawling



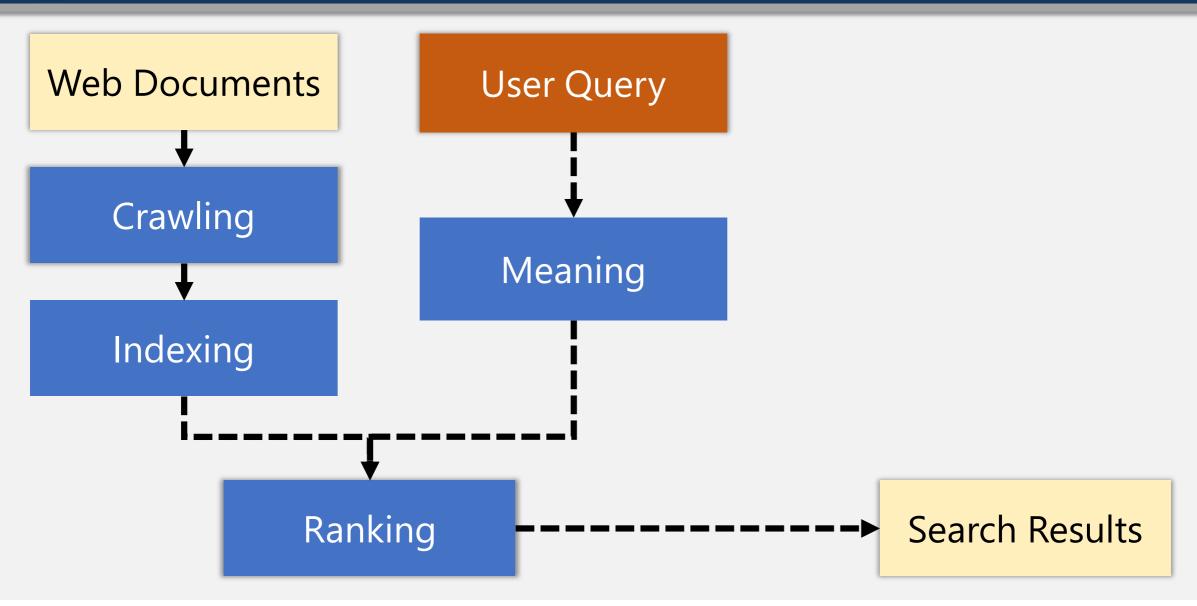
















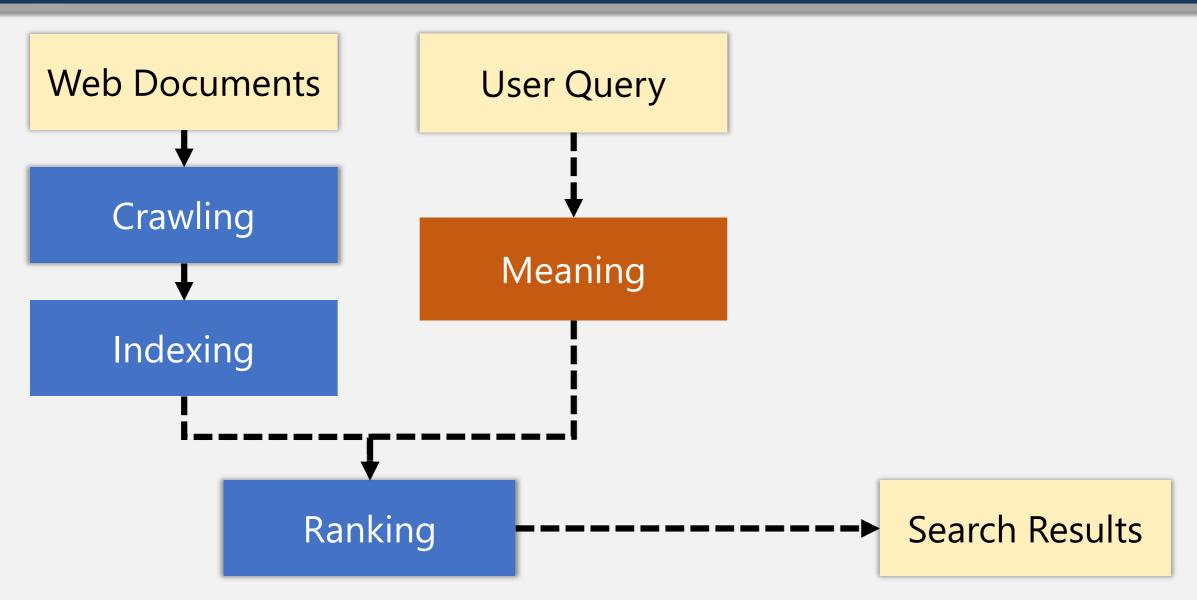
Q best suitcase for japan travl





User Query





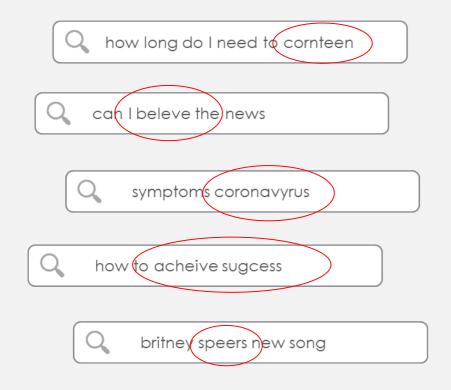


Spelling

- Q where to buy suitcase for japan travl
- Q where to buy suitcase for japan **travel**

Meaning





"How? By looking for mistakes. We look at all the ways in which people mis-spell words in queries and text all over the web, and use that to predict what you actually mean."



Meaning

Spelling

- Q where to buy suitcase for japan travl
- Q where to buy suitcase for japan **travel**

Synonyms

- Q where to buy suitcase for japan travel
- Q where to buy suitcase or luggage for japan travel



Meaning

Spelling

- Q where to buy suitcase for japan travl
- Q where to buy suitcase for japan **travel**

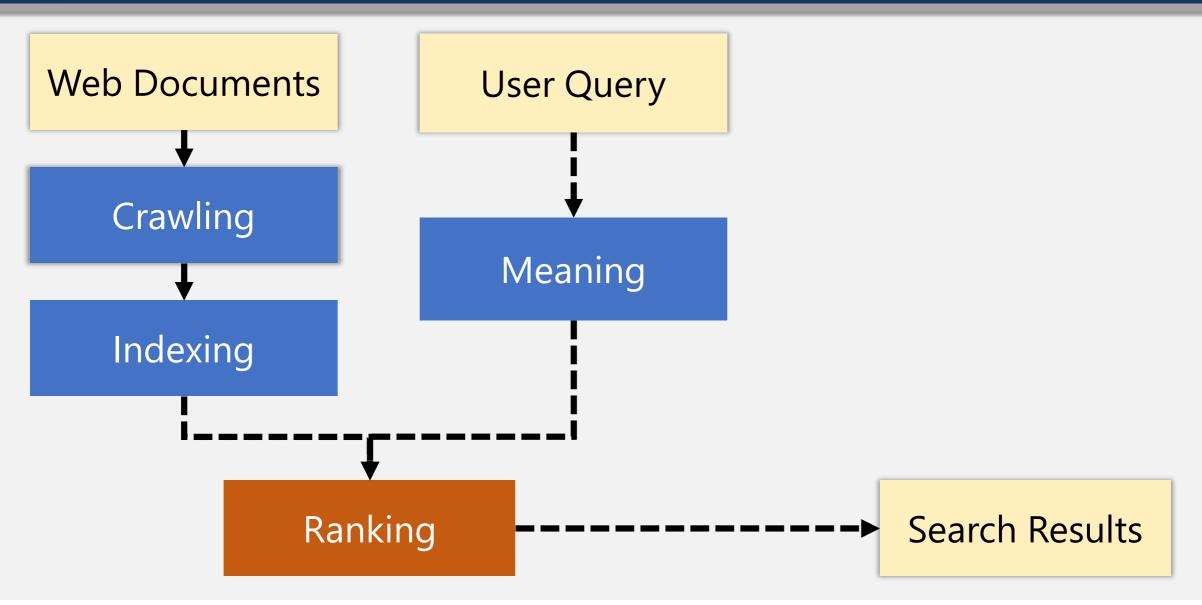
Synonyms

- Q where to buy suitcase for japan travel
- Q where to buy suitcase or luggage for japan travel

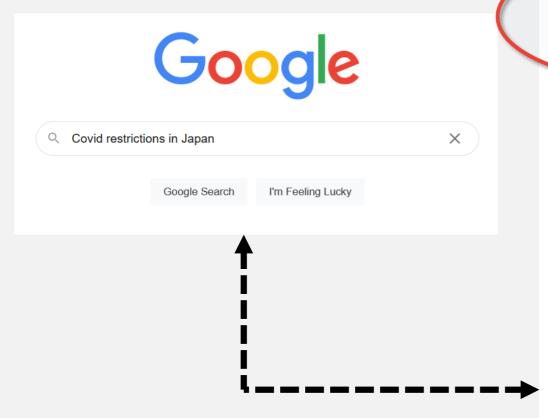
Location

- Q where to buy suitcase for japan travel
- Q where to buy suitcase for japan travel near capitol hill, dc









About 73,900,000 results (0.47 seconds)

All travelers permitted to travel to Japan, regardless of age, must receive a negative COVID 10 test within 72 hours of departure of the international leg of their trip.

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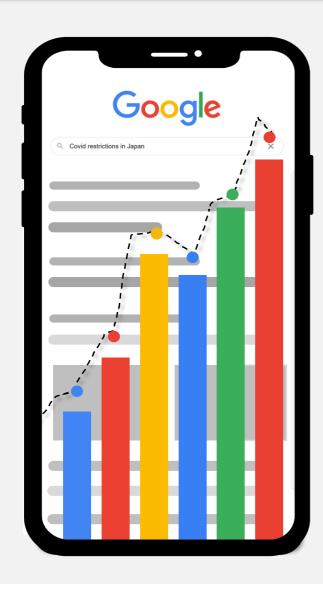
Europe: Bosnia and Herzegovina, Bulgaria, Ky... Africa: Algeria, Angola, Cameroon, Central ...

https://www.mofa.go.jp > fna

Border measures to prevent the spread of novel coronavirus ...

Border measures to prevent the spread of novel **coronavirus** (**COVID**-19). August 26, 2022. **Japanese** ... **Restrictions** on airport/ports for arrival; 7.





Ranking



"[REDACTED]"



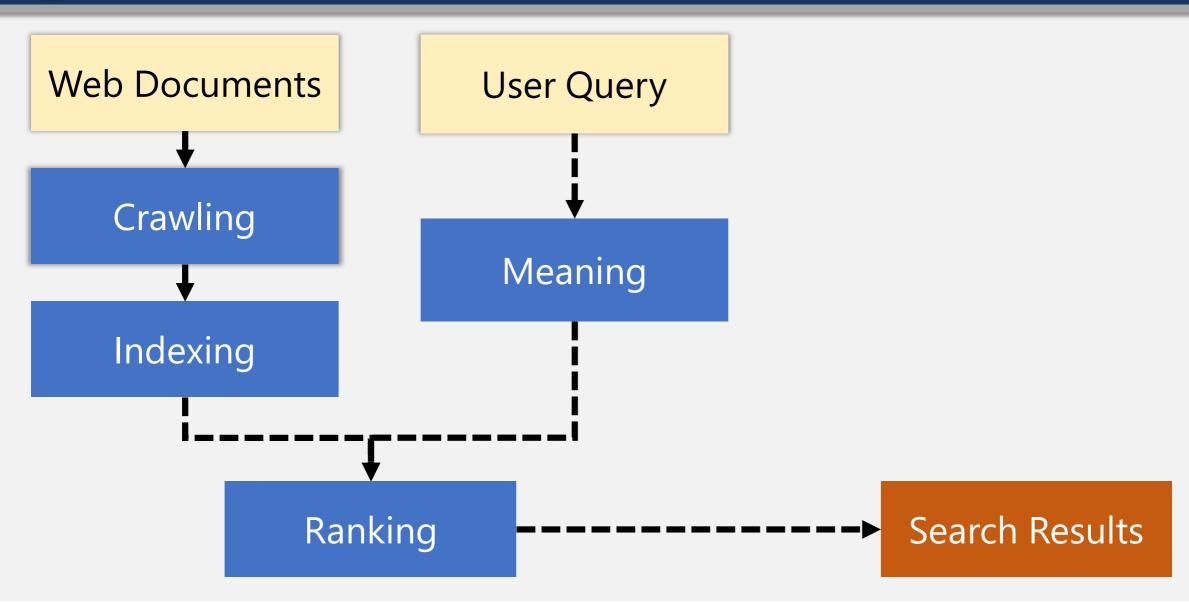
Source: GOOG-DOJ-16015714, at -723.



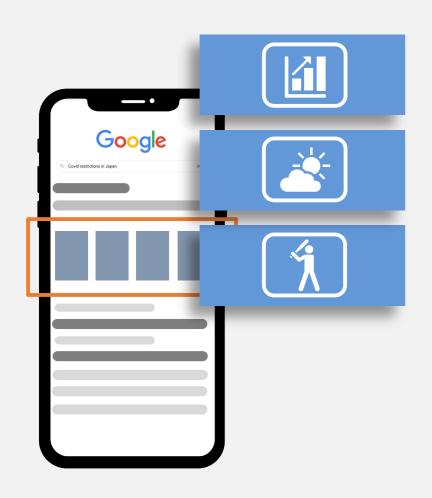


"We can regard each [search] as a massive multiple-choice test. Each day, we get to ask humanity a billion questions of the form, Which of these 10 documents is most relevant to your query?' Then some person helpfully answers with a click, which teaches us something about the world."



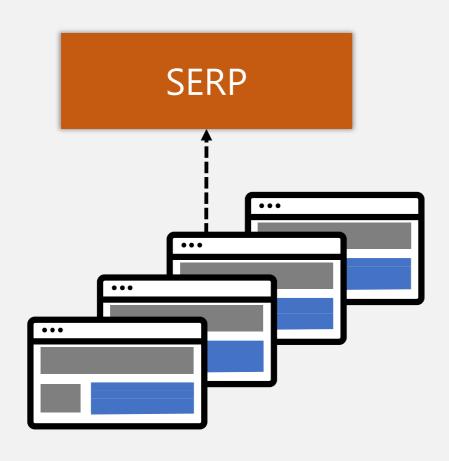


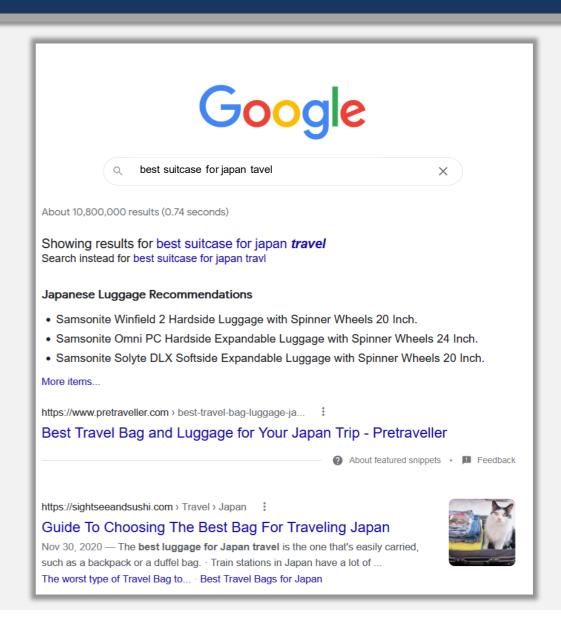




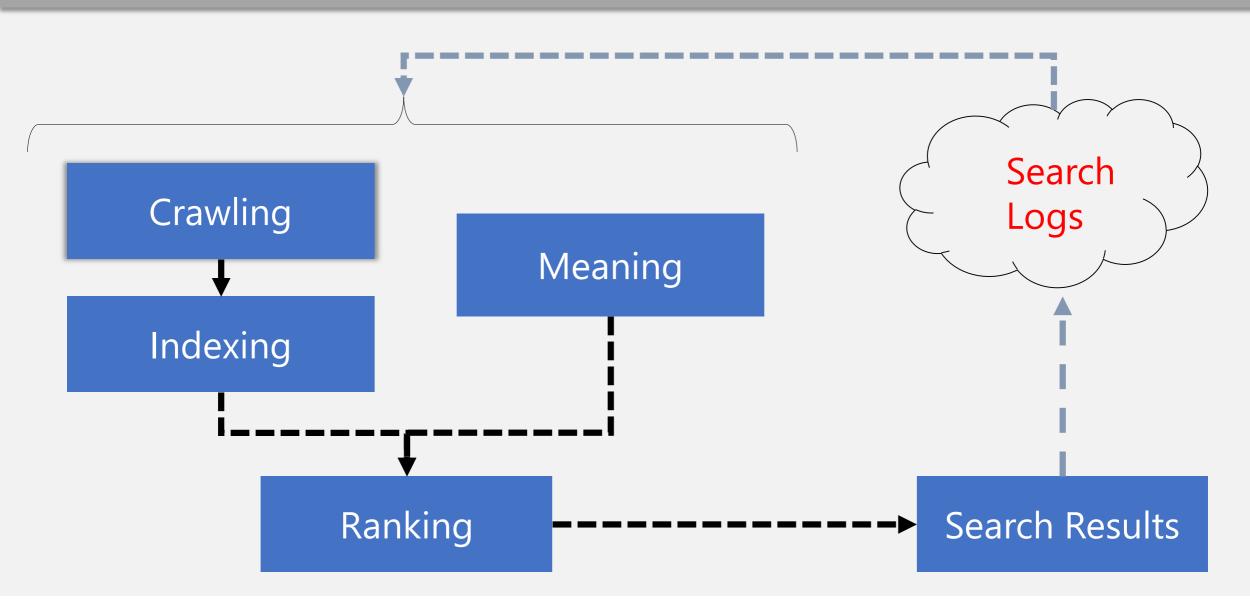
Other Data



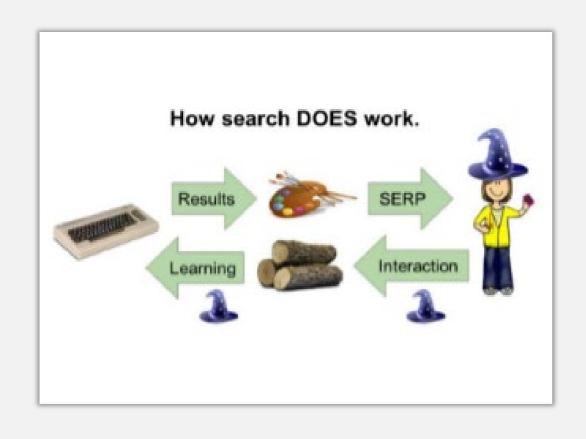












"The key is that there is a second flow of information in the reverse direction. As people interact with the search results page, their actions teach us about the world. For example, a click here means the image was better than the web result. A long look there means the KP was interesting. We log these actions, and then scoring teams learn from them."



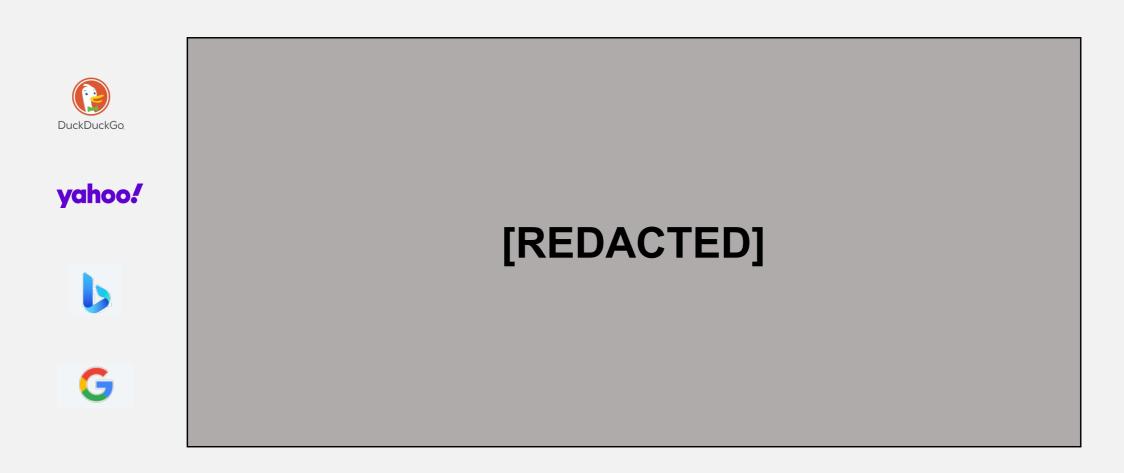
General Search

Queries	
Head	Occur most frequently
Torso	Occur somewhat less frequently
Tail	Occur only rarely

What is scale?



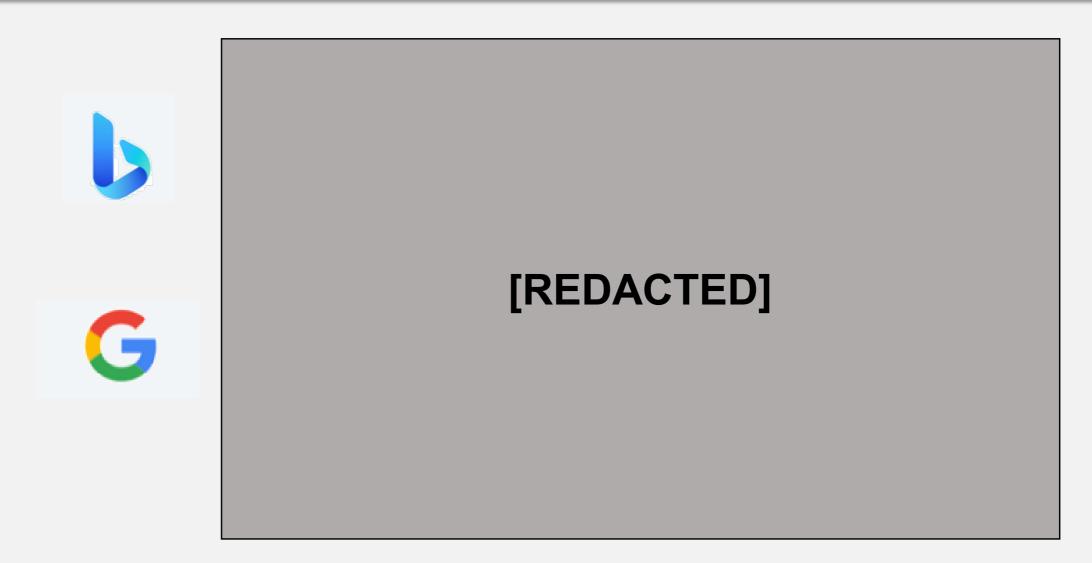
What is Scale?



One Year's Worth of Search Queries Based on Market Share



What is Scale?





Roadmap

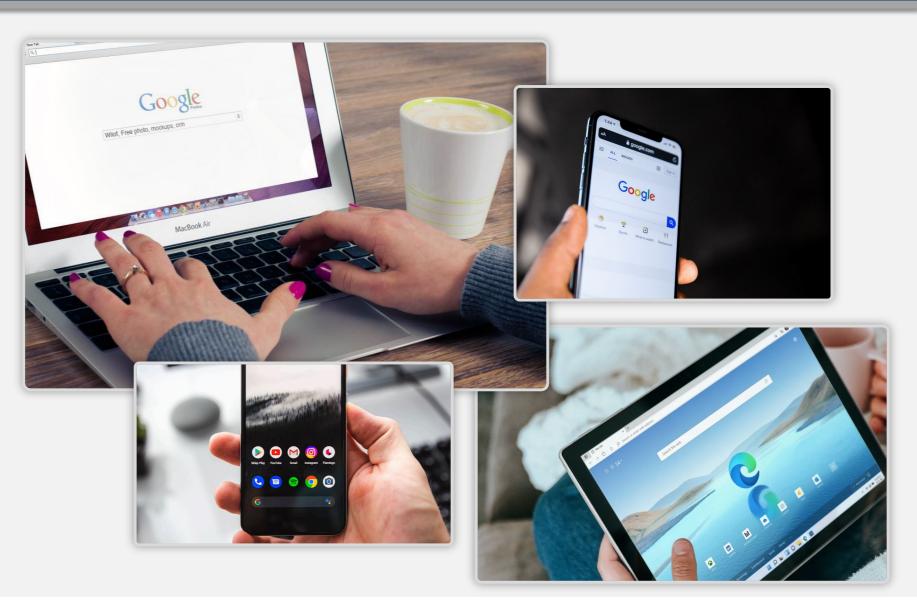
- 1 General Search Industry Overview
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How do consumers access general search?



Search Distribution

Accessing General Search



What is a search access point?

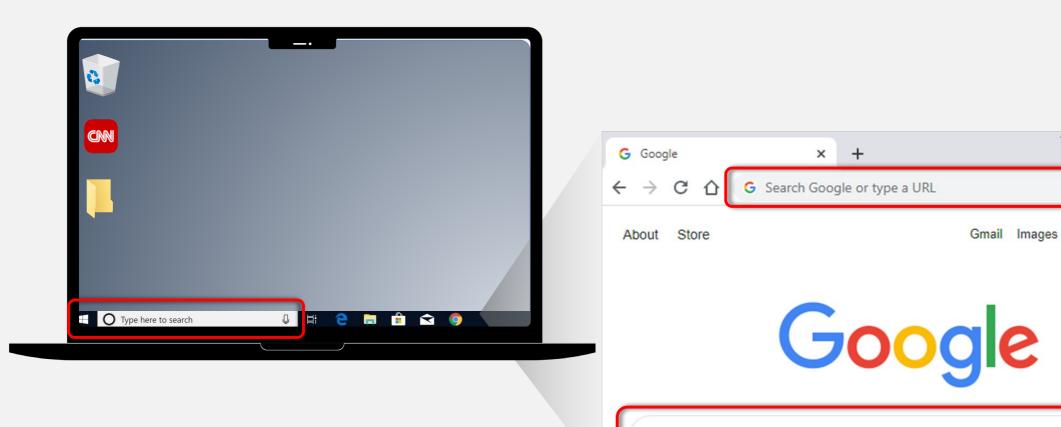


Search Access Points

A search access point is a place on a computer or mobile device where a user can enter a query.



Search Access Points

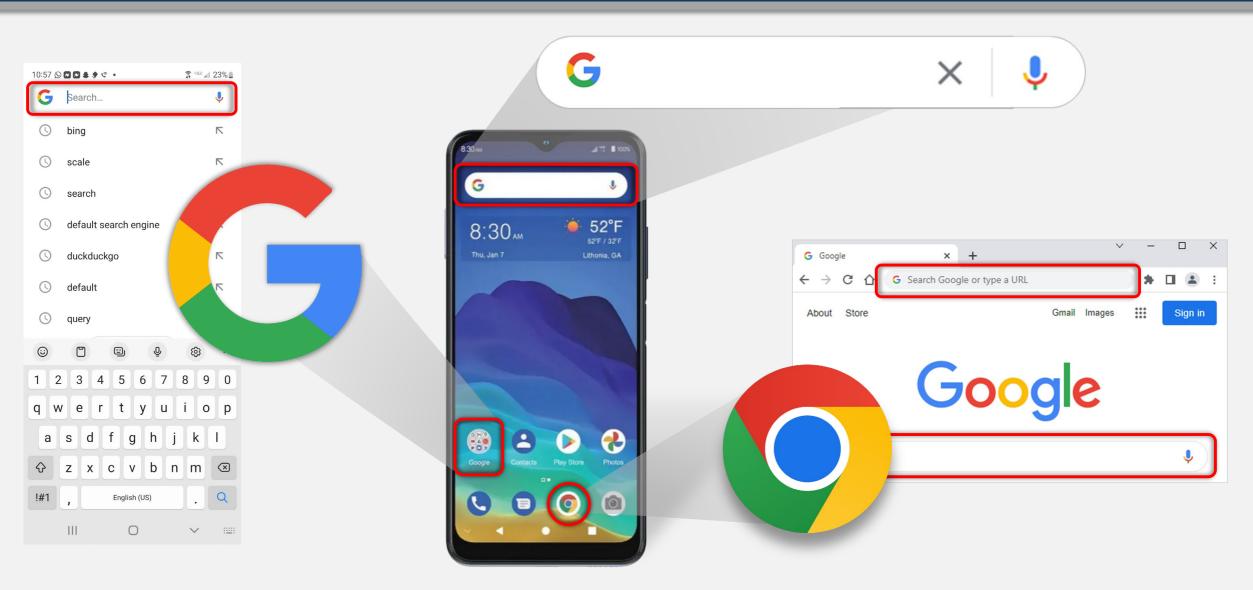


Sign in

:::



Search Access Points



What is a default search engine?

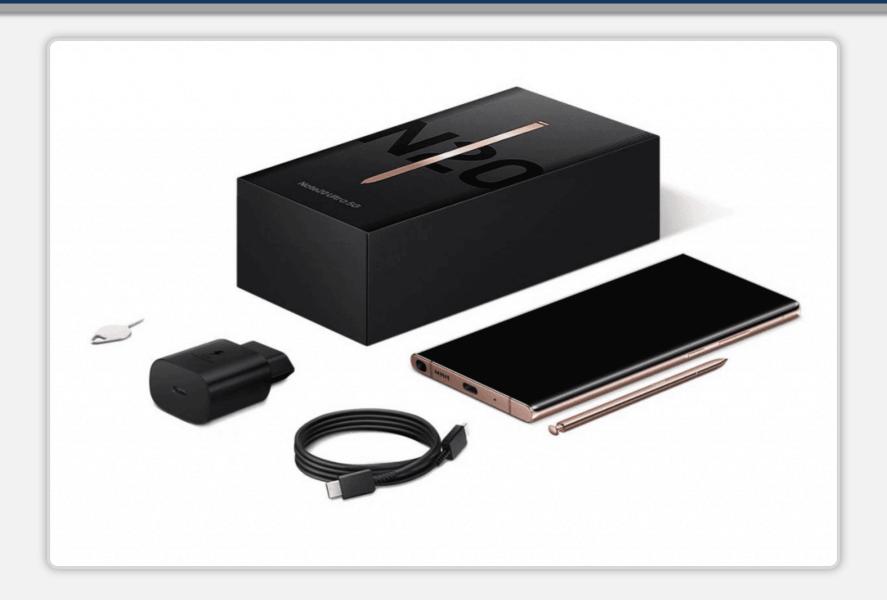


Default Search Engine

The search engine that a distributor programs a search access point to automatically send queries to out of the box.



Defaults



Why are search defaults important?



"Default home page can be a powerful strategic weapon in the Search battle Could be an easy way to grow and defend market share for Google"

Source: GOOG-DOJ-05756467, at -485.



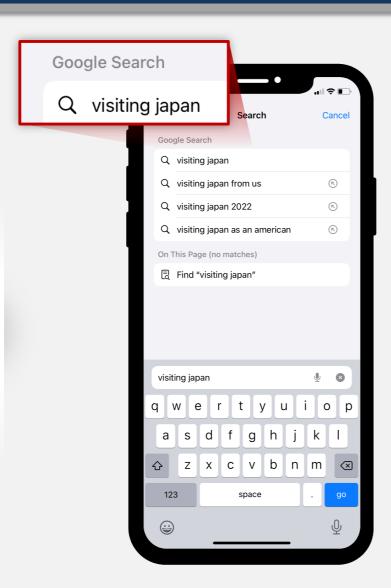
"tyranny of the default"

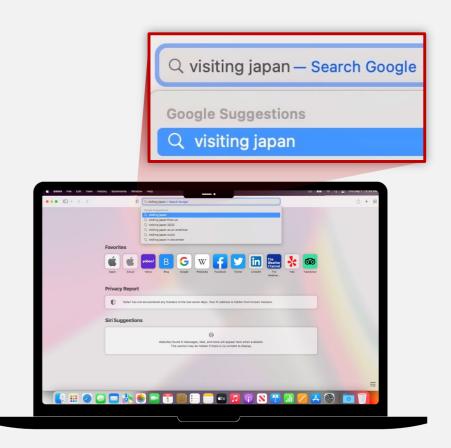
Which general search engines are defaults?



Apple Search Defaults









Android Search Defaults







Windows Search Defaults





What is a *user-selected* default search engine?



User-Selected Default Search Engine

The search engine that a user sets a search access point to automatically send queries to.

How sticky are search defaults?









Total: \$18.30 (\$15.00 + \$3.30 tip)

22% \$3.30

20% \$3.00

15% \$2.25

Custom tip

No tip

Sign here



I agree to pay the above total amount according to my card issuer agreement. Card ending 0123. Reference code kywuPqxavTa. I understand my information will be processed pursuant to Toast's Privacy Statement and direct Toast to share my information with the merchant.

Continue





Leave browser app



Tap on Search Engine option



Open Settings app



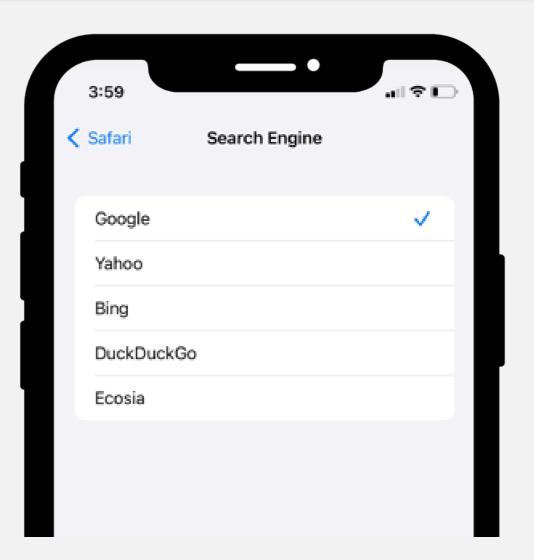
Select desired search engine



Scroll to locate Safari tab



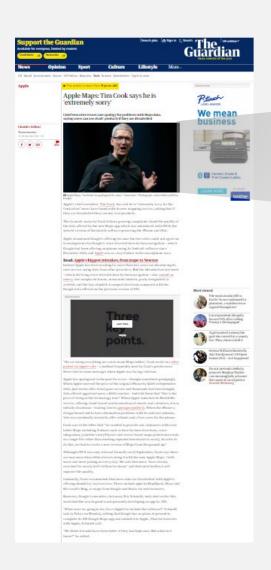
Navigate back to Safari app











Apple Maps: Tim Cook says he is 'extremely sorry'

Chief executive issues rare apology for problems with Maps data, saying users can use rivals' products if they are dissatisfied





Default Search Recover Assumptions [REDACTED]



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How is Google the exclusive default search engine on Apple?

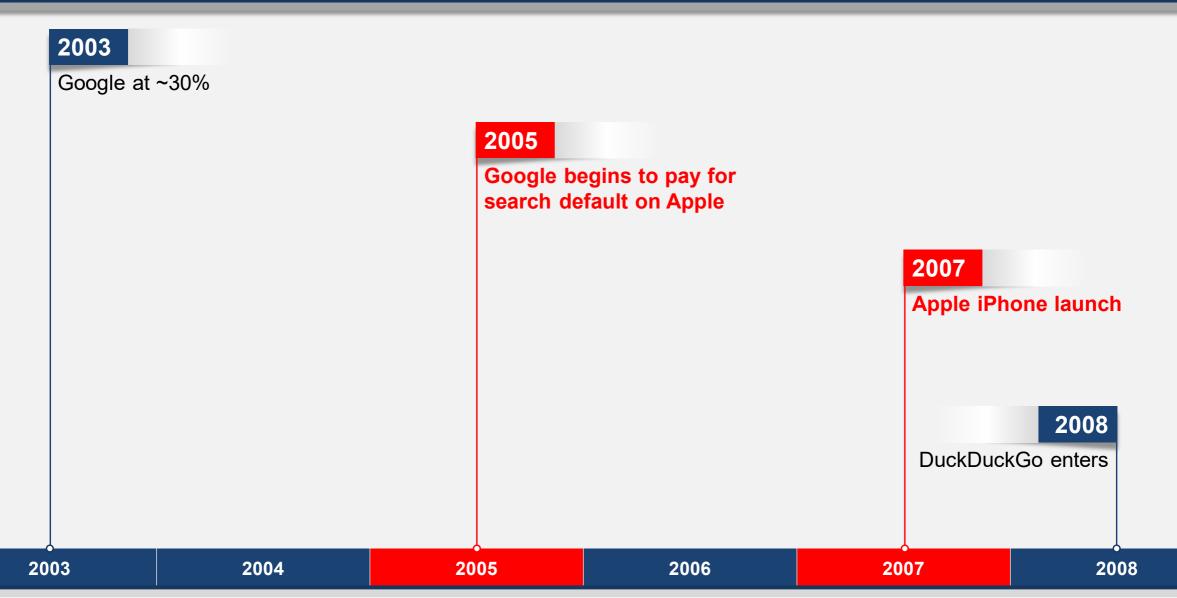


Apple





Timeline of Events





Apple





Apple



- **Q.** And why are GSA and Chrome not preinstalled on Apple mobile devices?
- A. We don't install any third-party apps. Never have on iOS.
- Q. . . . [S]ince 2007, Apple has never preinstalled or preloaded any third-party applications on an iPhone, correct?
- **A.** That's correct.
- **Q.** What type of value would Apple require if it decided that it was going to . . . preload third-party applications on iPhones? . . .
- **A.** There is none. We would never do it.

How is Google the exclusive default search engine on Android?

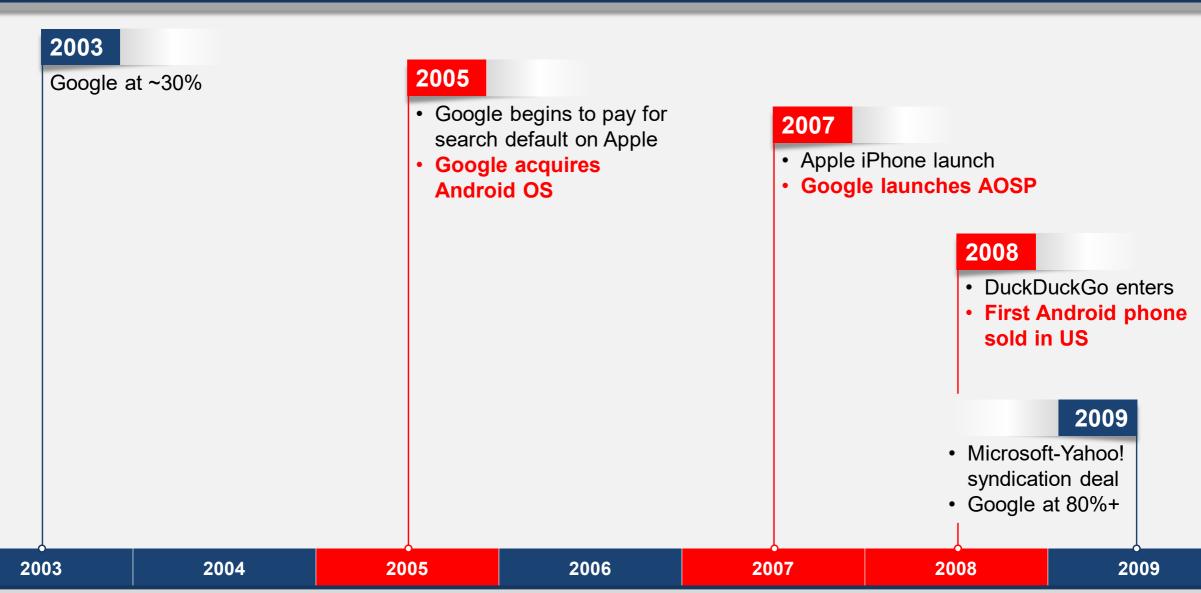


Android





Timeline of Events





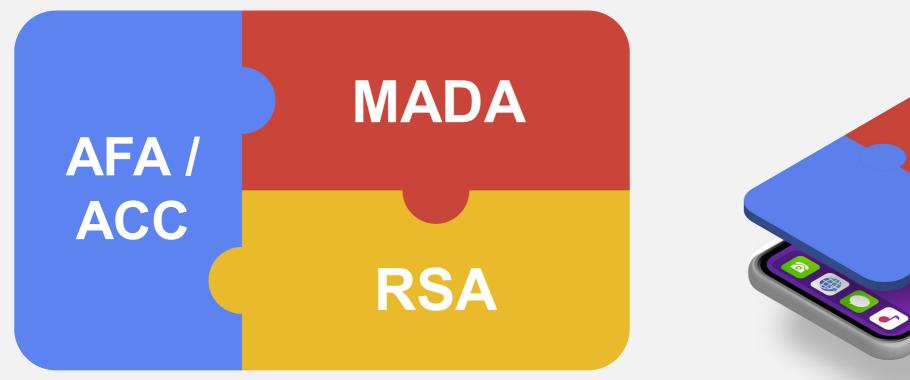
Android

"[REDACTED]"

[REDACTED]



Google







Google's Android Distribution Partners

Original Equipment Manufacturers (OEMs)





Mobile Network Operators (MNOs)













- Anti-Fragmentation Agreement
- Android Compatibility Commitment

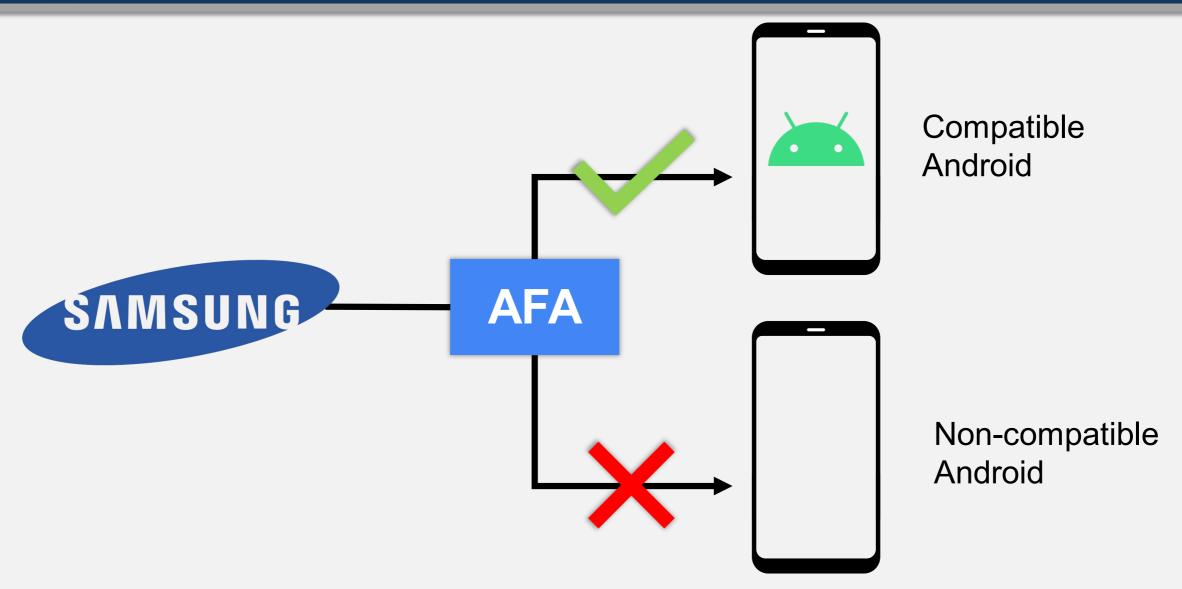




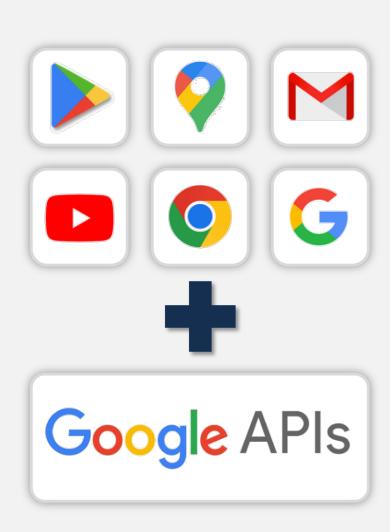
WHAT DO THEY PROVIDE?

- OEMs only make/sell compatible Android devices
- Google must approve devices
- Prohibits "fragmentation" of Android (AFAs)









Google Mobile Services (GMS)

- Google proprietary apps
 - Google Search App
 - Chrome
 - Google Play
 - Google Maps
 - YouTube
 - Gmail
- Google proprietary APIs





Google Play Store

- Google's proprietary app store
- Largest Android app collection
- Proprietary APIs



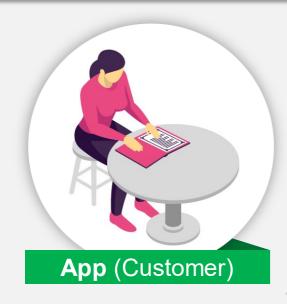
Google Search App



Google Search Widget





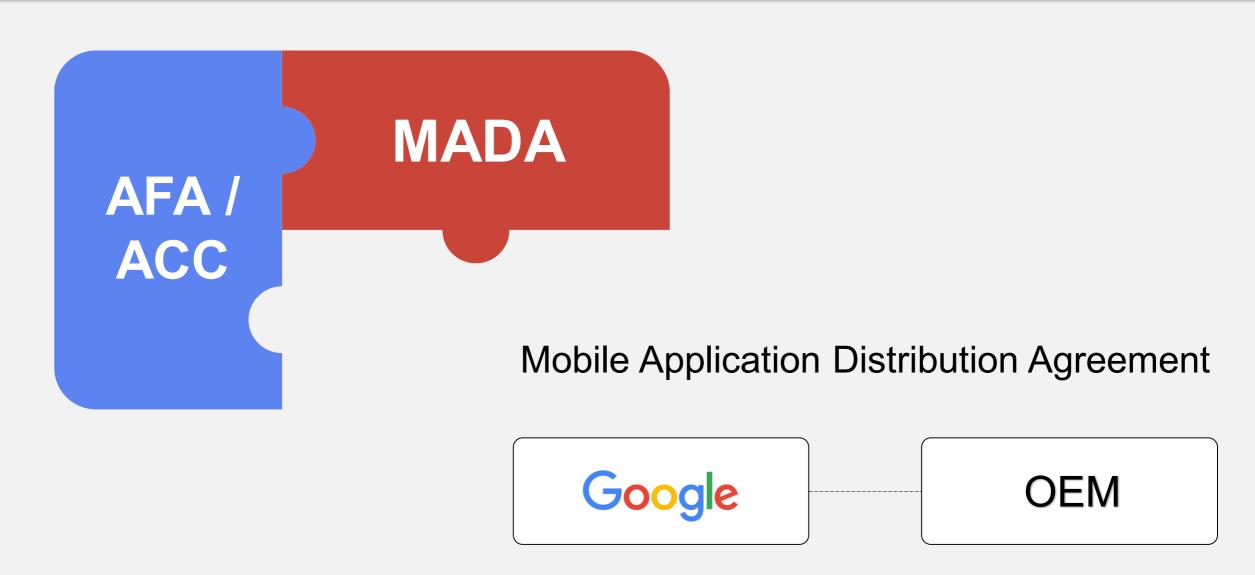


Google APIs









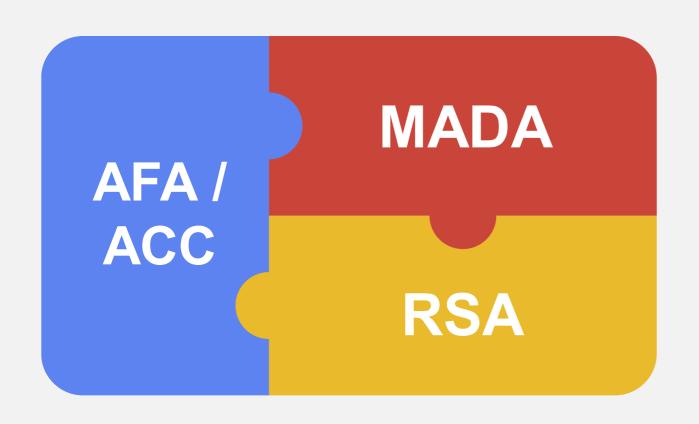




WHAT DOES IT PROVIDE?

- A GMS license
- If the OEM preinstalls any Google app, the OEM must:
 - preinstall a suite of Google apps
 - give apps prominent placement, e.g., Google Search widget on the home screen
 - make 6 core apps undeletable







Revenue Share Agreement





WHAT DOES IT PROVIDE?

For a share of search ad revenue, MNO/OEM must:

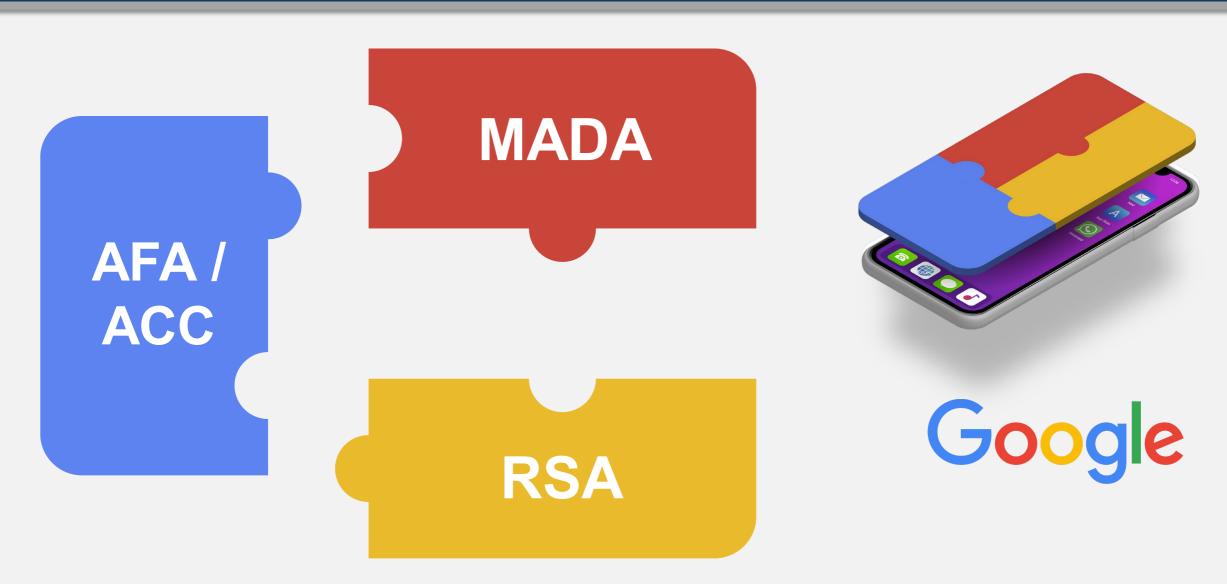
- make Google exclusive search default
- install search-related Google apps with prominent placement
- exclude "alternative search services"



RSA Payments

Google payments under RSAs by partner type (US) [REDACTED]







Defaults



Sundar Pichai Google CEO

Q. And Google pays rev share on a specific device type if it gets exclusivity on default out of the box, right?

A. That's my understanding, yes.

Is Google the exclusive default search on other browsers?



Browsers



Samsung Internet



Mozilla Firefox



UCBrowser



Opera



Puffin

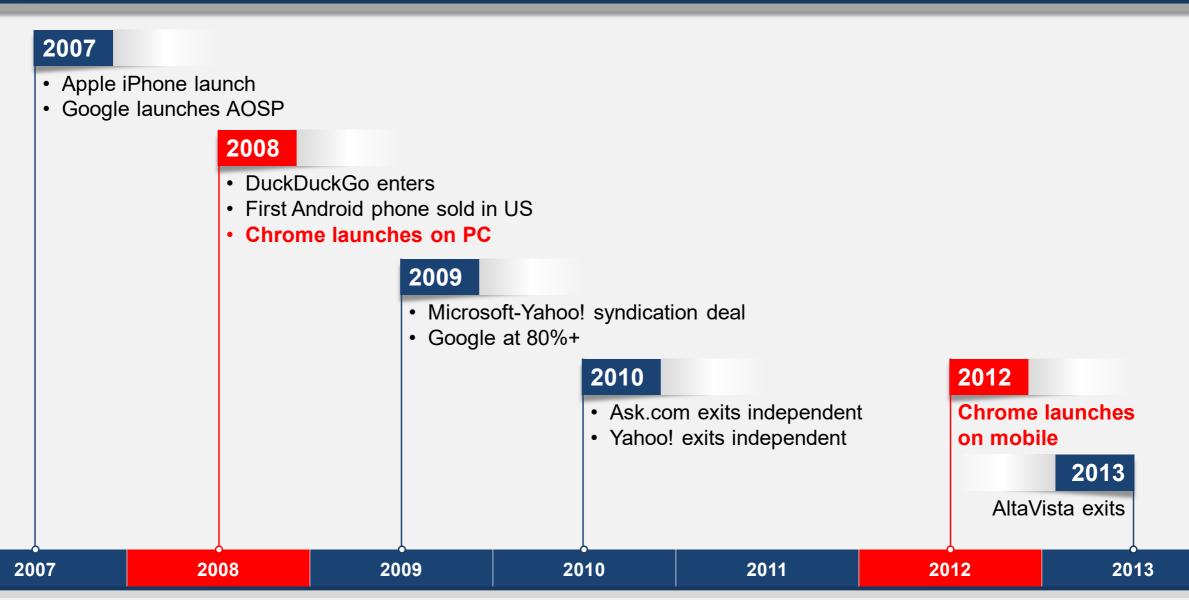


Browsers





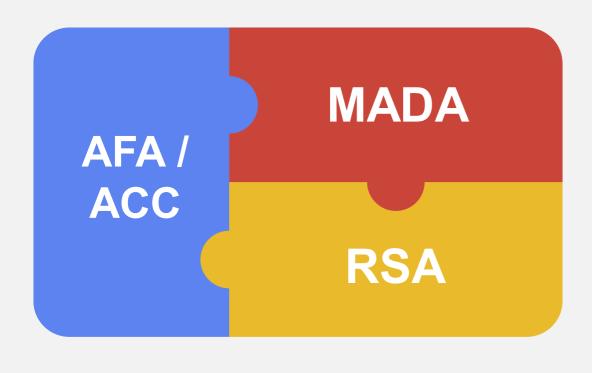
Timeline of Events



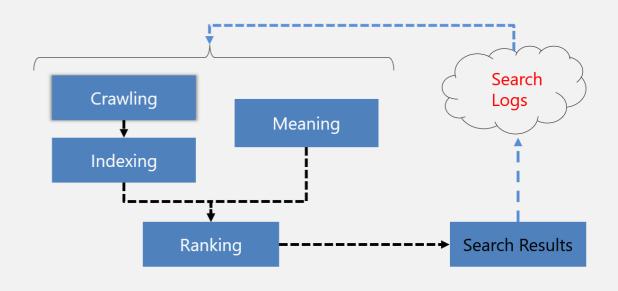


General Search





Distribution Contracts



Search Mechanics



Roadmap

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What is advertising?

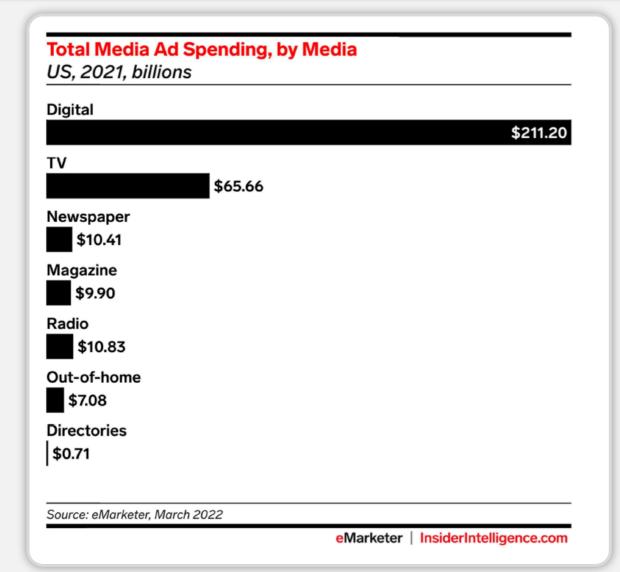


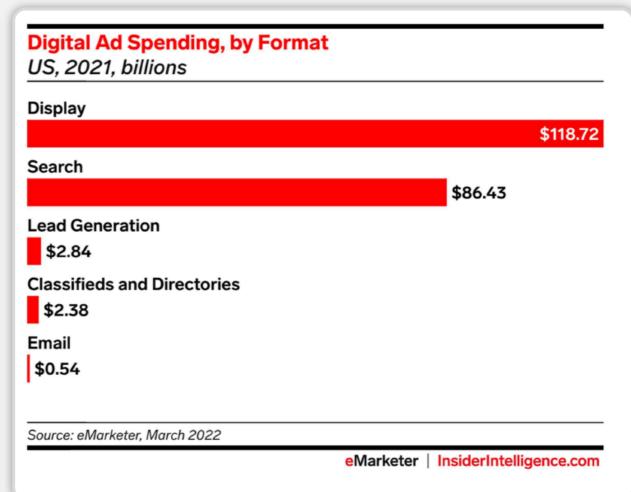
Advertising Channels





Advertising Channels





What advertising markets do the US Plaintiffs allege?



Search Ads

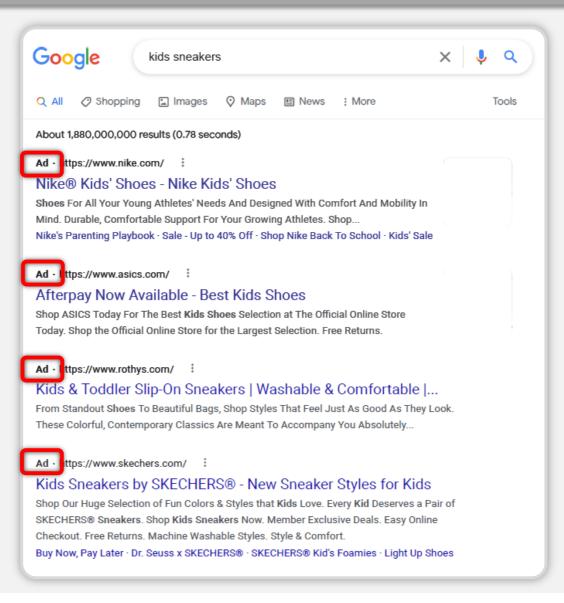
Markets Alleged

General Search Text Ads (Text Ads):

Ads consisting primarily of text and appearing on a general search engine's results page in response to a real-time query.



Text Ads





Search Ads

Markets Alleged

General Search Text Ads (Text Ads):

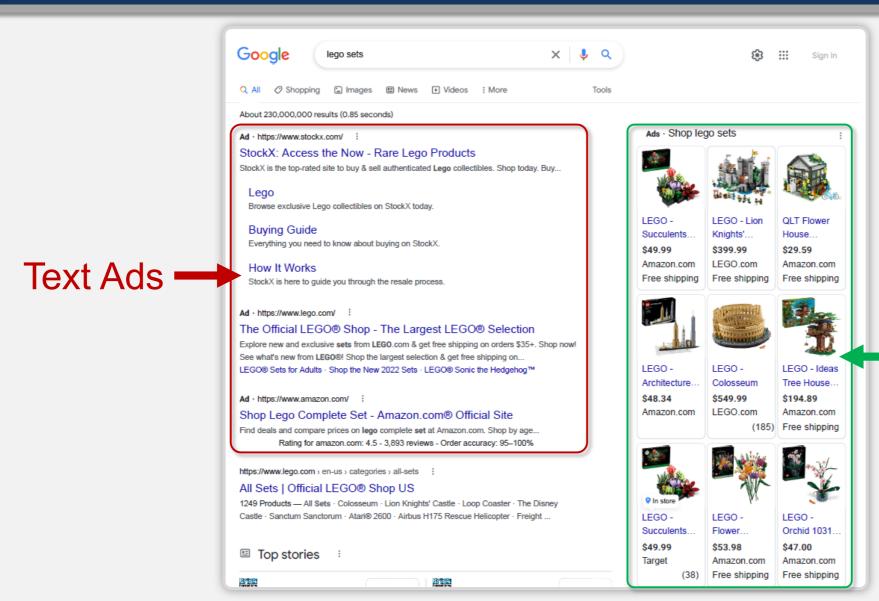
Ads consisting primarily of text and appearing on a general search engine's results page in response to a real-time query.

Search Ads:

Any ads appearing on any search engine's results page in response to consumer's real-time query (including Text Ads).



Search Ads

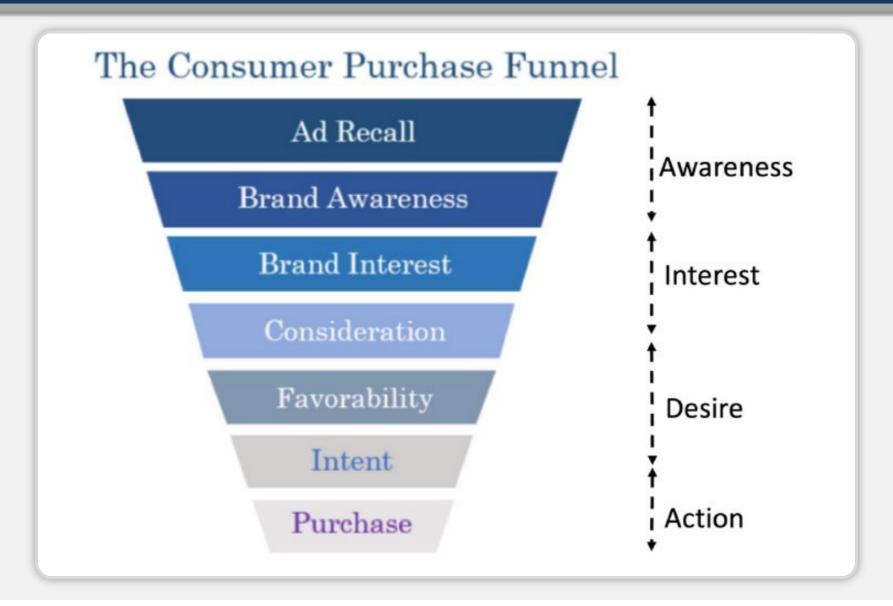


Shopping Ads

What channels do advertisers use and why?



The Consumer Purchase Funnel





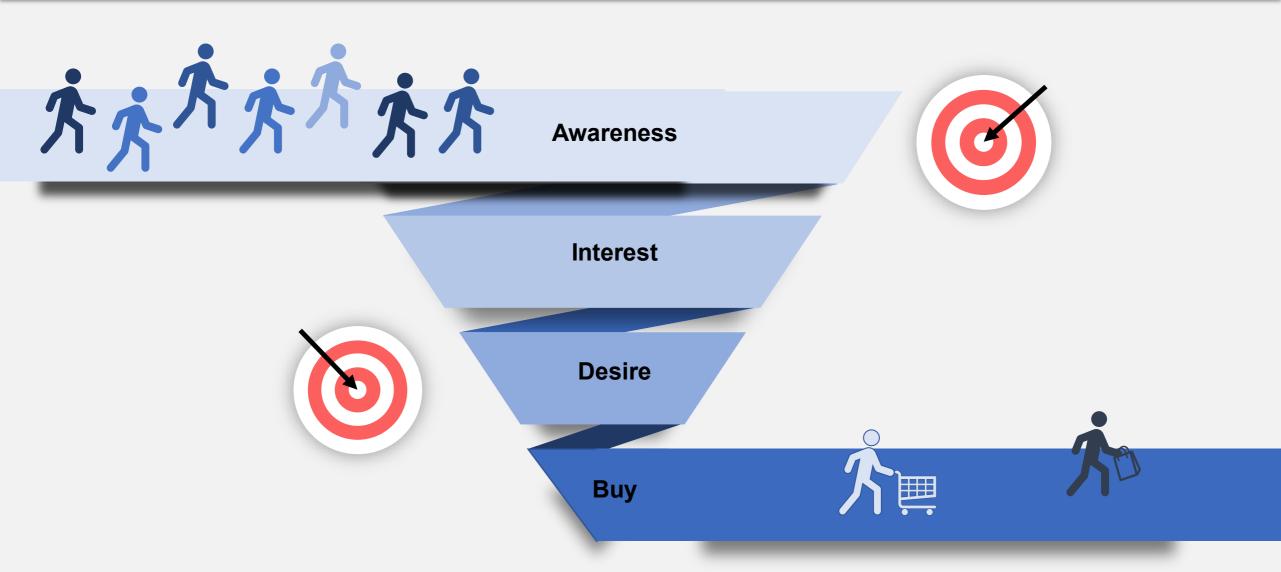
The Consumer Purchase Funnel







Advertiser Objectives







- Increase awareness of brand
- 2) Increase engagement with brand /product
- 3) Increase favorability of brand/product
- 4) Increase purchases of product





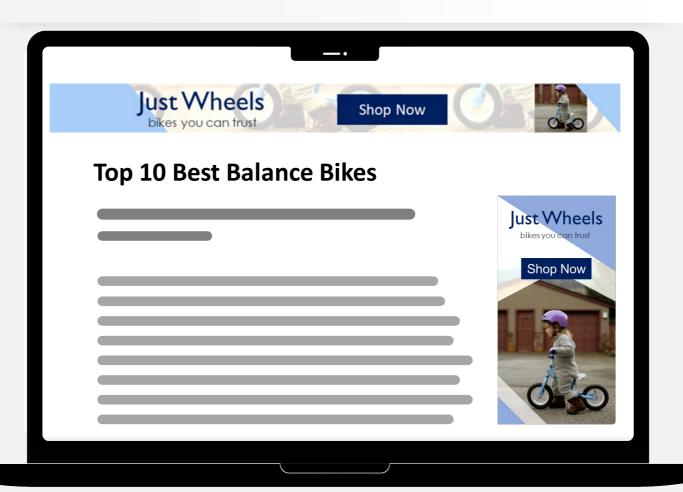
 Increase awareness of brand



- 2) Increase engagement with brand /product
- 3) Increase favorability of brand/product
- 4) Increase purchases of product



Objective 1: Increase awareness of brand







- Increase awareness of brand
- 2) Increase engagement with brand /product



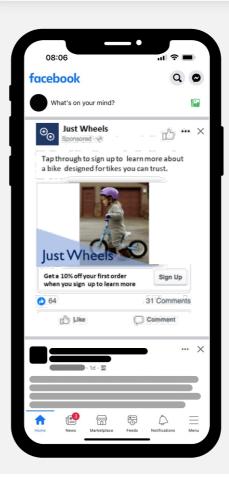
- 3) Increase favorability of brand/product
- 4) Increase purchases of product

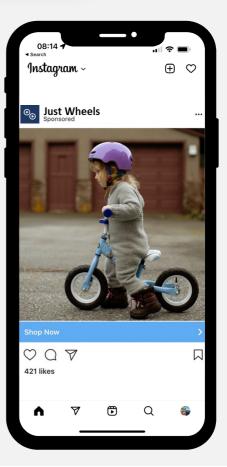


Objective 2: Increase engagement with brand/product

facebook











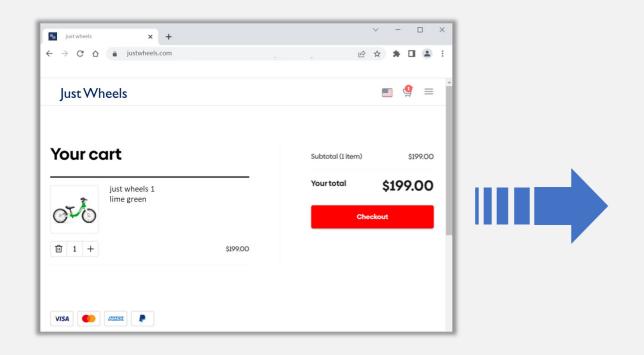
- Increase awareness of brand
- 2) Increase engagement with brand /product
- 3) Increase favorability of brand/product

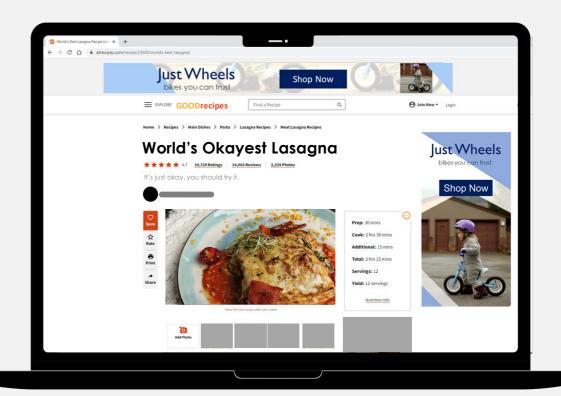


4) Increase purchases of product



Objective 3: Increase favorability of brand/ product













- Increase awareness of brand
- 2) Increase engagement with brand /product
- 3) Increase favorability of brand/product
- Increase purchases of product



What are Search Ads?



Search Ads are those served in response to a consumer's real-time query on a general or specialized search engine.

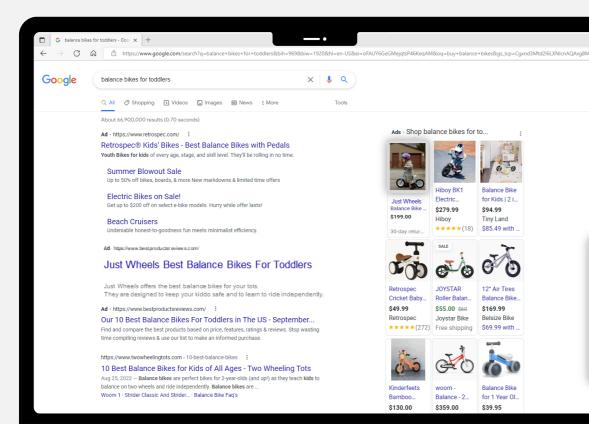


balance bike for toddler









Ad. https://www.bestproductsreviews.com/

Just Wheels Best Balance Bikes For Toddlers

Just Wheels offers the best balance bikes for your tots.

They are designed to keep your kiddo safe and to learn to ride independently.









 Increase awareness of brand



Increase engagement with brand /product



3) Increase favorability of brand/product



 Increase purchases of product





01 Text Ads

02 Other types of Search Ads

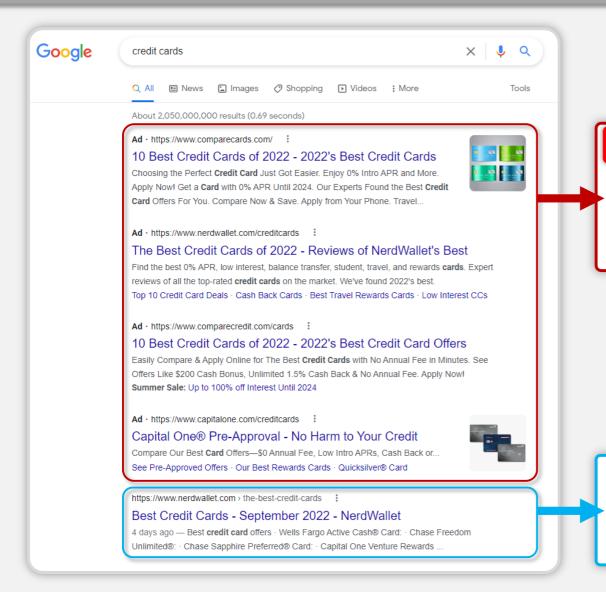


01 Text Ads

02 Other types of Search Ads

What are Text Ads?





Text Ads

Ad https://www.nerdwallet.com/creditcards :

The Best Credit Cards of 2022 - Reviews of NerdWallet's Best

Find the best 0% APR, low interest, balance transfer, student, travel, and rewards **cards**. Expert reviews of all the top-rated **credit cards** on the market. We've found 2022's best.

Top 10 Credit Card Deals · Cash Back Cards · Best Travel Rewards Cards · Low Interest CCs

Organic Results

https://www.nerdwallet.com > the-best-credit-cards \$\frac{1}{2}\$

Best Credit Cards - September 2022 - NerdWallet

4 days ago — Best **credit card** offers · Wells Fargo Active Cash® Card: · Chase Freedom Unlimited®: · Chase Sapphire Preferred® Card: · Capital One Venture Rewards ...

How are Text Ads sold?

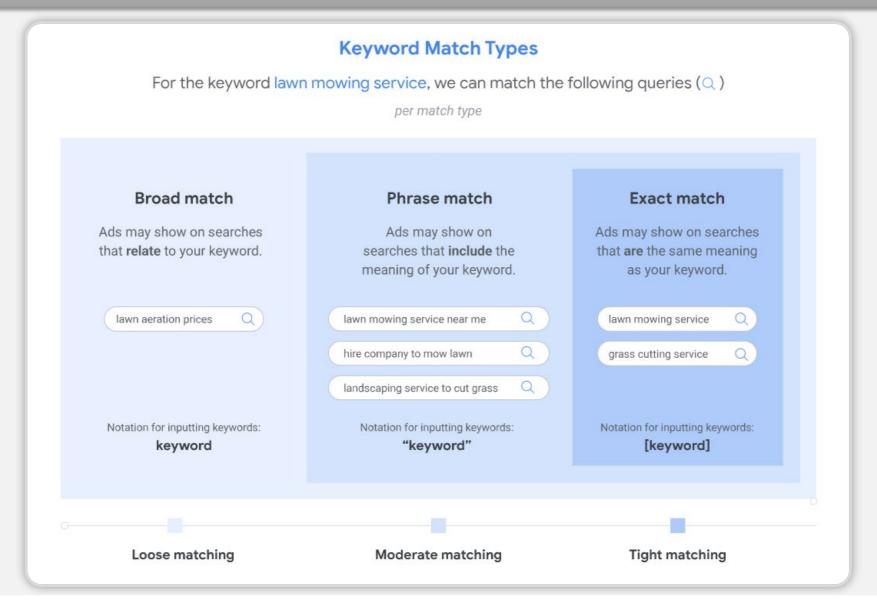




Find the right keywords for your business

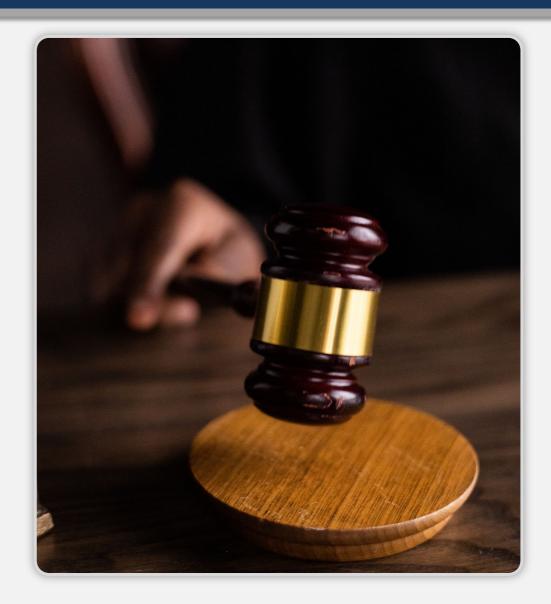
Go to Keyword Planner







- Real-Time Auctions
- Real-Time Bidding



Who shows Text Ads in the US?



Independent General Search Services















Syndicated General Search Services



What is Google's market share of Text Ads in the US?



Text Ads Market Share

Search Text Advertising Market Shares (US) [REDACTED]

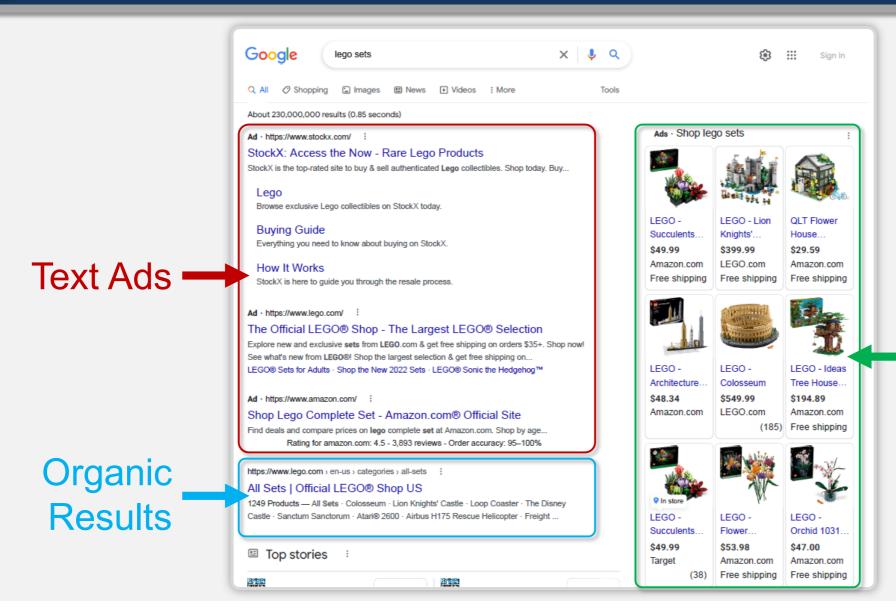


01 Text Ads

02 Other types of Search Ads

What are the other types of Search Ads?

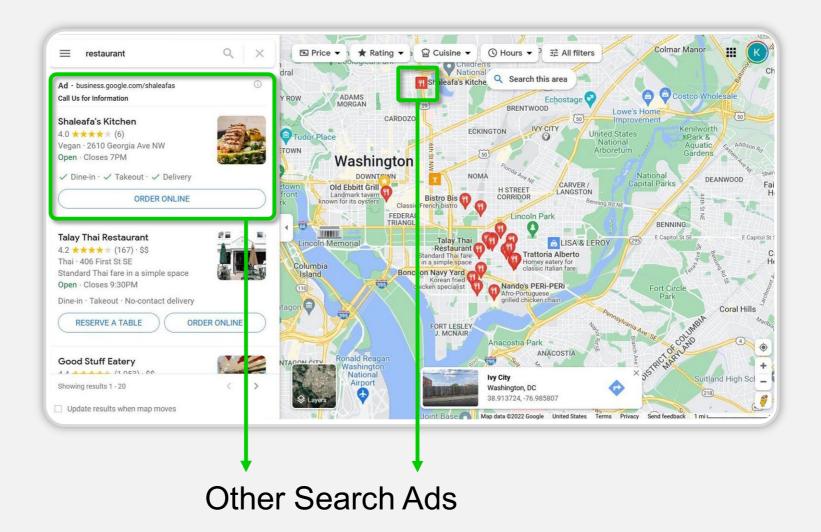




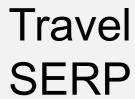
Shopping Ads

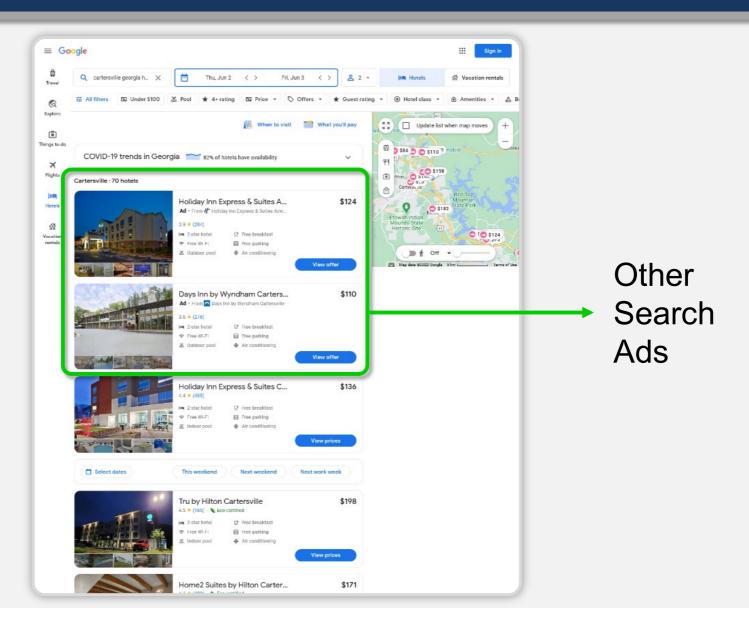


Maps SERP



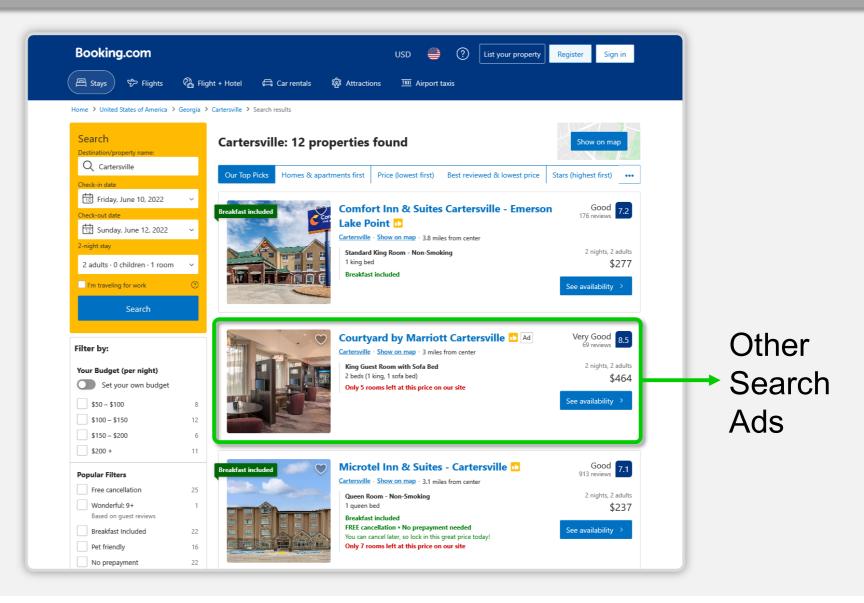






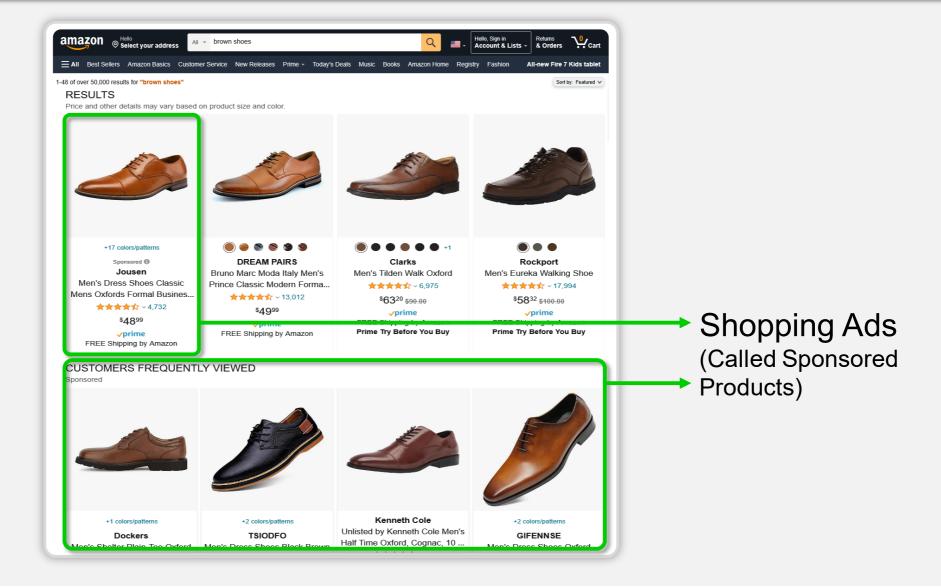


Booking.com SERP



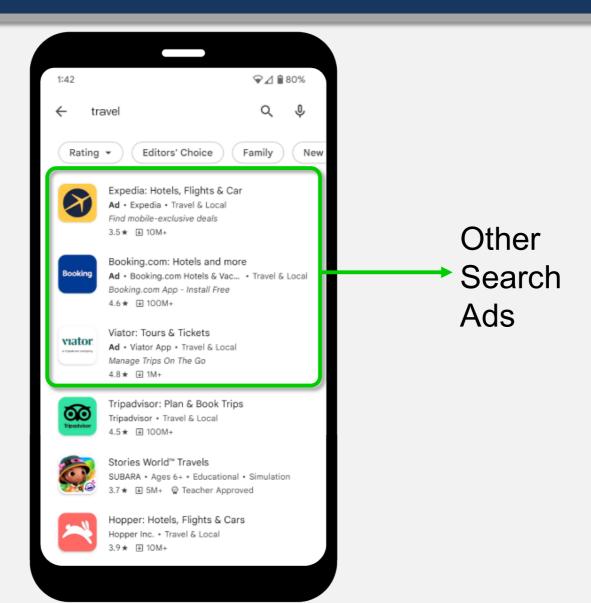


Amazon SERP





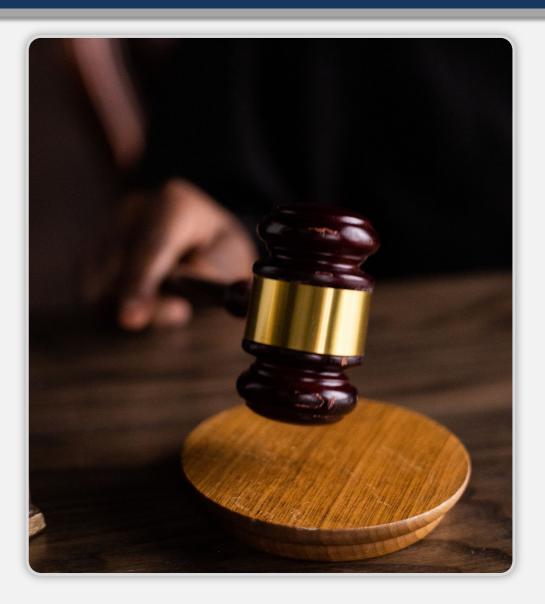
Play Store SERP



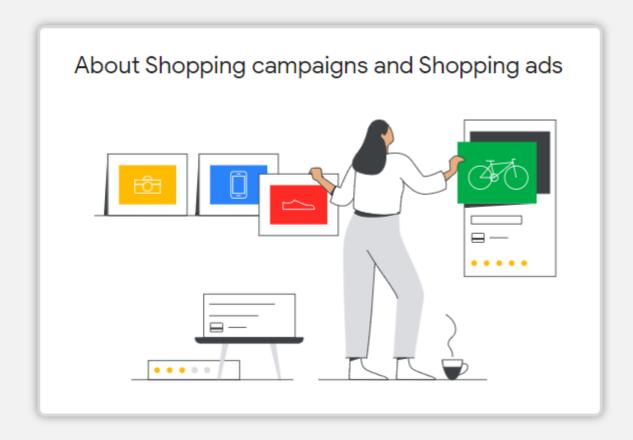
How are other types of Search Ads sold?



- Real-Time Auctions
- Real-Time Bidding







"To get started, you'll send us your product data with Merchant Center and create a campaign in Google Ads. Then, we'll use your campaign to create ads on Google and around the web where potential customers can see what you're selling."

- Google Ads Help

Who shows other types of Search Ads in the US?



Google















What is Google's market share of Search Ads in the US?



Search Advertising



Text Ads



Other Types of Search Ads



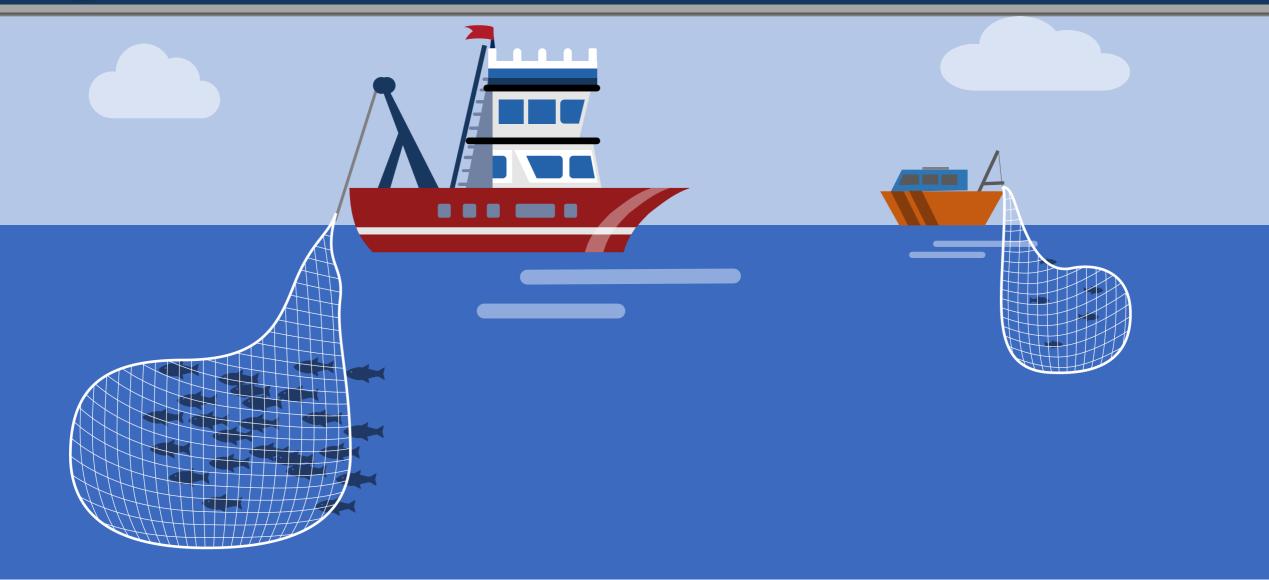
Search Ads Market Share



Why is data important to the Search Ads business?



Scale





What is Scale?





Roadmap

- 1 General Search Industry Overview
- 2 General Search Mechanics
- 3 Search Distribution
- 4 Google's Search Distribution Contracts
- 5 Search Advertising Industry Overview

Appendix



Search Timeline

