United States & Co-Plaintiff States v. Google LLC

Plaintiffs' Closing Statement

Search Advertising

REDACTED FOR PUBLIC FILING

Revenue

"Mandatory"

"Always On"

"No Real Market Pressure"

"Rank ads sub-optimally in exchange for more revenue"

"Code Yellow"

Agenda

1 Google Has Monopoly Power In Search Ads & Text Ads

2 Search Ads Is A Relevant Product Market

3 Text Ads Is A Relevant Product Market

4 Google's Price Increases Harmed Advertisers

5 Google Failed To Prove Procompetitive Justifications

REDACTED FOR PUBLIC FILING

Agenda

1 **Google Has Monopoly Power In Search Ads & Text Ads**

2 Search Ads Is A Relevant Product Market

3 Text Ads Is A Relevant Product Market

4 Google's Price Increases Harmed Advertisers

5 Google Failed To Prove Procompetitive Justifications

REDACTED FOR PUBLIC FILING

Monopoly Power

"Monopoly power is the **power to control prices** or exclude competition."

United States v. E.I. du Pont de Nemours,
351 U.S. 377, 391 (1956) (emphasis added)

"[T]he material consideration in determining whether a monopoly exists is…[if] **power exists to raise prices** or to exclude competition **when it is desired to do so**."

Am. Tobacco Co. v. United States,
328 U.S. 781, 811 (1946) (emphasis added)

Direct evidence shows a firm's "**power to control prices** or exclude competition."

United States v. Microsoft Corp.,
253 F.3d 34, 51 (D.C. Cir. 2001) (emphasis added)

Monopoly power exists where "something a firm without a monopoly **would have been unable to do**" or behavior "**difficult to explain** unless [the defendant has] a monopoly product."

Microsoft, 253 F.3d at 57–58 (emphasis added)

Monopoly Power:
Direct Evidence

"Monopoly power is the **power to control prices** or exclude competition."

United States v. E.I. du Pont de Nemours,
351 U.S. 377, 391 (1956) (emphasis added)

Dr. Hal Varian
Chief Economist

Q. A monopolist who sells things through an auction could control the auction's outcome by **changing the design of the auction** itself?

A. There could be ways to do that, yes.

* * *

Q. A monopolist who sells things through an auction could influence the auction's outcome by **changing the algorithm** that runs the action; is that right?

A. Well, yes. If he changes the algorithm, you get a different answer.

Q. Finally, sir, a monopolist that wanted to influence the result of an auction would have **a number of levers** that it could use, correct.

A. Correct, yeah.

Tr. Testimony

Jerry Dischler
VP & General Manager, Google Ads

Q. And Google has **pricing knobs or tunings** that it can use to impact search ad pricing; correct?

A. Yes.

Tr. Testimony

Dr. Adam Juda
VP, Product Management

Q. And you defined a **tuning as a mechanism by which the weights in the auction function are adjusted**. Would you agree on that?

A. That sounds reasonable to me.

Q. **Tunings can impact pricing**, correct?

A. They can.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Tr. 1207:17–19 (Dischler (Google)); Tr. 4111:12–17 (Juda (Google)).

13

Dr. Adam Juda
VP, Product Management

Q. So, yes, ads quality sometimes does try and **raise prices**.

A. I would describe it less as raising prices and more coming up with better prices or **more fair prices, where those new prices are higher** than the previous ones.

Tr. Testimony

REDACTED FOR PUBLIC FILING

2019

Message

From: Darin Fisher [Redacted@google.com]
Sent: 2/5/2019 6:13:51 PM
To: Benedict Gomes [Redacted@google.com]
CC: Anil Sabharwal [Redacted@google.com]
Subject: Fwd: CONFIDENTIAL: Search revenue code yellow

Hey Ben,

Would love to get your thoughts on this. I imagine Edge and the rise of Win10 is a significant factor here (especially with the recent holiday device sales). I will dig into what we are seeing on the Chrome-side. I would love to get insight into what you see from your side and any thoughts you have on how we should approach this together.

Thanks,
-Darin

---------- Forwarded message ---------
From: **Jerry Dischler** <Redacted@google.com>
Date: Tue, Feb 5, 2019 at 9:53 AM
Subject: CONFIDENTIAL: Search revenue code yellow
To: Prabhakar Raghavan <Redacted@google.com>, Philipp Schindler <Redacted@google.com>, Ross Monro <Redacted@google.com>, cersei-2019 < Redacted @google.com>, Surojit Chatterjee < Redacted @google.com>, Ben Gomes <Redacted@google.com>, Anil Sabharwal <Redacted@google.com>, Darin Fisher <Redacted@google.com>, Nick Fox <Redacted@google.com>

All,

Shiv and I are **calling a code yellow for Search revenue** starting today. We've seen steady weakness in the daily numbers and are likely to end the quarter significantly behind if we don't turn things around.

This is material non-public information, so please do not share this message broadly. We also pride ourselves in not asking our teams to worry about revenue, so please keep this message within this core team.

If we divide up the weakness, there are three contributing factors:

1. **Search query growth is significantly behind forecast**, particularly on desktop. There is a chance that Chrome is a contributor to this weakness.
==> **Ben and Darin**: We would like a **single owner from the Search and Chrome teams** to conduct urgent analysis to understand the nature of the weakness.

2. The **timing of our revenue launches is slightly behind** where it was last year. +Darshan Kantak and +Sunita Verma will lead this workstream and the Code Yellow effort overall. Our top priority in this stream is to deliver Q1 revenue launches during February. +Surojit Chatterjee, **we'll need a lead from your team** as well in the core team.

3. There are **several advertiser-specific and sector weaknesses**, including [Redacted] US Financial Services, and Autos. +Andy Miller will lead efforts on this workstream, working on advertiser/sector analysis and sales program acceleration.

Ex. No.
UPX2043
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-03836063

"[C]alling a **code yellow for Search revenue** starting today. We've seen **steady weakness in the daily numbers** and are **likely to end the quarter significantly behind** if we don't turn things around."

"The **timing of our revenue launches is slightly behind** where is was last year."

REDACTED FOR PUBLIC FILING

Jerry Dischler
VP & General Manager, Google Ads

Q. And in some of the launches you recall have **increased prices 5 percent**; is that correct?

A. **Yes; for the typical advertiser, yes**. With every advertiser, every advertiser behaves differently. So I'm not going to say across the board.

* * *

Q. And when Google launched price increases of 5 percent on search ads, it resulted in an increase in revenue to Google; correct?

A. **Typically, it would result in an increase in revenue**.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Jerry Dischler
VP & General Manager, Google Ads

Q. Sir, would you agree that Google has **raised search ad prices by 10 percent** for some queries? Correct?

A. By 10 percent for some queries? **It's possible, yes**.

* * *

Q. Would [Google] keep enough advertisers so that [its] **revenue would go up if [Google] implemented a 15 percent increase**?

A. I imagine that's what the author would say, yes.

Q. Do you have any reason to think that that's not true?

A. No.

Q. Yes or no, did you give that answer?

A. That is the answer I gave on September 28, 2020, yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Dr. Mark Israel
Google Expert
Compass Lexecon

Q. Now, **prices for Google's ads have risen over the past decade**; is that right?

A. Overall -- nominal prices on average, **I think it's fair that they have gone up**. It depends a lot on what you look at and what index you use, but I think it's fair that on average, they've gone up.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Search Ads Price Increase: CPCs More Than Doubled

Google's Search Ads Price Index, PCs and Mobile Phones (US)

PCs — Mobile Phones
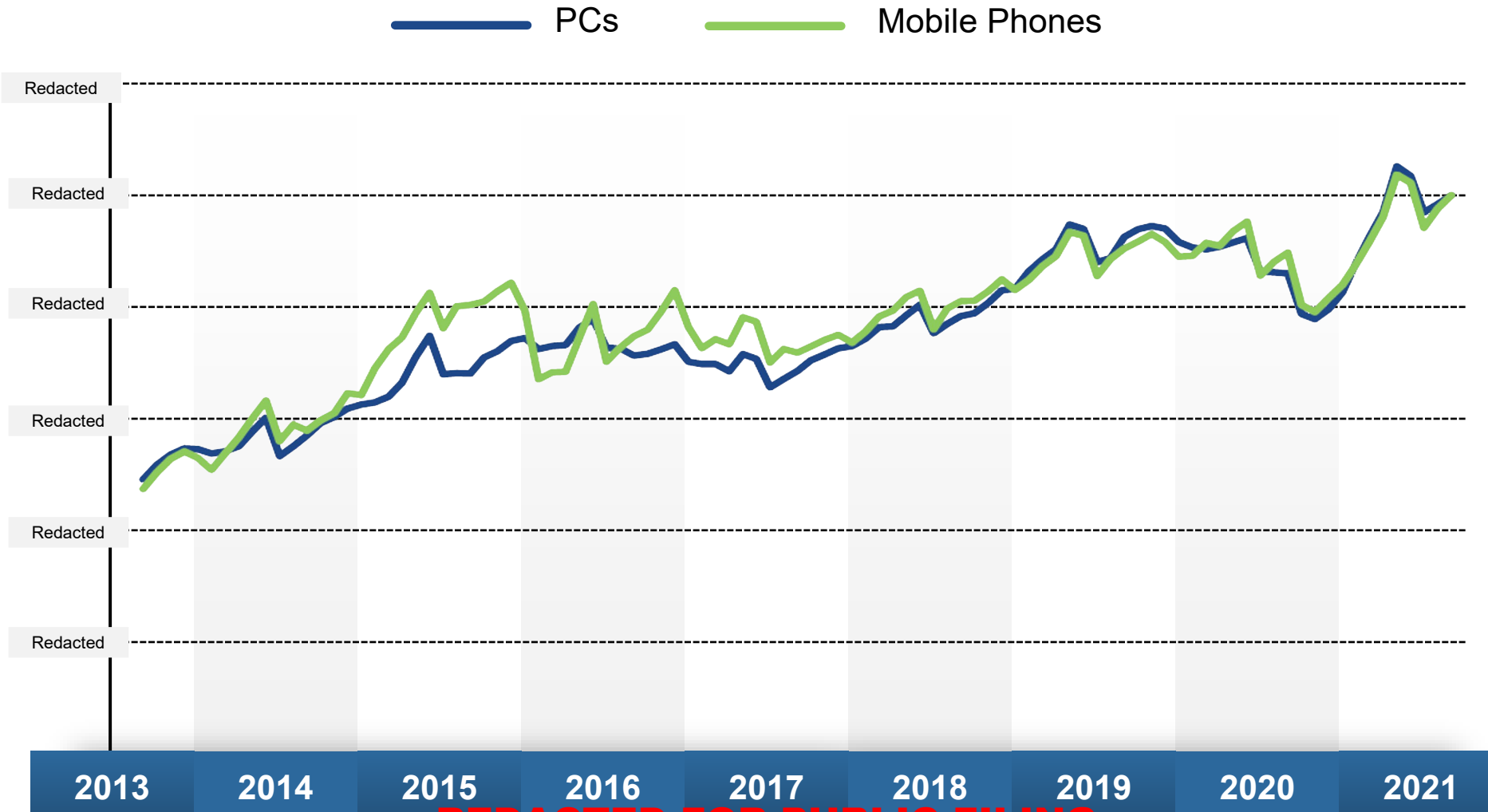
REDACTED FOR PUBLIC FILING

Search Advertising Is Incredibly Profitable

Adrian Perica
VP, Corporate Development

"[T]here aren't so many businesses on the planet that have **such high marginal profit[] on incremental revenues**."

UPX0635 (2018)

Dr. Sridhar Ramaswamy
Former CEO & Founder at Neeva; Former SVP, Ads/Commerce at Google

"[S]earch is one of the **most profitable businesses ever**."

Tr. Testimony

Nick Fox
VP, Product Management

"**What are our superpowers?** . . . . **Resources: our core business (Search) is incredibly lucrative** … providing **endless capital**…."

UPX0275 (2021)

REDACTED FOR PUBLIC FILING

UPX0635 at -352 (emphasis added); Tr. 3796:5–3798:22 (Ramaswamy (Neeva)); UPX0275 at -078 (emphasis added).

20

2020

Background
- Search advertising is one of the world's greatest business models ever created - maybe Windows is on that same level as Christian and I discussed at dinner & there are certainly illicit businesses (cigarettes or drugs) that could rival these economics, but we are fortunate to have an amazing business

- Part of what has been so amazing about that is that we've essentially been able to ignore one of the fundamental laws of economics - businesses need to worry about supply and demand

- When talking about revenue, we could mostly ignore the demand side of the equation (users and queries) and only focus on supply side of advertisers, ad formats, and sales

- Sure, we had to build the best product, made smart marketing/distribution investments to get our product everywhere, but we could essentially tear the economics textbook in half

- We had a few jolts across time, such as
  - iOS 7 when Apple moved the search access point in Safari
  - Mozilla moving search default to Yahoo where we lost some users
- But these were mostly exceptions that reminded us how lucky we were

- Nothing can defy the economics foundations forever and the law large numbers catches up with everyone - even Google - such that user and queries are becoming an important input into revenue

Situation
- So we're entering a new world - with a lot of uncertainty around how to adjust our incentives and targets to care about both sides of the equation

- I think we need to acknowledge that there's a lot of emotion and fear wrapped up in where we go next - how do we keep evolving without destroying the secret sauce that has made Search so wonderful

- **Ads/Revenue:** When I talk to folks in ads and revenue, I hear fear and frustration that they are held to revenue targets where they only control half of the picture - the old model of things getting thrown over the wall to them has outlived its usefulness
  - There's talk of suggesting that the Search team consider new goals around query quotas, focusing on monetizable queries, returning towards focusing Search experience on high revenue countries

- **Search:** When I talk to my search friends, I hear similar fear around not focusing on the next generation of search users (even if lower monetizing today), avoiding any metrics or targets that could lead to unnatural search experiences to chase revenue, and DAU (not queries) is the one metric that matters

Ex. No.
UPX0038
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-16071619

"Search Advertising is **one of the world's greatest business models ever created** . . ."

"Part of what has been so amazing about that is that we've essentially been able to **ignore one of the fundamental laws of economics** – businesses need to worry about supply and demand[.]"

"Sure, we had to build the best product, made smart marketing/distribution investments to get our product everywhere, **but we could essentially tear the economics textbook in half**[.]"

REDACTED FOR PUBLIC FILING

2018

Message
From: Jerry Dischler [Redacted@google.com]
Sent: 10/22/2018 3:44:10 AM
To: Prabhakar Raghavan [Redacted @google.com]
CC: Vivek Raghunathan   Redacted   @google.com]; Vishal Sharma [Redacted@google.com]
Subject: Re: Really basic video ads questions

Inline

On Sun, Oct 21, 2018 at 8:19 PM Prabhakar Raghavan <Redacted@google.com> wrote:
Gents - I'm looking

PRIVILEGED & CONFIDENTIAL
go/insidertrading
go/compliance

Overview of Search and YouTube Ads Revenue

October 12, 2018

GOOGLE CONFIDENTIAL   1

Yes! Although no advertiser really says zero tolerance and we're still trying to seek out what an acceptable level is for many of the top brand advertisers.

Thanks.

--
p.r.

Ex. No.
UPX0342
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-04183957

Google.com revenue growth:
within ~1ppt of 21% Y/Y for 8 of last 9 years

30%

22%   21%   20%   21%   23%   22%   20%
                        19%

2010   2012   2014   2016   2018
$17B $83B
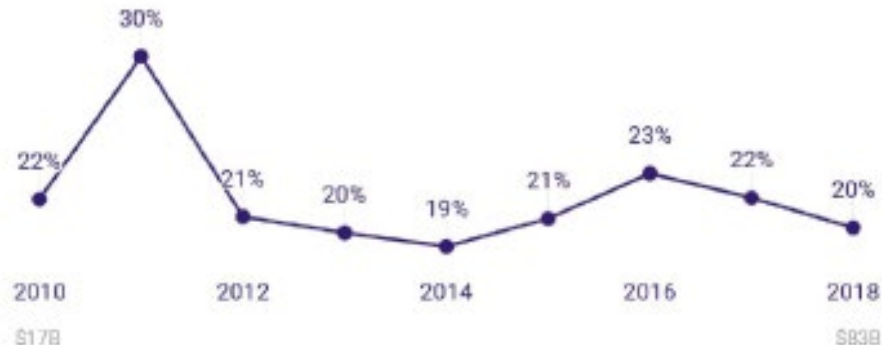
~2/3rds of company's revenue and $ growth for 10+ years

Fixed-FX

Dr. Prabhakar Raghavan
SVP, Knowledge & Information Products

Q. And this chart shows that between the years 2010 and 2018, the . . . Search Ads team consistently met the OKR for revenue growth in the neighborhood of 20 percent; correct?
A. Yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

2018

Message

From: Jerry Dischler [Redacted@google.com]
Sent: 10/22/2018 3:44:10 AM
To: Prabhakar Raghavan [Redacted @google.com]
CC: Vivek Raghunathan [Redacted @google.com]; Vishal Sharma [Redacted@google.com]
Subject: Re: Really basic video ads questions

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PRIVILEGED & CONFIDENTIAL
go/insidertrading
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GOOGLE CONFIDENTIAL   1

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is for many of the top brand advertisers.

Thanks.

--
p.r.

Ex. No.
UPX0342
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-04183957

RPM has become the dominant growth driver
Redacted

Maintained ~20% Y/Y growth over several years
RPM gains making up for diminishing query volume contribution

[TOTAL] Query & RPM contribution to total G.com Y/Y revenue growth

Redacted

Fixed-FX; not adjusted for country mix

1 **Monetisation gains now driving majority of revenue growth**
- In 2018: Red. of growth driven by RMP, however that gets to Red. when we adjust for country mix

>> *What's the source of the RPM strength?*

REDACTED FOR PUBLIC FILING

2019

From: Jerry Dischler <Redacted@google.com>
To: Anil Sabharwal <Redacted@google.com>
Sent: Fri, 3 May 2019 09:05:53 -0700
Subject: Re: Important SQV Update
Cc: Prabhakar Raghavan <Redacted@google.com>, Nick Fox <Redacted@google.com>, Benedict Gomes <Redacted@google.com>, John Maletis <Redacted@google.com>, Hiroshi Lockheimer <Redacted@google.com>

Thanks Anil for pushing your team and for being open to this whole line of thinking. Is there any chance we can converge on this more quickly? To elaborate:

Just looking at this very tactically, and sorry to go into this level of detail, but based on where we are I'm afraid it's warranted. We are short __% queries and are ahead on ads launches so are short Redacted% revenue vs. plan. If we don't hit plan, our sales team doesn't get its quota for the second quarter in a row and we miss the street's expectations again, which is not what Ruth signaled to the street so we get punished pretty badly in the market. We are shaking the cushions on launches and have some candidates in May that will help, but if these break in mid-late May we only get half a quarter of impact or less, which means we need Redacted%+ excess to where we are today and can't do it alone. The Search team is working together with us to accelerate a launch out of a new mobile layout by the end of May that will be very revenue positive (exact numbers still moving), but that still won't be enough. Our best shot at making the quarter is if we get an injection of at least __%, ideally Redacted%, queries ASAP from Chrome. Some folks on our side are running a more detailed, Finance-blessed, what-if analysis on this and should be done with that in a couple of days, but I expect that these will be the rough numbers.

The question we are all faced with is how badly do we want to hit our numbers this quarter? We need to make this choice ASAP. I care more about revenue than the average person but think we can all agree that for all of our teams trying to live in high cost areas another $Redacted in stock price loss will not be great for morale, not to mention the huge impact on our sales team.

I'm super proud of our pure approach at Google and don't want to poison the culture of any team, and this is why I haven't pushed harder. I also don't want the message to be "we're doing this thing because the Ads team needs revenue." That's a very negative message. But my question to all of you is - based on above - what do we think is the best decision for Google overall?

In that spirit, do we think it's worth reconsidering a rollback? Or are there very scrappy tactical tweaks we can launch with holdback that we know will increase queries? (For example, can we increase vertical space between the search box/icons/feed on new tab to make search more prominent? Are there other ranking tweaks we can push out very quickly? Are there other entry points we haven't focused on that we could push on soon?) Just to be clear, the reason I haven't pushed harder on a rollback so far is because I don't want the message to be

Would love your thoughts and sorry for the long email.

Best,
-Jerry.

On Wed, May 1, 2019 at 8:20 PM Anil Sabharwal <Redacted@google.com> wrote:

Ex. No.
UPX0522
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL

GOOG-DOJ-13030193

"**If we don't hit plan . . . we miss the street's expectations** again . . . so we get punished pretty badly in the market. **We are shaking the cushions on launches** . . . ."

Jerry Dischler
VP & General Manager, Google Ads

Q. Part of your goal of shaking the cushions was to find more revenue for Google; correct?

A. **My goal was to get creative so that we could try to make our quarter, yes.**

Tr. Testimony

REDACTED FOR PUBLIC FILING

UPX0522 at -193 (emphasis added); Tr. 1216:20–23 (Dischler (Google)).

24

Google's Steady Increase In Search Ads Revenue

2018

Google

Search Ads Overview

December 2020

Confidential + Proprietary

Ex. No.
UPX0012
1:20-cv-03010-APM
GOOG-DOJ-22529383

GOOG-DOJ-22529383.001

Search Ads and O&O Revenue

	2012	2013	2014	2015	2016	2017	2018	2019	2020
	$32B Redacted	$37 Redacted	$42B Redacted	$50B Redacted	$59 Redacted	$71B Redacted	$84B Redacted	$98B Redacted	Redacted
YoY Growth	18%	15%	14%	18%	19%	21%	18%	16%	Redacted

Google   Figures based on Fixed FX revenue
Source: XBridge

Confidential + Proprietary
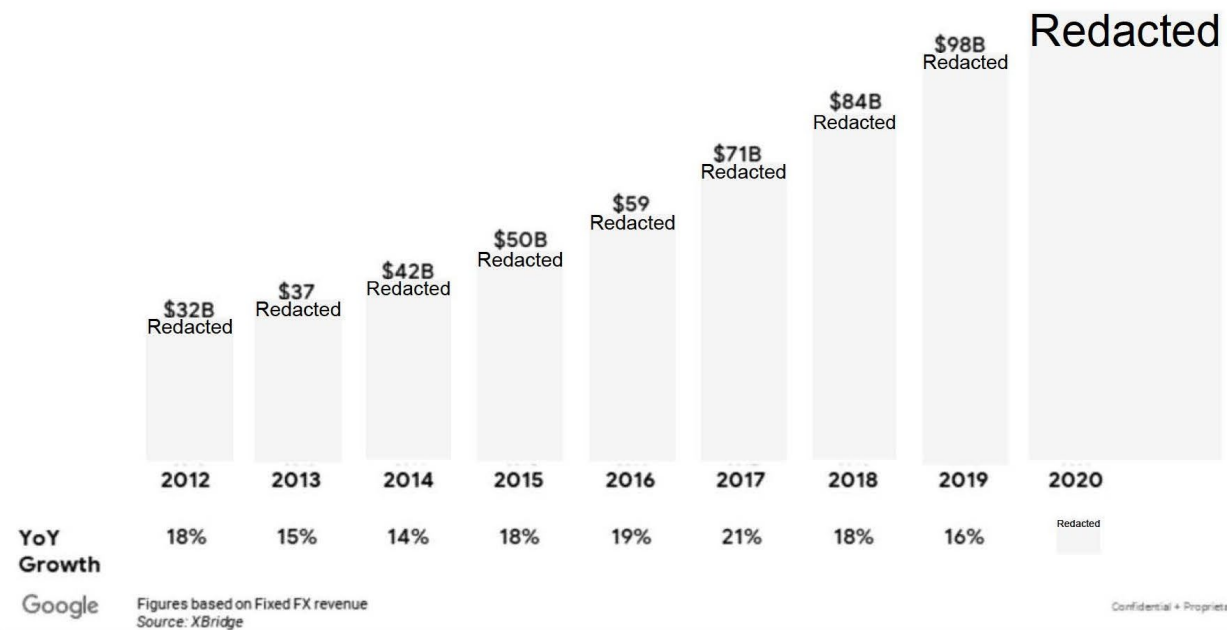
First off we wanted to remind you that we are all part of a most amazing business.
Search Ads + O&O has **grown at an incredible rate over the past decade** - typically in the high teens - reaching $98B last year, and despite covid - **we'll exceed $100B this year**.
You can see that the vast majority of our growth has come from Mobile search - especially in the last 5 years.
Desktop has largely plateau-ed, while AFS has declined.
And just in the last couple years - you can see O&O like discovery and gmail starting to really contribute.

REDACTED FOR PUBLIC FILING

Google Search+ Margins

USD Millions	2014	2015	2016	2017	2018	2019	2020	2021
Booked Revenue	46,827	52,552	60,515	71,791	86,158	98,330	102,883	146,438
TAC	(7,101)	(7,175)	(8,226)	(11,198)	(14,482)	(16,976)	(18,576)	(26,344)
CAC								
Other COS								
Machine/Network								
Gross Margin								
Gross Margin %								
EngPM								
GBO								
Marketing								
G&A								
TI								
Operating Profit								
Operating Profit %								

Redacted

Sources: UPX0490 (Total Ads Annual tab, Column J), UPX0491 (Total Ads Annual tab, Columns H, I, J), UPX0492 (Total Ads (Mgt) tab, Columns I, J, K), UPX0493 (Total Ads (Mgmt) tab, Column J)

USDOJ-GOOG-00189774.001

- **Search Ads revenue exceeds $150 billion today**

- **Gross margin exceeds** Red. **%**

- **Operating profit exceeds** Red. **%**

REDACTED FOR PUBLIC FILING

Monopoly Power:
No Consideration Of Competitor Pricing

Monopoly power exists where a firm sets prices "**without considering rivals' prices**, something a firm without a monopoly would [be] unable to do."

United States v. Microsoft, 253 F.3d 34, 57–58 (D.C. Cir. 2001)

2022

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

United States of America, *et al.*,

Plaintiffs,   Case No. 1:20-cv-03010-APM

v.   HON. AMIT P. MEHTA

Google LLC,

Defendant.

State of Colorado, *et al.*,

Plaintiffs,   Case No. 1:20-cv-03715-APM

v.   HON. AMIT P. MEHTA

Google LLC,

Defendant.

**DEFENDANT'S THIRD SUPPLEMENTAL RESPONSES AND OBJECTIONS TO
PLAINTIFFS' NOVEMBER 1, 2021 NOTICE OF DEPOSITION OF GOOGLE LLC**

Defendant Google LLC hereby supplements its responses and objections to Plaintiffs'

November 1, 2021 Notice of Rule 30(b)(6) Deposition of Google LLC ("Notice"), as follows.

Ex. No.
UPX6021
1:20-cv-03010-APM

USDOJ-GOOG-00187388

"As a general matter, Google **does not regularly or systematically compare 'the relative pricing' of different Google digital advertising products**, nor does Google regularly or systematically compare 'the relative pricing' of 'Google search advertising' to advertising provided by different sellers."

REDACTED FOR PUBLIC FILING

Dr. Adam Juda
VP, Product Management

Q. Sir, you're not aware of anyone at Google doing any analysis of Bing's auction model; correct?

A. No one immediately comes to mind.

Q. You're also **not aware of anyone at Google ever doing any analysis of pricing of search ads at Bing**; correct?

A. **Nothing immediately comes to mind.**

Tr. Testimony

REDACTED FOR PUBLIC FILING

2016

Email document (Ex. No. UPX0461, 1:20-cv-03010-APM):

Message
From: Jerry Dischler Redacted@google.com]
Sent: 4/21/2016 8:29:33 PM
To: Sridhar Ramaswamy Redacted@google.com]
Subject: Re: Internet - Takeaways From Large NA Search Agency Check

SG; will bring up at next 1:1

On Thu, Apr 21, 2016 at 12:15 PM Sridhar Ramaswamy <Redacted@google.com> wrote:
Lets brainstorm this. If they are being consistent naysayers, we have a problem.

--Sridhar

On Thu, Apr 21, 2016 at 11:35 AM, Jerry Dischler Redacted@google.com> wrote:
Partially this and partially that he wants to distribute the generation of sacred cow slaying ideas so he is not a single point of failure so the rest of the team can be comfortable with these kinds of explorations.

I am going to push part of this back on Sundeep. But do think we as a leadership team could do more to encourage here. I just talked about this a bit in my team meeting. Mike and Vinod could be more accepting and encouraging though it is good to have their perspectives as defenders of quality.

On Thu, Apr 21, 2016 at 11:21 AM Sridhar Ramaswamy <Redacted @google.com> wrote:
Let me make sure I understand though: Is the saying that they are other sacred cows we need to slay?

On Thu, Apr 21, 2016 at 8:21 AM, Jerry Dischler <Redacted@google.com> wrote:
FYI/please do not forward

Sundeep brings up a deep issue and am thinking through this seriously. Would love to get any feedback you have on this important topic.

---------- Forwarded message ----------
From: Jerry Dischler <Redacted@google.com>
Date: Thu, Apr 21, 2016 at 8:20 AM
Subject: Re: Internet - Takeaways From Large NA Search Agency Check
To: Sundeep Jain < Redacted @google.com>

Let's discuss this.

I take your feedback seriously, as does Sridhar. We want to create a road for this kind of innovation to occur. At the same time these kinds of changes are "boil the frog" in nature. We never really had market pressure to clean up advertising - just look at the state of ads and in particular search ads when AdWords was announced. It was taken on as a moral imperative for that team and has served Google (and us personally) incredibly well. Unfortunately this approach comes with constraints, some of which are no longer valid. Sridhar is acutely aware of this which is why at every opportunity you are asked to present the holy grail findings. He wants to change the mindset of the group and this takes time and repetition.

The market argument is somewhat dangerous. The market is a trailing indicator and it's too easy to "boil the frog." When we arrive at a point that's too far the market will be all over us and we'll be in a spot where it'll be difficult to turn back. That is the reason we need a deep set of principles that guide our actions. But that set of principles needs to evolve over time and should not stifle innovation.

HIGHLY CONFIDENTIAL   GOOG-DOJ-03424732
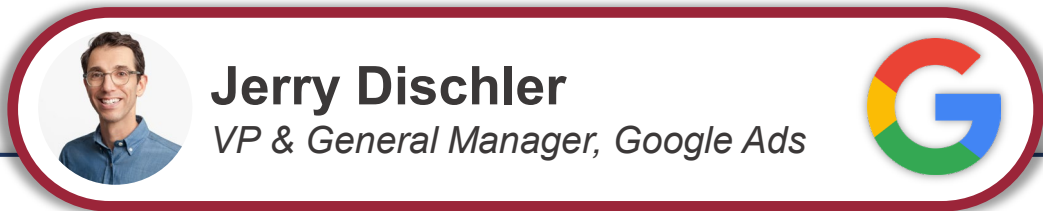
Ex. No.
UPX0461
1:20-cv-03010-APM

Jerry Dischler
VP & General Manager, Google Ads

"We **never really had market pressure** to clean up advertising . . . ."

Dr. Adam Juda
VP, Product Management

Q. THE COURT: **So is there any variable in the algorithm that takes into consideration the cost of advertising on other digital platforms?**

A. THE WITNESS: **No.** I don't think we would know with enough confidence what that would be at the auction level even if we wanted to do so, but no, **I can't think of anything like that.**

Tr. Testimony

REDACTED FOR PUBLIC FILING

Sundeep Jain
Former VP, Product Management (Mar. 2013-Oct. 2018)

Q. Was competition with Facebook for advertisements something you would consider when deciding whether to enact a particular user interface launch at Google?

A. [T]here are so many factors that go into a user interface launch. . . . **I don't think we looked at Facebook's ads** as -- so broadly, not really.

Tr. Testimony

REDACTED FOR PUBLIC FILING

2017

From: Evan Sidarto <Redacted@google.com>
To: Ben Friedenson <Redacted@google.com>
Subject: Re: Japan RPM
Cc: Mike Roszak <Redacted@google.com>, Tomonori Sakai < Redacted @google.com>, Patrick Orr <Redacted@google.com>

Glad it was helpful. I think the message you should take away are:
1) Japan is unique, we have a big competitor unlike US and UK
2) Japan advertisers are still behind the curve on online adoption, but this represents a big opportunity for Google (JP can be #2 market for Google after US if we have market metrics like US/UK)
3) From a sales perspective, we are doing everything we can to help extract the most from search

On Tue, Apr 25, 2017 at 9:53 AM, Ben Friedenson <Redacted@google.com> wrote:

+1 thanks!
On Mon, Apr 24, 2017 at 6:03 PM Mike Roszak <Redacted@google.com> wrote:

Great, thanks to you both!

On Mon, Apr 24, 2017 at 5:57 PM, Tomonori Sakai < Redacted @google.com> wrote:

Hi Mike,
To add to Evan's comment which I echo (thank you very much Evan!), I'd highlight the competitive situation in JP.

• JP is unique among our major countries in a sense that we have a player who competes against us head-to-head, Y!J (even though we surpassed Y!J in search revenue ~2 years ago). Advertisers split their search budget to Y!J and Google, which makes the auction pressure on Google less.
• So I don't think it's much apple-to-apple to compare RPM in JP against RPM in US/UK where we don't have competitors like Y!J, and I've rather compared our RPM against Y!J's (even though we need to make lots of assumptions to estimate it). And I believe our RPM surpassed Y!J's a few years ago on smartphones.

Another possible factor behind why the absolute mobile RPMs are lower than in other countries is that JP advertisers may value online less compared with those in US/UK. Online share of wallet in the ads market is Redacted in JP while it's Redacted in US and Redacted in UK (2016).

Tomo

On Tue, Apr 25, 2017 at 9:03 AM, Mike Roszak <Redacted@google.com> wrote:

Thanks Evan - very helpful. We were looking at both desktop and mobile RPMs where Japan was lower than other markets on both those dimensions. So if the underlying advertiser metrics are very healthy, do we have a theory for why the absolute mobile RPMs are lower?

On Mon, Apr 24, 2017 at 4:39 PM, Evan Sidarto <Redacted@google.com> wrote:

@Tomo feel free to share more thoughts

Hi Mike,
Are we talking about mobile or desktop RPMs? We are less concerned with the latter given query declines. I don't think either of them are a fair comparison for US/UK/AU given language differences. I've inserted a table below from search ads BFM.

• On mSearch JP is already the most mature in the world (i.e. % of msearch of total is highest).
• Google is already the #1 search in the market, so it's not a market issue. It would be worth asking if Japan has a separate tuning cluster from UK/US/AU. Perhaps they already are.
• mBids in Japan are a cut above the rest, so from a sales perspective, advertisers are already valuing mobile much higher than desktop.
• Creative excellence in Japan is one of the highest in the world - so we are using the best ad formats to derive

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Ex. No.
UPX0462
1:20-cv-03010-APM

"**Japan is unique, we have a big competitor unlike US and UK.**"

* * *

"JP [Japan] is unique among our major countries in the sense that we have a player who competes against us head-to-head, Y!J . . . **Advertisers split their search budget to Y!J and Google, which makes auction pressure on Google less.**"

Monopoly Power:
Market Shares

Market share of 60-65% meets "the levels that courts ordinarily find sufficient to establish monopoly power."

FTC v. Facebook, Inc., 581 F. Supp. 3d 34, 47–48 (D.D.C. 2022) (citations omitted)

Monopoly Power: Market Shares

Shares Of Search Ads Revenue (US)
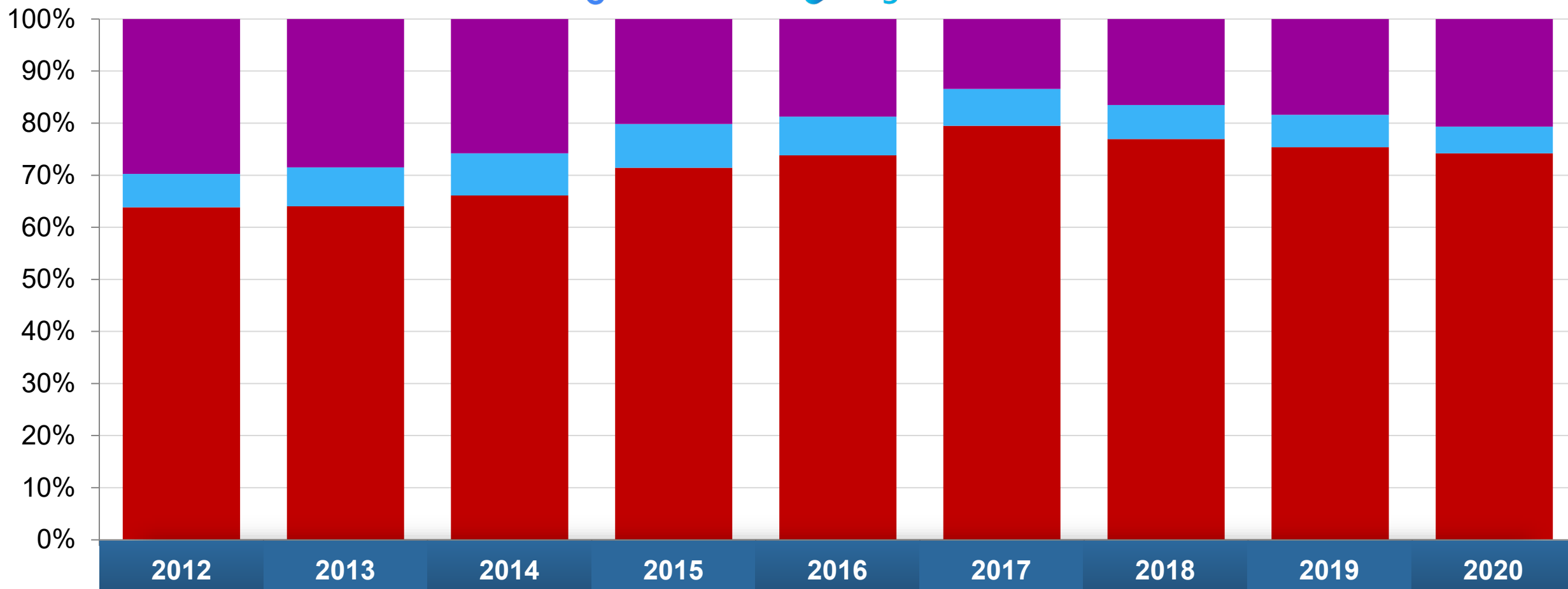
REDACTED FOR PUBLIC FILING

Agenda

1 Google Has Monopoly Power In Search Advertising

2 Search Ads Is A Relevant Product Market

3 Text Ads Is A Relevant Product Market

4 Google's Price Increases Harmed Advertisers

5 Google Failed To Prove Procompetitive Justifications

REDACTED FOR PUBLIC FILING

Market Definition:
Search Advertising

"Congress prescribed **a pragmatic, factual approach** to the definition of the relevant market and not a formal, legalistic one."

Brown Shoe Co. v. United States,
370 U.S. 294, 336 (1962) (emphasis added)

Expert conclusions on relevant market must be "**consistent with the business realities**" of a company.

FTC v. Sysco Corp.,
113 F. Supp. 3d 1, 36–37 (D.D.C. 2015) (emphasis added)

"[T]he relevant market must include all products **reasonably interchangeable** by consumers for the same purposes."

United States v. Microsoft Corp.,
253 F.3d 34, 51–52 (D.C. Cir. 2001)
(emphasis added) (cleaned up)

"[C]ourts look at whether two products can be used for the same purpose, and, if so, **whether and to what extent purchasers are willing to substitute one for the other**."

United States v. H & R Block, Inc.,
833 F. Supp. 2d 36, 51 (D.D.C. 2011)
(emphasis added) (cleaned up)
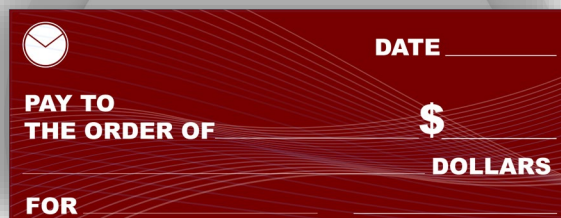
"[A]lthough it is literally true that, in a general sense, cash and checks compete with general purpose cards as an option for payment by consumers . . . cash and checks do not drive many of the means of competition in the general purpose card market."

United States v. Visa,
163 F. Supp. 2d 322, 338 (S.D.N.Y. 2001)

"[T]he mere fact that a firm may be termed a competitor in the overall marketplace does not necessarily require that it be included in the relevant product market for antitrust purposes."

FTC v. Sysco Corp.,
113 F. Supp. 3d 1, 26 (D.D.C. 2015) (cleaned up)

"[W]hile providers of all tax preparation methods may compete at some level, this does not necessarily require that [they] be included in the relevant product market for antitrust purposes."

United States v. H & R Block,
833 F. Supp. 2d 36, 54 (D.D.C. 2011) (cleaned up)

"**At a high enough price, even poor substitutes look good to the consumer**."

United States v. Eastman Kodak Co.,
63 F.3d 95, 105 (2d Cir. 1995)
(emphasis added) (cleaned up)

"In other words, **the existence of a larger market within which two products compete does not necessarily mean that they are reasonably interchangeable substitutes for one another**. In this case, there is undeniably a broader market for digital healthcare advertising in which programmatic, social media, and endemic websites all participate. **But the viability of such additional markets does not render the one identified by the government unusable**."

FTC v. IQVIA Holdings Inc.,
2024 WL 81232, at *24 (S.D.N.Y. Jan. 8, 2024) (emphasis added) (cleaned up)

Market Definition:
Search Ads

- **Peculiar characteristics and uses**

- **Distinct prices**

- **Industry or public recognition of the market**

Joshua Lowcock
Global Chief Media Officer

Q. Could we focus on search advertising for a moment? How do you define "search advertising"?

A. Search advertising can be defined as advertising that you buy in **response to people conducting a search** on a search engine or platform.

Tr. Testimony

Jerry Dischler
VP & General Manager, Google Ads

Q. . . . A search ad is an advertisement that's displayed on a search engines result page **in response to a user query**; correct?

A. Yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Dr. Hal Varian
Chief Economist

"[T]here is a market for search advertising of course."

Tracy-Ann Lim
*Managing Director,
Chief Media Officer*

JPMorgan Chase & Co.

A. [P]aid search is . . . an **always-on channel** so we call it like an **evergreen media channel**, where we capture demand year-round, whereas other[] channels, like paid social, operate on a campaign timetable so a campaign has a beginning, a middle, and an end.

* * *

Q. And when you say always on, what does that mean?

A. **Every day of every week of every month year-round**.

Tr. Testimony

Joshua Lowcock
Global Chief Media Officer

IPG
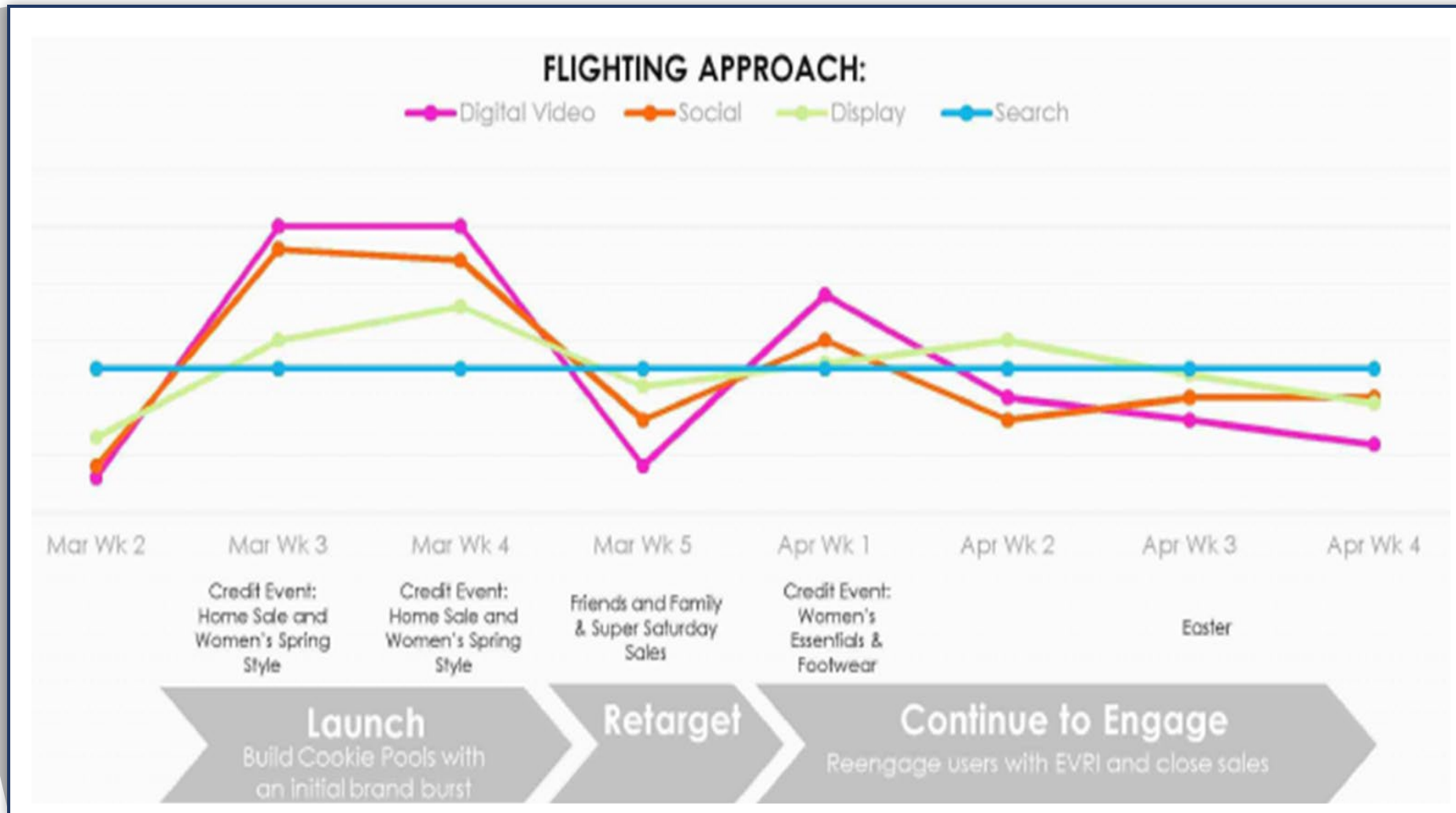
Q. Mr. Lowcock, could you explain the **differences in your mind between "search" and "display"** and whether or not they are substitutable from your perspective in your business?

A. 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**.

* * *

Q. Mr. Lowcock, could you please explain whether you consider any particular ad inventories or platforms to be **must haves** for an online ad campaign?

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

Tr. Testimony

REDACTED FOR PUBLIC FILING

Ryan Booth
*Senior Manager,
Paid Search*

THE HOME DEPOT

A. . . . Back to earlier part of the testimony, **search ads are unique** in the sense that somebody is going and initiating the action, going to Google, going to Bing, asking for solutions to -- asking for a solution.

Tr. Testimony

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2020

Discovery ads strategy (ACM)
June 5, 2020

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Ex. No.
UPX0033
1:20-cv-03010-APM

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Discovery ads provides a familiar pitch to social buyers

~$150BN spend from Search and Display buyers $80BN Incremental Social budgets

Display Buyer
Drive performance across publisher sites

Display

DV360

Search Buyer
Capture a person's declared intent

Search   Shopping

Uberversal
(UAC, ULC, SSC, SDC, TV4A)

Social Buyer
Create intent, find new customers

Discovery ads

- Beyond Search and Display buyers, Google can now access social budgets and *creatives*
- Discovery's lift and shift strategy brings social campaigns for feed surfaces and drives higher marginal ROI for social buyers using Search Intent

Google

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Market Definition: Search Ads Pricing

Jerry Dischler
VP & General Manager, Google Ads

Q. And in some of the launches you recall have **increased prices 5 percent**; is that correct?

A. **Yes; for the typical advertiser, yes**. With every advertiser, every advertiser behaves differently. So I'm not going to say across the board.

* * *

Q. And when Google launched price increases of 5 percent on search ads, it resulted in an increase in revenue to Google; correct?

A. **Typically, it would result in an increase in revenue**.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Prof. Michael Whinston

Plaintiff Expert
Prof. of Economics & Management, M.I.T.

A. What they did is they **artificially lowered or raised prices to advertisers**, and they looked to see what happened to ad revenue.

* * *

A. And the bottom line on this that they came to was, if we -- basically there's what they called a **stickage of 50 percent. So if they raised prices 10 percent, revenue would go up 5**.

* * *

A. So, yes, there was some reduction in advertising, but it was low enough that **raising prices was profitable**, and that's what convinced them that they could do this.

Tr. Testimony

- "**Agenda:**
  - **Do we want to raise prices?**
  - Is it ok to raise prices?
  - How we would roll-out?"

- "**10% is believed to be safe**
  - WoW noise is high (50% by spend seeing more than 10%).
  - We've launched things at 15% and heard nothing.
  - **GY was 20% on mobile on average**."

- "^{Redacted} @: one way to phrase this is that under perfect prices, **1 penny less than the breaking point is the right amount**. The advertiser is currently paying at least 20% less than their willingness to pay."

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2019

Redacted

Redacted

Ex. No.
UPX0509
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL

GOOG-DOJ-04451958

"The AION long term AE was in that regards **a key reassuring piece of evidence showing that** Redacted **spend stickage to a detectable price increase** matched shorter 6 week responses, while the CX Lab ROI study confirmed that advertisers do indeed detect and react to changes within these time frames."

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Agenda

1 **Google Has Monopoly Power In Search Advertising**

2 **Search Ads Is A Relevant Product Market**

3 **Text Ads Is A Relevant Product Market**

4 **Google's Price Increases Harmed Advertisers**

5 **Google Failed To Prove Procompetitive Justifications**

REDACTED FOR PUBLIC FILING

Market Definition:
Brown Shoe Factors

- **Peculiar characteristics and uses**

- **Distinct customers**

- **Distinct prices**

- **Industry or public recognition of the market**

Dr. Hal Varian
Chief Economist

Q. . . . PLAs are a **different species** than text ads; is that right?

A. Yes.

Tr. Testimony

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Jerry Dischler
VP & General Manager, Google Ads

Q. Sir, UPX12.005, is this an example of a text ad?
A. It is.
Q. **And a text ad contains the ad content and the text including possibly one, the URL, two, one to three headlines, and three, a one to two description line; is that correct?**
A. That's correct.

Tr. Testimony

Joshua Lowcock
Global Chief Media Officer

Q. What is a text ad?
A. …**So a text ad is just simply text, there's no image, there's no video, it is text only**.

Tr. Testimony

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Jerry Dischler
VP & General Manager, Google Ads

Q. Would you agree that a text ad gives an advertiser **more control** when their ad appears on a search engine results page?
A. It does.
Q. For a text ad, an advertiser can **select a set of keywords** to direct the text ad to appear in response to specific user queries?
A. A specific set of user queries, yes.
Q. But for a shopping ad, the advertiser does not select keywords that will respond to a query; correct?
A. That's correct.

Tr. Testimony

Dr. Hal Varian
Chief Economist

Q. With text ads, the **advertiser gets to choose the creative element** in the ad?
A. Yes.
Q. With text ads, the advertiser can identify the distinctions in their product versus other companies?
A. Yes.
Q. With **shopping or -- shopping ads, or PLAs, advertisers do not get to choose the creative in the ad**?
A. Okay.
Q. True?
A. I believe so.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Jerry Dischler
VP & General Manager, Google Ads

Q. And the majority of advertisers on Google cannot buy shopping ads or PLAs because **they're not actually selling physical products**; correct?
A. That's correct.

Tr. Testimony

Tracy-Ann Lim
Managing Director, Chief Media Officer

Q. And why does JPMorgan Chase not buy product listing ads or shopping ads?
A. We, for the most part, **represent intangible products and services.**
Q. So is it the case that the only search-related ads that JPMorgan buys are search text ads?
A. Yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

A majority of Google's search ad revenue comes from advertisers who buy only text ads

2021 Share of Google Search Ad Revenue From Advertisers Who:

- Purchase Text Ads But Not PLAs: 52.8%
- Purchase both Text Ads and PLAs: 46.9%
- Purchase PLAs But Not Text Ads: 0.1%

Google Customer Spend Data (DOJ RFP 2.76). (Whinston Report, Fig. 59, at 155)

37
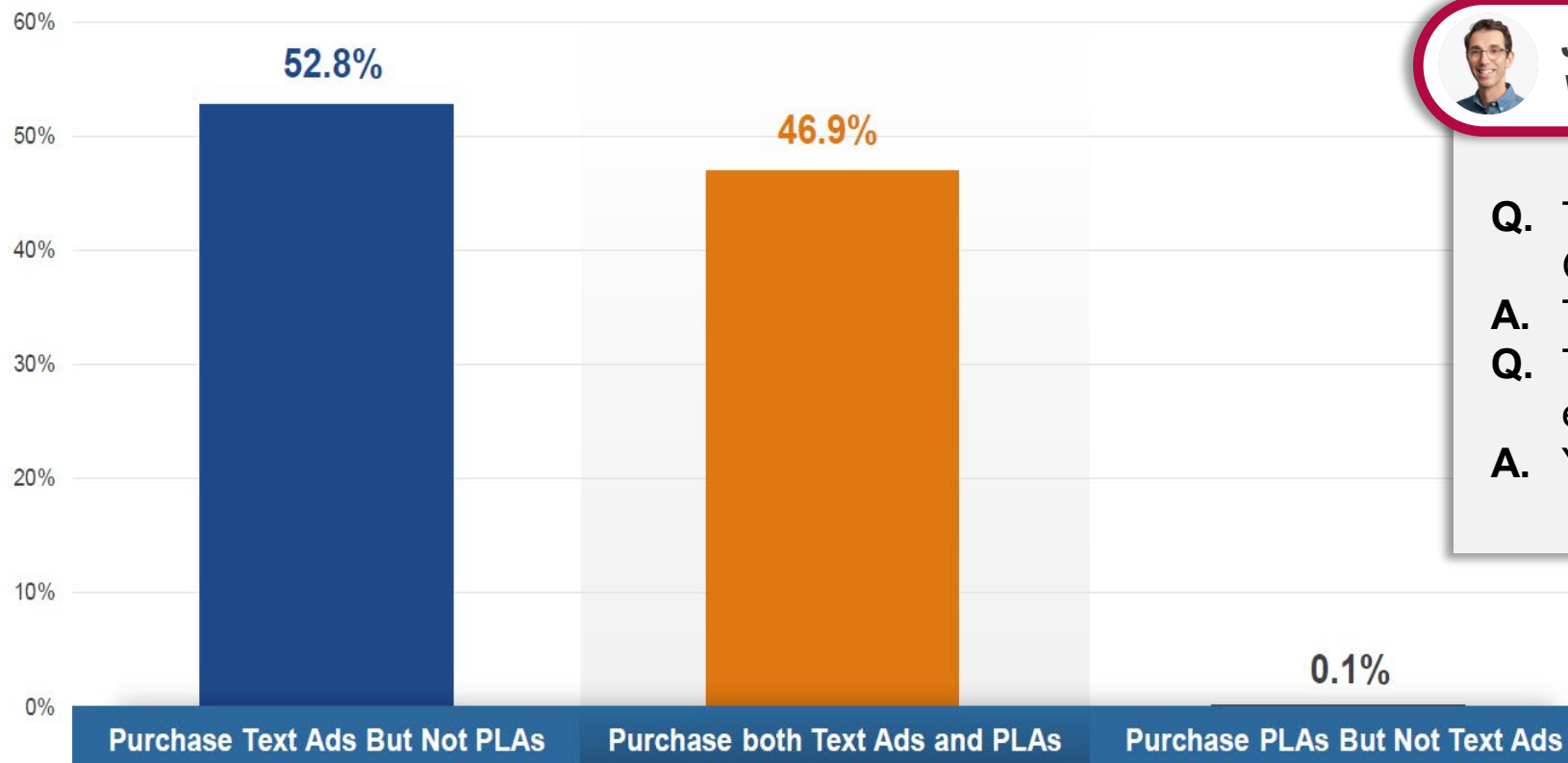
Jerry Dischler
VP & General Manager, Google Ads

Q. The majority of advertisers on Google purchase text ads, correct?
A. That's correct.
Q. The majority of revenue that Google earns is from text ads, correct?
A. Yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Dr. Adam Juda
VP, Product Management

Q. Google runs an ad auction for text ads, correct?
A. We do.
Q. And Google runs a **separate ad auction for shopping ads, or PLAs**, correct?
A. That is correct.

Tr. Testimony

Joshua Lowcock
Global Chief Media Officer

Q. And when shopping ads are sold in an auction, is that the same auction or a different auction than the auction for text ads?
A. It's a different auction.
Q. How does the auction for shopping ads differ from the auction for text ads?
A. They're **two separate auctions**.

Tr. Testimony

Jerry Dischler
VP & General Manager, Google Ads

Q. And I believe you stated that the **auction for text ads is different than the auction for shopping ads or PLAs**; correct?
A. It is.
Q. They're **completely separate auctions**; correct?
A. They are.

* * *

Q. And since text ad auctions and shopping auctions are separate, any changes to **the pricing in one auction does not impact the pricing of another auction; correct**?
A. That's correct.

Tr. Testimony

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Average Annual Cost Per Click (CPC) for US Queries, 2016–2021

━━━ Google (Text)   ━━━ Bing (Text)   ●●●● Bing (PLA)   ●●●● Google (PLA)

Redacted

Redacted

| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |

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2017

Redacted

EXHIBIT
PSX00191

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GOOG-DOJ-03773720

"[T]he hypothesis is that PLA's are good experience on shopping queries, however, the cpc's on PLAs arent [sic] comparable to text ads. Today these two formats are **siloed in their own world and don't compete**, it will be worth looking at pricing from that point of view."

REDACTED FOR PUBLIC FILING

Joshua Lowcock
Global Chief Media Officer

IPG

Q. And, Mr. Lowcock, if the price of Google's text ads **increased by 5 percent**, would you recommend to your clients to move their ad spend elsewhere?

A. No.

* * *

Q. Have you seen a trend with respect to the CPCs of Google's text ads?

A. **There has been an increase in price of CPC on text ads**.

Q. And have your clients moved their ad spend away from Google Search?

A. No.

Tr. Testimony

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Tracy-Ann Lim

Managing Director,
Chief Media Officer

Q. And just to drive down on this point, what is it that makes paid search text ads versus digital display ads not fungible?

A. **They exist for a different reason**. . . .

Tr. Testimony

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Ⓜ 2018

Google Search & Automotive - Summary

Ex. No.
UPX0915
1:20-cv-03010-APM

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FBDOJGOOG_00361061

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

Agenda

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Advertiser Harm:
Google Manipulates Auction Pricing

"[T]he material consideration in determining whether a monopoly exists is . . . [if] power exists to **raise prices** or to exclude competition **when it is desired to do so**."

Am. Tobacco Co. v. United States, 328 U.S. 781, 811 (1946) (emphasis added)

2018

Adventures in Pricing

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Redacted@, ads-thresholds-core@

Ex. No.
UPX0889
1:20-cv-03010-APM

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When Vanilla pricing may no be sufficient

Second Pricing works great most of the time, but there are failure scenarios

- **Weak or lack of Auction Pressure**
  - When no competition is present, or when competition is of inferior quality
- **Reserve pricing**
  - Reserve prices are generally lower than their second price counterparts

We need a way to extract value more directly

→ We need *pricing mechanisms* with *pricing knobs*

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Redacted

G 2013

Tuning for Smarties

(ads quality: we're no dummies)

Redacted

Ex. No.
UPX0043
1:20-cv-03010-APM

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GOOG-DOJ-12619436

"What are we tuning again? Prices!"

REDACTED FOR PUBLIC FILING

Redacted

G 2018

How should AQ think about Pricing?

Jan 2018 - Red

Note: This was reviewed and brought to resolution (preferred path) in AQER on 2/1 and 2/8. The outcome of these investigations, 6 months later, were then summarized in August here.

I - Strategic considerations

Pricing today

If we think of *pricing* as the action of defining the cost our advertisers' pay per unit of value (e.g. cost per click or cost per conversion), then pricing on google.com happens today in small touches all throughout the year.

Most AQ launches, in addition to trying to improve the value for users and advertisers (e.g quality improvements driving better conversions, new formats driving higher CTRs, etc) have some CPC or CPA component. We'll call this *'incidental'* pricing. We also directly affect pricing through tunings of our auction mechanisms, in general through the three levers that are format pricing, squashing or reserves. We'll call this *'intentional'* pricing.

As a result pricing on google.com is happening in a semi-controlled, semi-organic way that might not be ideal: We worry about how these changes stack up over time for individual advertisers. We worry that this might eventually - and unwillingly - lead us to a state where advertisers are unhappy with their performance. And we worry this might lead them at some point to modify their spend on google.com, possibly reallocating budget to other channels on timeframes we can't track (e.g. quarterly, annually). How can we assess the cumulative effects of our launches?

A side effect of these worries is a recent discomfort among leadership with the idea of intentional pricing launches. Historically we've aimed at maximizing long term value for both advertisers and google through intentional exploration. Redacted

Redacted

Types of risks at hand

When it comes to pricing there are two broad categories of risk we should consider:

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Ex. No.
UPX0509
1:20-cv-03010-APM

GOOG-DOJ-04451958

"We also **directly affect pricing** through tunings of our auction mechanisms, in general through the **three levers that are format pricing, squashing or reserves**. We'll call this *'intentional'* pricing."

1. **Format Pricing**

2. **Squashing**

3. **rGSP**

Advertiser Harm:
Format Pricing

Jerry Dischler
VP & General Manager, Google Ads

Q. And do you agree that format pricing is just one of the pricing knobs that Google has to adjust the search ads auction?

A. Yes.

Tr. Testimony

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2016

Expensive Formats AE

•••

AQER - December 5 2016

A Momiji Project

Ex. No.
UPX0727
1:20-cv-03010-APM

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GOOG-DOJ-03437041

A) Momiji Opportunity

Likely billions in format pricing + squashing

- ~10% RPM from Format Pricing
- ~5% RPM from Squashing
- Work well together (i.e. ~15% total)
- More opportunity on Mobile than Desktop

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ATTORNEY CLIENT PRIVILEGED

Momiji V1 (Review #23)
2017 Format Pricing Launch
...
AQER - June 89 2017

Produced in Native

Ex. No.
UPX0507

"Prices should go up . . . GammaYellow: Prices could be higher, and we think we would keep the money[.]"

* * *

"Most gains in Top-1, where we have no way to say what formats should cost . . . **Format pricing is our best knob to engender large price increases**[.]"

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Jerry Dischler
VP & General Manager, Google Ads

Q. For the typical or average advertiser, there was a price increase as a result of the momiji launch; correct?

A. For the typical advertiser, I believe the answer is yes, but as advertisers are fond of telling us, none of them are typical.

Tr. Testimony

2017

Launch: Momiji V1

Launch cal

Team

Redacted

Ex. No.
UPX0456
1:20-cv-03010-APM

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"There will be no proactive communication of this change, and no comm doc or impact list will be shared with sales."

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2008

Google™

Ads Quality: From A - Z in 16 chapters

Author: Kai Hansen
Status: Draft
Last Revision Date: January, 2008

Ex. No.
UPX0925
1:20-cv-03010-APM

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GOOG-DOJ-16763745

Google's Ad Serving System

Google

Query, Geo-location, Language, Other user preferences

Ads to show, order to show them in, price to charge per click

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Advertiser Harm:
Squashing

2017

So you want to work on the Auction
An introductory guide for Research collaborators and Thresholds newbies

Redacted

NB: All of the content and documents linked in this document are very confidential. Please do not share any of this material outside of Search Ad Auction and Prediction Stack SWEs/PMs without consulting Redac.

Introduction
Background
    Value Reserve Pricing
    Format Pricing
    Squashing
    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)

Ex. No.
UPX0430
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-10776576

"It is a pricing knob which increases an advertiser's LTV based on how far their pCTR is from the highest pCTR on query."

"[W]orking on **using it to engender a more broad price increase**."

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Prof. Michael Whinston

Plaintiff Expert
Prof. of Economics & Management, M.I.T.

A. [W]hat they would do is they would take . . . the bidder who had the second highest predicted clickthrough rate, and, in essence, in the formula for the auction, boost that ranking of that. And why? To basically **raise the price against the highest bidder**.

Tr. Testimony

G 2017

Launch: Butternut Squash
ads-heterodox@

Launch cal entry

Executive Summary
Why we are doing this
What we are doing
Butternut Limitations
How to Butternut a Launch
Reserve vs Second Pricing
Launch Timeline
Ads Layer Metrics
Launch Layer Metrics
Reranking analysis
pCTR Ratio Analysis
MH-CPC Analyses
Impact on Advertisers
Reranking Examples
Examples with Big CPC Changes
Headroom Analysis
Does the Max pCTR Candidate Show?
Communication Plan
Larry Email

Ex. No.
UPX0442
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-27838867

"recover lost revenue from launches which create value for our users and advertisers, but reduce revenue for Google"

REDACTED FOR PUBLIC FILING

Jerry Dischler
VP & General Manager, Google Ads

Q. And Google has implemented squashing in its text ad auction dynamics; correct?

A. It has.

Q. And one of the effects of squashing text ads is that the top winner of the auction pays more; correct?

A. In some cases, yes.

Q. **On average, the winner pays more; correct**?

A. On average, yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Prof. Michael Whinston

Plaintiff Expert
Prof. of Economics & Management, M.I.T.

A. [Google is] **introducing inefficiency into the auction**. . . . [T]hey're willing to do that because it helped them extract more out of the highest – the advertiser most likely to win – the top advertiser. . . .

Tr. Testimony

2017

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PRD: Kumamon

A holistic approach to fine-grain tuning and employing unlimited ML signals in the auction go/Kumamon

Redacted@, with lots of ideas and input from Redacted@ and Redacted@

August 2017

Introduction and Product Summary
Further Background and Motivation
New Auction Algorithm
Optimization System
Shared Constraints and Requirements
Quality Constraints and Requirements
Pricing Constraints and Requirements
But what about...

Introduction and Product Summary

The current function we use to select, rank and price search ads on Google.com (LTV) is a relatively simple algorithm consisting of bid, three quality signals, and some (mostly) hand tuned parameters. While we derive a lot of comfort from this simplicity, and our almost certainly mistaken belief that we fully understand how the system works, it may be that we can better achieve our various use cases and the fundamental product goal of improving long term revenue by embracing an automatically tuned system with more inputs. At the risk of being trite, how can we make the auction AI first?

Kumamon aims to create a world where, not only are we using many more ML signals (e.g. more quality and taste models and UBS classifiers) in the auction and tuning more parameters at finer granularity, but we are also doing so much more often and with better results. The core idea:
1. Run many blindness and advertiser experiments
2. Update macro models based on the experiments

EXHIBIT
PSX00167

HIGHLY CONFIDENTIAL

GOOG-DOJ-03034207

"negative user experience consequences"

"negative impact on the long term incentives for advertisers to improve quality"

REDACTED FOR PUBLIC FILING

2018

Redacted

Redacted

- Another way of doing revenue-efficiency tradeoff: Rank ads sub-optimally in exchange for more revenue

Redacted

Ex. No.
UPX0051
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL

GOOG-DOJ-11176224

"Another way of doing revenue-efficiency tradeoff: **Rank ads sub-optimally in exchange for more revenue**."

Advertiser Harm: "Randomized" GSP

2019

"Polyjuice" rGSP + εFP launch

ads-thresholds@, market-algorithms-team@, ads-metrics@

Ex. No.
UPX0457
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL

GOOG-DOJ-27877257

"[It] introduces a **probability of swapping ads** as their scores get closer . . ."

"It **avoids the creation of feature opt-out incentives** common with mechanisms that are tied to ad features (e.g. format pricing), **better embedding pricing into our auction**."

"It provides the high efficiency and **large tuning range** we need to accommodate Ads Quality tuning needs going forward."

REDACTED FOR PUBLIC FILING

2021

Google

Search Ads Auction
High level overview and recent explorations on rGSP

Redacted @, for budget-server bi-weekly meeting

HIGHLY CONFIDENTIAL | DX0153.001 | GOOG-DOJ-10775089

DX0153
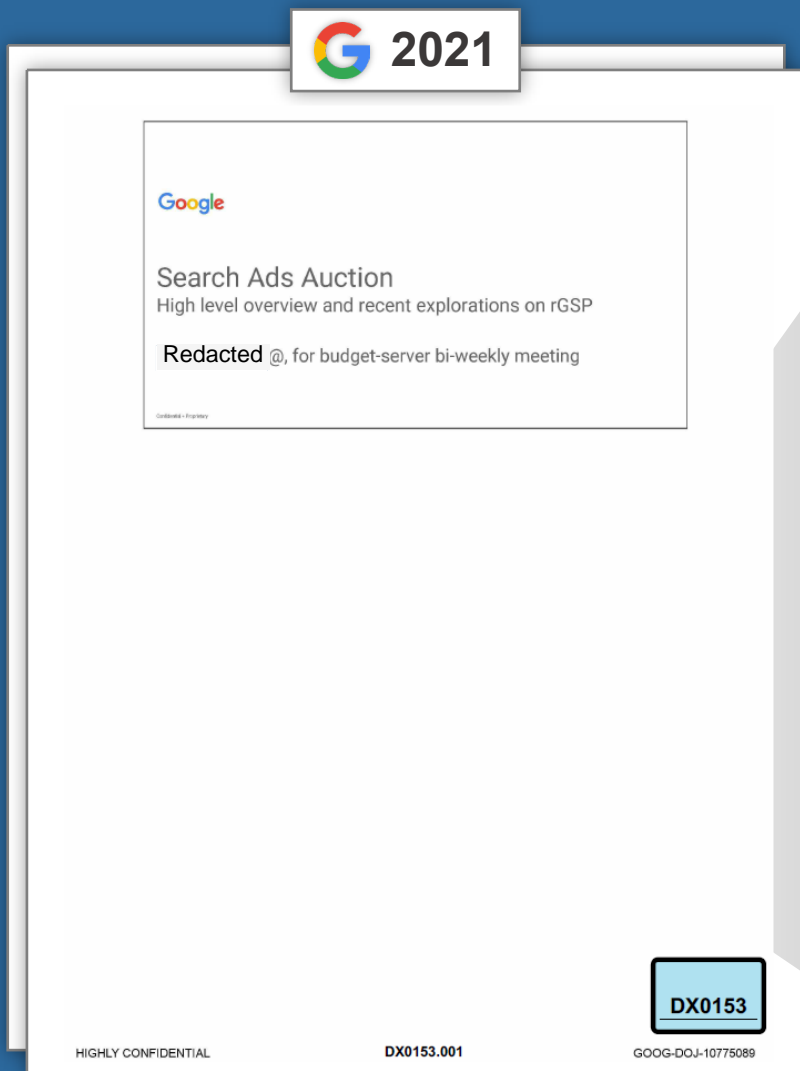
"A better pricing knob than format pricing"

"Would likely replace format pricing"

"Initial impact of 10+% RPM with the current tuning knob"

REDACTED FOR PUBLIC FILING

2018

"Randomization we can explain to advertisers"

* * *

- "Easy to tune, with the ability to raise prices (shift the curve upwards or make it steeper at the higher end) in small increments over time (AKA 'inflation')[.]
- We don't want to have to say 'we randomize' – that will have perception problems[.]"

REDACTED FOR PUBLIC FILING

Dr. Adam Juda
VP, Product Management

Q. rGSP was a launch that was incorporated into the Google ad auction in around 2019; is that correct?
A. Seems right.

* * *

Q. **But if they enter the ad auction in any way, they're subject to rGSP; agreed?**
A. rGSP is how the auction works today, yes.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Prof. Kinshuk Jerath

Plaintiff Expert
Prof. of Marketing,
Columbia Univ.

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

43

Dr. Mark Israel
Google Expert
Compass Lexecon

Q. Okay. So one of the things that rGSP does is, it says if you are bidding high enough, you don't have to worry about the swap, correct?

A. I think -- I mean, I think **it incentivizes advertisers who have a high value on the spot to bid higher** if they put a high value on the slot.

Tr. Testimony

2019

Ex. No.
UPX1045
1:20-cv-03010-APM

"[I]s there any component of quality?"

"Does not directly touch quality."

"Does exploration lead to better quality?"

"[H]aven't seen that it does[.]"

REDACTED FOR PUBLIC FILING

Agenda

1 Google Has Monopoly Power in Search Ads & Text Ads

2 Search Ads is a Relevant Product Market

3 Text Ads is a Relevant Product Market

4 Google's Price Increases Harmed Advertisers

5 Google Failed To Prove Procompetitive Justifications

REDACTED FOR PUBLIC FILING

Defendant's burden to "show" a sufficient justification for its conduct, "specif[y] and substantiate . . . [its] claims."

United States v. Microsoft Corp.,
253 F.3d 34, 59, 66 (D.C. Cir. 2001)

"The Government, having demonstrated harm to competition, the burden shifts to Dentsply to show that [its exclusionary contractual provision] promotes a sufficiently procompetitive objective."

United States v. Dentsply Int'l, Inc.,
399 F.3d 181, 196–97 (3rd Cir. 2005)

"This burden-shifting has evolved based on which party has access to the various categories of evidence and information, with any evidence of pro-competitive justifications likely to be under the defendant's control."

Viamedia, Inc. v. Comcast Corp.,
951 F.3d 429, 464 (7th Cir. 2020)

[T]he "procompetitive benefits" argument is the centerpiece of Meta's affirmative defense to the FTC's claims. . . . [B]ecause it is an affirmative defense, Meta will bear the burden of proof on the issue.

FTC v. Meta Platforms, Inc.,
2023 WL 3092651, at *1 (D.D.C. Apr. 26, 2023)

Quality Adjusted Price

2016

Redacted

HIGHLY CONFIDENTIAL   GOOG-DOJ-04882133

We don't yet have "value" reserves

- We still don't know value distributions
  - We need external data (not bids!)
  - Revenue optimal reserve and other advertiser's bids not correlated enough
- We still can't set a price per advertiser
  - Generalization problem not solved (e.g. pBid failed)
  - Robustness problem not solved

But maybe we can set an "optimal" query reserve...

"**After years of reserve work, we still aren't able to say what an advertiser's value is**.

We aren't really detecting value, we are finding ideal reserve for click loss trade-off. So, it's another revenue efficiency knob[.]"

REDACTED FOR PUBLIC FILING

"If we had good estimates of the following two values for each ad, then we could simplify the system and pretty much call it a day:
- Blindness cost (or sightedness value) of the ad
- **Advertiser value per click**

We've tried to get good estimates on both of these values **but have been unsuccessful**."

REDACTED FOR PUBLIC FILING

Dr. Adam Juda
VP, Product Management

"Within ClickQuality, I think the general belief is that **we're likely showing more low quality ads that we ought not be showing** relative to high quality ads that are not making their way through to the auction."

* * *

"Auction / Pricing . . . The general belief here is there is **more juice in getting prices right (higher) than in improving the allocation of ads**."

REDACTED FOR PUBLIC FILING

Dr. Mark Israel
Google Expert
Compass Lexecon

Q. Right. You don't try to determine what portion of nominal price changes is due to changes in quality; is that correct?

A. I mean, I report what Google has done in measuring that. **I don't do a separate econometric study.**

Tr. Testimony

2022

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

United States of America, *et al.*,

    Plaintiffs,

v.

Google LLC,

    Defendant.

Case No. 1:20-cv-03010-APM

HON. AMIT P. MEHTA

State of Colorado, *et al.*,

    Plaintiffs,

v.

Google LLC,

    Defendant.

Case No. 1:20-cv-03715-APM

HON. AMIT P. MEHTA

DEFENDANT GOOGLE LLC'S THIRD SUPPLEMENTAL RESPONSES AND OBJECTIONS TO DOJ PLAINTIFFS' FOURTH SET OF INTERROGATORIES

Pursuant to Rule 33 of the Federal Rules of Civil Procedure and the Local Rules of the United States District Court for the District of Columbia, defendant Google LLC ("Google"), by and through its undersigned counsel, hereby supplements its responses and objections to Plaintiffs United States of America and the States of Arkansas, California, Florida, Georgia, Indiana, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Montana, South Carolina, Texas, and Wisconsin's Fourth Set of Interrogatories as follows:

Ex. No.
UPX6015
1:20-cv-03010-APM

USDOJ-GOOG-00187313

"**In early 2018**, members of Google's ad auction team began what they called a 'holistic pricing project.' During this effort, the ads team tried to measure and track something they called 'Excess CPC.' . . . **Google paused the holistic pricing project and the associated adjustments in late 2019**."

Dr. Mark Israel
Google Expert, Compass Lexecon

A. [Excess CPC] is Google's metric that they reported over time. **I think they last reported a value in 2020**. . . . [I]t was their attempt to . . . measure **something like a quality adjusted price**.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Expanded Keyword Matching
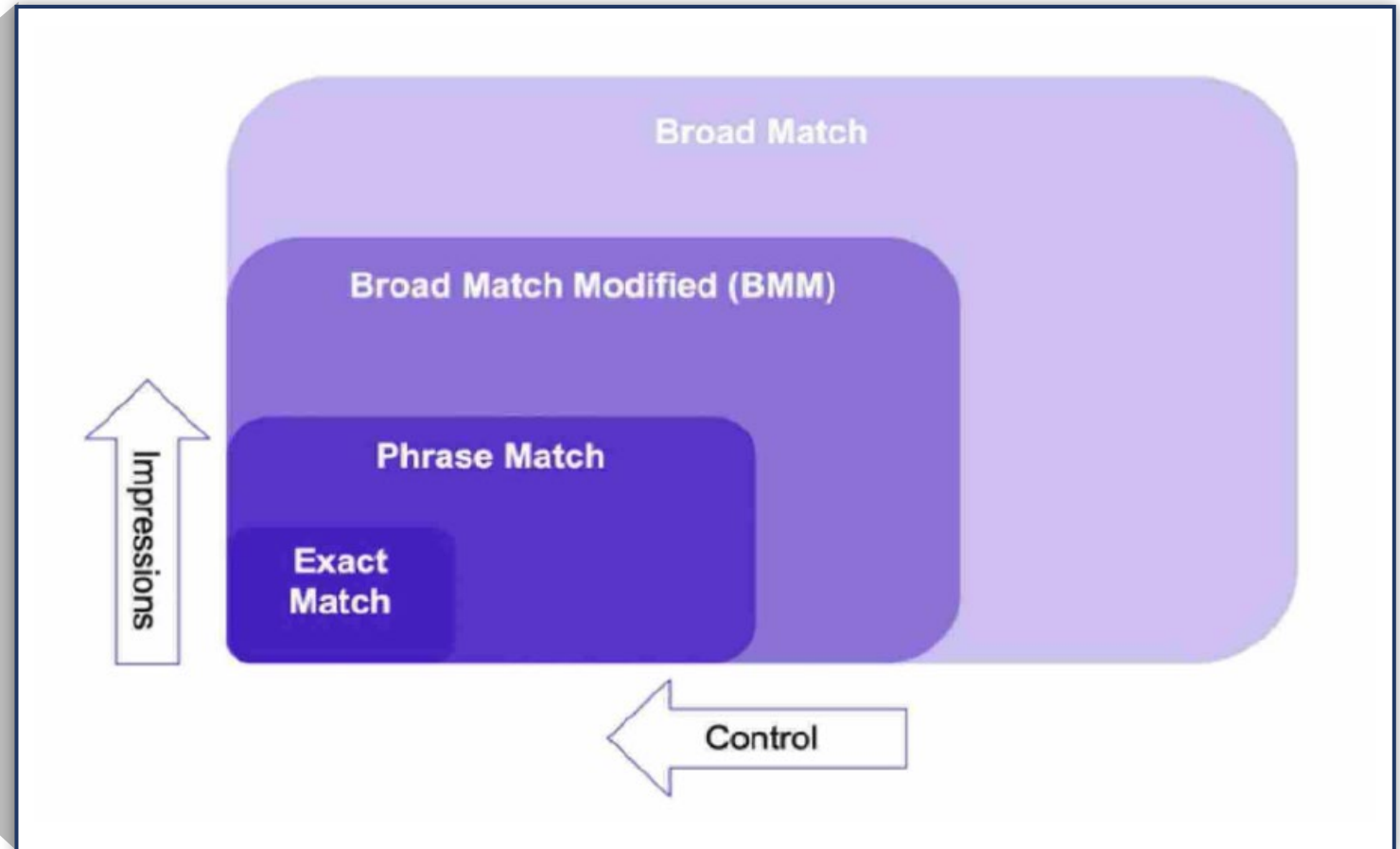
Prof. Kinshuk Jerath

*Plaintiff Expert
Prof. of Marketing,
Columbia Univ.*

A. [T]his makes it **easier for advertisers to enter auctions, but much more difficult for them to not enter these auctions**. So on average, that would lead to thicker auctions, exactly as [the Court] said, and thicker auctions means more -- higher prices.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Jerry Dischler
VP & General Manager, Google Ads

Q. An outcome of semantic matching is **thicker auctions**, correct?
A. Yes.

Tr. Testimony

Joshua Lowcock
Global Chief Media Officer

Q. [W]hat effect on CPC would you expect an increase in bidders in an auction to have?
A. It would increase the -- it should **increase the price**.

Tr. Testimony

REDACTED FOR PUBLIC FILING

Dr. Mark Israel
Google Expert
Compass Lexecon

Q. And all else equal, **more advertisers in an auction tend to lead to a higher price**?

A. . . . I think it's probably **true on average**. . .

Tr. Testimony

2018

Google

Semantic Exact and Close Match
Current targeting analyses

Redacted@, Redacted), advertiser-understanding@, ads-expmatch-team@

Advertiser Response Summit
Zürich, 2018-10-02

Ex. No.
UPX1117
1:20-cv-03010-APM

CONFIDENTIAL   GOOG-DOJ-22425101

Examples: increased auction pressure

Query	Baseline	Experiment
Redacted	KW: Redacted $0.23	KW: Redacted $5.81

REDACTED FOR PUBLIC FILING

2019

Redacted

DX0161

HIGHLY CONFIDENTIAL   DX0161.001   GOOG-DOJ-06260541

"[C]overage increase also leads to denser auctions and higher CPCs . . ."

REDACTED FOR PUBLIC FILING

2020

Search and O&O Ads

Search Ads Quality

July 22nd 2020

A/C Privileged
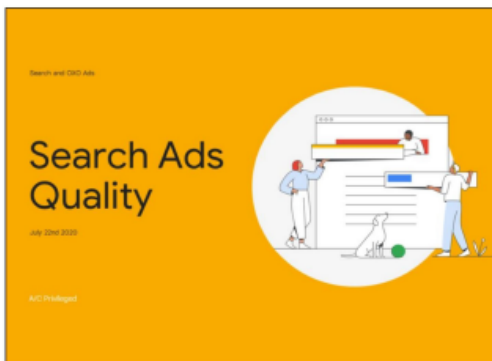
CONFIDENTIAL

EXHIBIT
PSX00548

GOOG-DOJ-29857446

RPM contributions per year
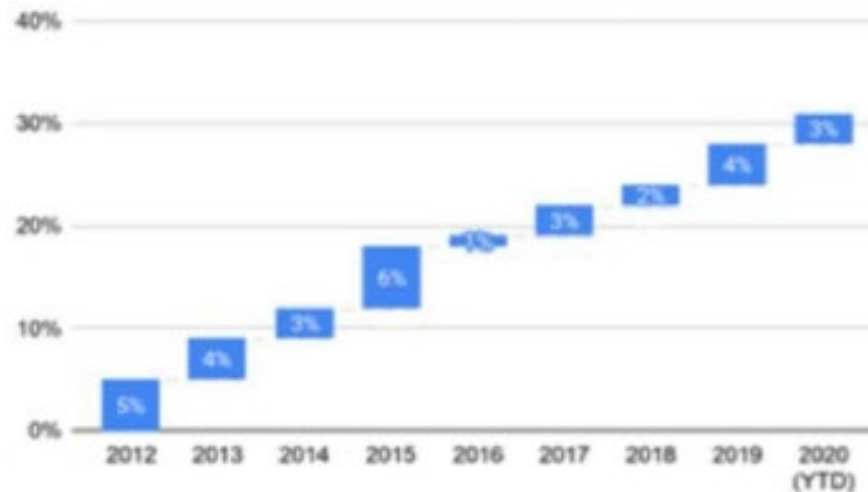
- Keyword targeting has delivered steady gains
- Semantification of match types started in 2012 with close variants & full semantic exact in 2018
- We will continue to harness gains from expansion and semantification using ML

REDACTED FOR PUBLIC FILING

Jerry Dischler
VP & General Manager, Google Ads

Q. Advertisers do not have the ability to opt out of semantic matching, correct?

A. That's correct.

Tr. Testimony

REDACTED FOR PUBLIC FILING

2019

Redacted

HIGHLY CONFIDENTIAL   ANGI-00240964

"**[I]t is like being in the ring with a sumo wrestler, with the lights turned off.** We just have to keep our heads down and work hard to innovate our way to the next level."

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Search Query Reports

tinuiti 2020

Q3 2020

Ex. No.
UPX0987
1:20-cv-03010-APM

Google Ads
Benchmark Report

Triopoly Series ○●○

Confidential   TINUITI00000116

Google US Text Ads
Spend Share Attributed to Search Queries

● August   ● September

Desktop
98%
74%

Phone
96%
75%

Tablet
94%
76%

source: anonymized Tinuiti advertiser data, 2020

"Google moved to **reduce the queries** included in Google Ads search terms reports, thereby **limiting advertiser visibility into the specific queries driving ad traffic**."

"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."

2020

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

WOW!

From: Martin, Kenny
Sent: Thursday, October 29, 2020 11:55 AM
To: Paskalis, Louis Redacted @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 via a real-world issue we discovered in our accounts. So I'm pretty sure Google did not notify them or us, no.

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

BANK OF AMERICA
Search Center of Excellence

Ex. No.
UPX0983
1:20-cv-03010-APM

From: Paskalis, Louis
Sent: Thursday, October 29, 2020 10:36 AM
To: Martin, Kenny Redacted @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 Redacted @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.

1

Confidential   BACGOOG-00003162

"See below – one of the more egregious examples of Google removing transparency from advertisers under the banner of 'privacy', IMO. **Search Query data has always [been] anonymized and aggregated**."

REDACTED FOR PUBLIC FILING

Mike James
Director, Software Development

Q. . . . [D]o you recall any conversations with Google about whether there are privacy issues with regard to the data that you referred to as obfuscated in Exhibit 4?

A. I have **no recollection of conversations regarding privacy concerns in the search query report data prior to this change**.

Des. Testimony

REDACTED FOR PUBLIC FILING

2020

Redacted

Ex. No.
UPX0526
1:20-cv-03010-APM

CONFIDENTIAL

GOOG-DOJ-29814524

Dr. Adam Juda
VP, Product Management

"While a query can contain sensitive information . . . queries are not PII . . . "

REDACTED FOR PUBLIC FILING

Prof. Kinshuk Jerath

*Plaintiff Expert
Prof. of Marketing,
Columbia Univ.*

A. [F]or 20 percent of their spend on Google, the **advertisers were not even told which queries they're buying** . . . . [T]his is like if you buy a product in a supermarket but they don't tell you what you actually bought. . . . **You should be entitled to know that at least this is where I spent my money**.

Tr. Testimony

REDACTED FOR PUBLIC FILING

ROI

ROI ≠ Substitutability

2017

Produced in Native

Ex. No.
UPX0519
1:20-cv-03010-APM

GOOG-DOJ-06240761

Macro ROI Investigation
Reg - June 2017
(w/ contributions from Redact Redacted)

Executive summary
Methodology
A - Measuring ROI
B - Perception of ROI
C - Spend decision making
D - Implications for format pricing
Annex I – reference documents

Executive summary

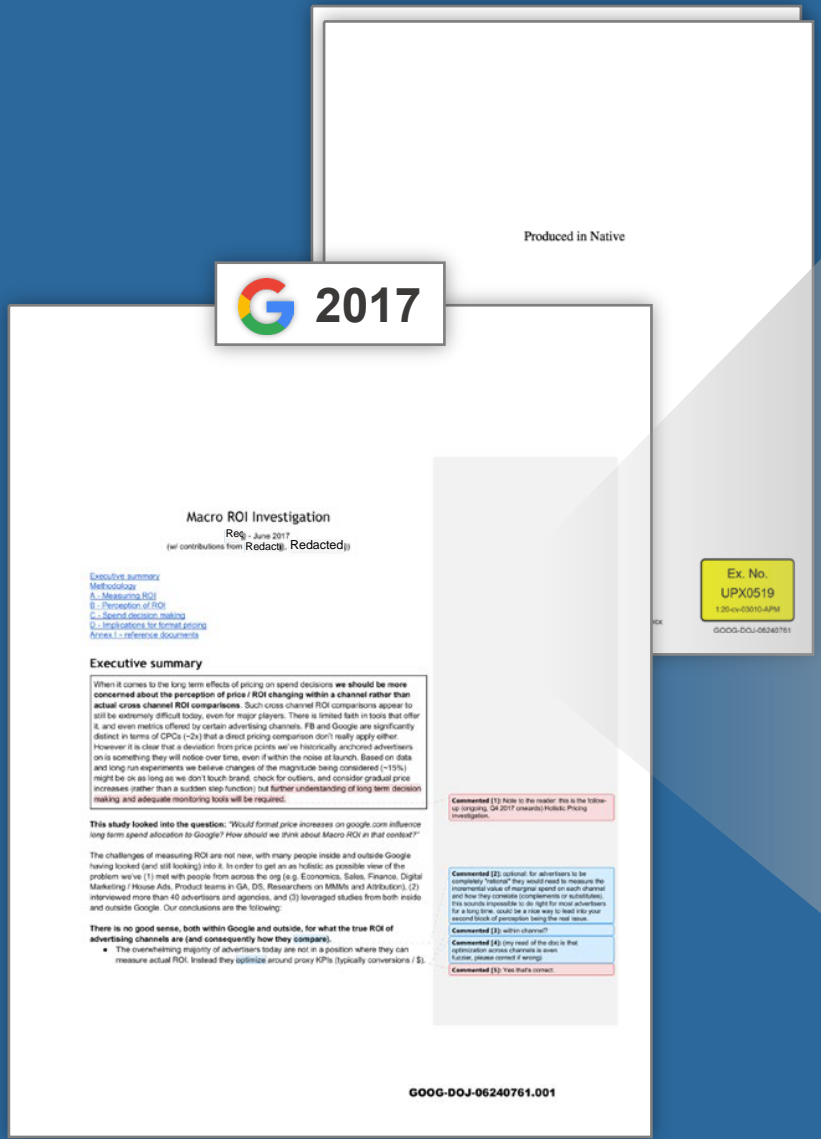When it comes to the long term effects of pricing on spend decisions **we should be more concerned about the perception of price / ROI changing within a channel rather than actual cross channel ROI comparisons.** Such cross channel ROI comparisons appear to still be extremely difficult today, even for major players. There is limited faith in tools that offer it, and even metrics offered by certain advertising channels. FB and Google are significantly distinct in terms of CPCs (~2x) that a direct pricing comparison don't really apply either. However it is clear that a deviation from price points we've historically anchored advertisers on is something they will notice over time, even if within the noise at launch. Based on data and long run experiments we believe changes of the magnitude being considered (~15%) might be ok as long as we don't touch brand, check for outliers, and consider gradual price increases (rather than a sudden step-function) but further understanding of long term decision making and adequate monitoring tools will be required.

This study looked into the question: "Would format price increases on google.com influence long term spend allocation to Google? How should we think about Macro ROI in that context?"

The challenges of measuring ROI are not new, with many people inside and outside Google having looked (and still looking) into it. In order to get as an holistic as possible view of the problem we've (1) met with people from across the org (e.g. Economics, Sales, Finance, Digital Marketing / House Ads, Product teams in GA, DS, Researchers on MMIs and Attribution), (2) interviewed more than 40 advertisers and agencies, and (3) leveraged studies from both inside and outside Google. Our conclusions are the following:

There is no good sense, both within Google and outside, for what the true ROI of advertising channels are (and consequently how they compare).
- The overwhelming majority of advertisers today are not in a position where they can measure actual ROI. Instead they optimize around proxy KPIs (typically conversions / $).

Commented [1]: Note to the reader: this is the follow-up (ongoing, Q4 2017 onwards) Holistic Pricing Investigation.

Commented [2]: optional: for advertisers to be completely "rational" they would need to measure the incremental value of marginal spend on each channel and how they correlate (complements or substitutes). this sounds impossible to do right for most advertisers for a long time. could be a nice way to lead into your second block of perception being the real issue.

Commented [3]: within channel?

Commented [4]: (my read of the doc is that optimization across channels is even harder. please correct if wrong)

Commented [5]: Yes that's correct.

GOOG-DOJ-06240761.001

"[W]e should be more concerned about the **perception of price / ROI changing within a channel rather than actual cross channel ROI comparisons**."

* * *

"[C]ross channel ROI comparisons appear to still be **extremely difficult** today, even for major players[.]"

Dr. Mark Israel
Google Expert
Compass Lexecon

Q. Right, but the simple fact that different things have the same ROI, that **doesn't tell us whether they're in the same antitrust model**?

A. **I agree with that entirely**. . .

Tr. Testimony

Prof. Kinshuk Jerath

*Plaintiff Expert
Prof. of Marketing,
Columbia Univ.*

A. [M]oney is moved from one channel to the other, [but] that **does not mean the channels were substitutes**. . . .

* * *

A. [M]oney has been moved from search to display, but not because the channels are substitutes or interchangeable, rather, **because the channels are complementary and mutually reinforcing**. . . .
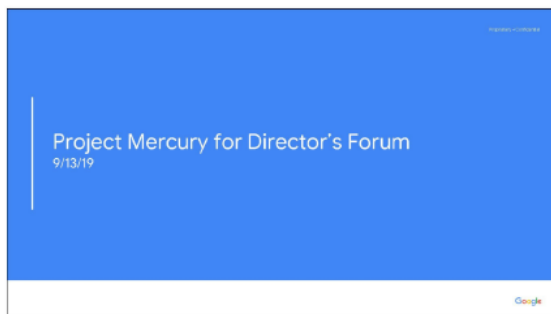
Tr. Testimony

2019

Project Mercury for Director's Forum
9/13/19

Ex. No.
UPX0427
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-08612029

What's a commercial journey, and why do we care?

Conceptual definition: A commercial journey is any journey that eventually results in a real-world transaction

Examples:

🛒 **Shopping** for a new suit for an upcoming wedding

🚗 Buying a used **car** and **transferring the title**

🎵 Taking **piano lessons** to pick up a new hobby

➕ Diagnosing an **MCL sprain** and finding an **orthopedic doctor**

🏢 Relocating to a new city and **looking for apartments**

Awareness
Familiarity
Consideration
Purchase
Loyalty

Commercial journeys have traditionally been **underserved** in organic Search, but they're some of the most important and **friction-filled** user needs

REDACTED FOR PUBLIC FILING

Ryan Booth
Senior Manager, Paid Media

Q. Does your team **shift ad spending that frequently between display and Google**?

A. Sorry, you're talking about shifting money from display buying over to Google.

Q. Or Google to display on a daily basis?

A. **No**.

Q. What about any social platforms?

A. No. I would say our Google and Bing investments are pretty much interchangeable but **distinct and separate** from social or display.

Tr. Testimony

Tracy-Ann Lim
*Managing Director,
Chief Media Officer*

JPMorgan
Chase & Co.

Q. And do you typically **shift the spend between search text ads and digital display ads** based on the – if the relative cost of those ads would change?

A. **No.**

Q. And why is that?

A. Paid search budgets are for paid search only. . . . **They are distinct and different and separate**. . . .

Q. And distinct in what way?

A. **They are not fungible.**

* * *

Q. Do you typically **shift ad spend between search text ads and social ads** based on changes in relative cost of those ads?

A. No.

Tr. Testimony

Joshua Lowcock
Global Chief Media Officer

IPG

Q. The engine will recommend moving spend from one ad format to another in order to improve ROI; fair?
A. Yes. It also talks about -- I mean, **all in-channel optimization**.

Tr. Testimony

Tracy-Ann Lim
Managing Director, Chief Media Officer

JP Morgan CHASE & CO.

Q. If you learned that the ROI on Bing search text ads was greater than the ROI on Google Search text ads, could you switch all of your search text ads spending to Bing?
A. No. Our spend with Bing maxes out where their volume ends…[s]o once we max out there…**there's no where else to go**.
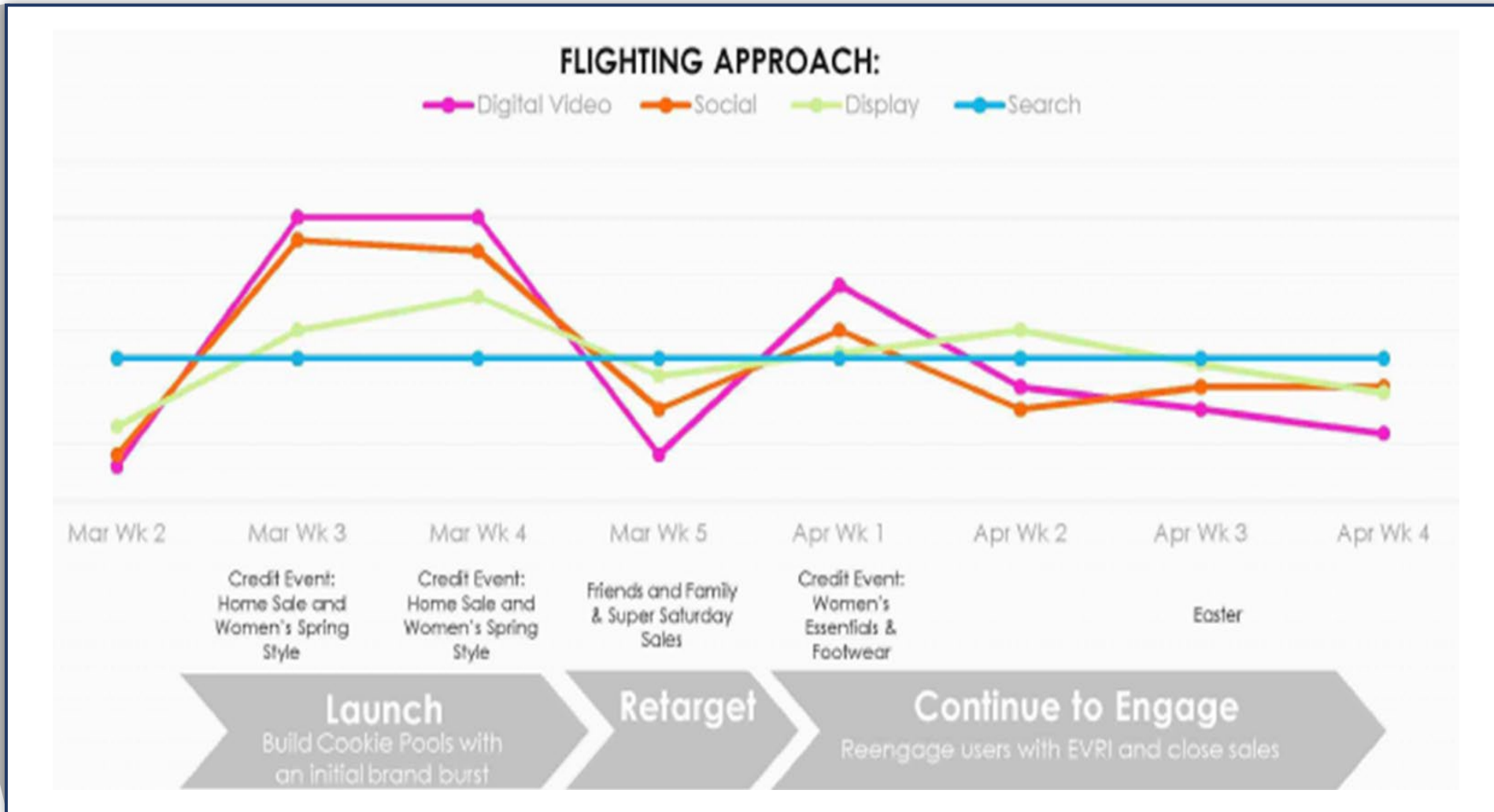
Tr. Testimony

REDACTED FOR PUBLIC FILING

Google Discovery Ads

2020

Google

Discovery ads strategy (ACM)
June 5, 2020

PRIVILEGED AND CONFIDENTIAL

HIGHLY CONFIDENTIAL

GOOG-DOJ-16933114

Ex. No.
UPX0033
1:20-cv-03010-APM

Discovery ads launched, allowing advertisers to extend the reach of their social ads to 2.9B+ Google users

Positioning

Discovery ads reach 2.9B people across Discover, YouTube and Gmail worldwide*. Simply reuse your social assets to drive performance.

Trajectory

Open beta announced at GML in May 2019

- Current: $836M 7-day ARR, Goal: $1.4B ARR
- Q1 Booked revenue $165 M surpassing target ($160M) despite COVID-19
- Active Advertisers: 20K
- Early signs demonstrating some proof that "lift and shift" strategy is working. Case Studies
- 4/28 GA: Silently launched to 100% of Google ads advertisers
- 5/27: Publish blog posts and UI alerts to drive adoption

*except Discover users in FR/DE/AU

Google

REDACTED FOR PUBLIC FILING

Dr. Prabhakar Raghavan

SVP, Knowledge & Information Products

Q. . . . Demand Gen ad campaigns, like **Discovery ad campaigns, are aimed at social buyers; right**?

A. At buying -- are aimed at the **latent intent that Facebook, Instagram, TikTok, and others are capturing, yes**.

* * *

Q. Do you see. . . the headline is 'no evidence of cannibalization with existing campaigns'?

A. I do.

Q. And that's saying that the **Discovery ads campaigns aren't cannibalizing what you're getting from Search ad campaigns**; right?

A. Correct.

Tr. Testimony

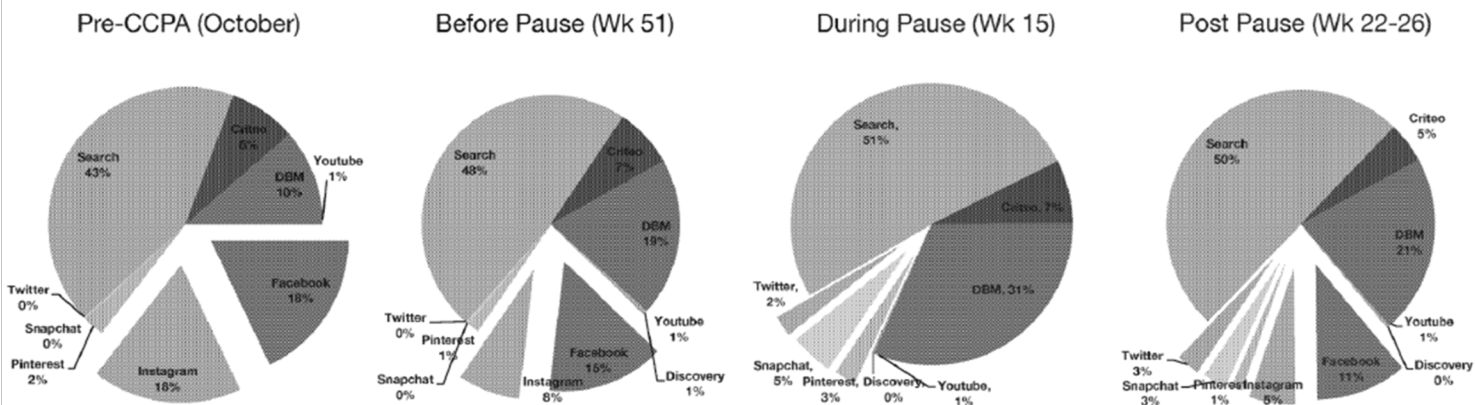**REDACTED FOR PUBLIC FILING**

Nike Facebook Boycott

CONVERSION BEFORE AND AFTER FACEBOOK PAUSE
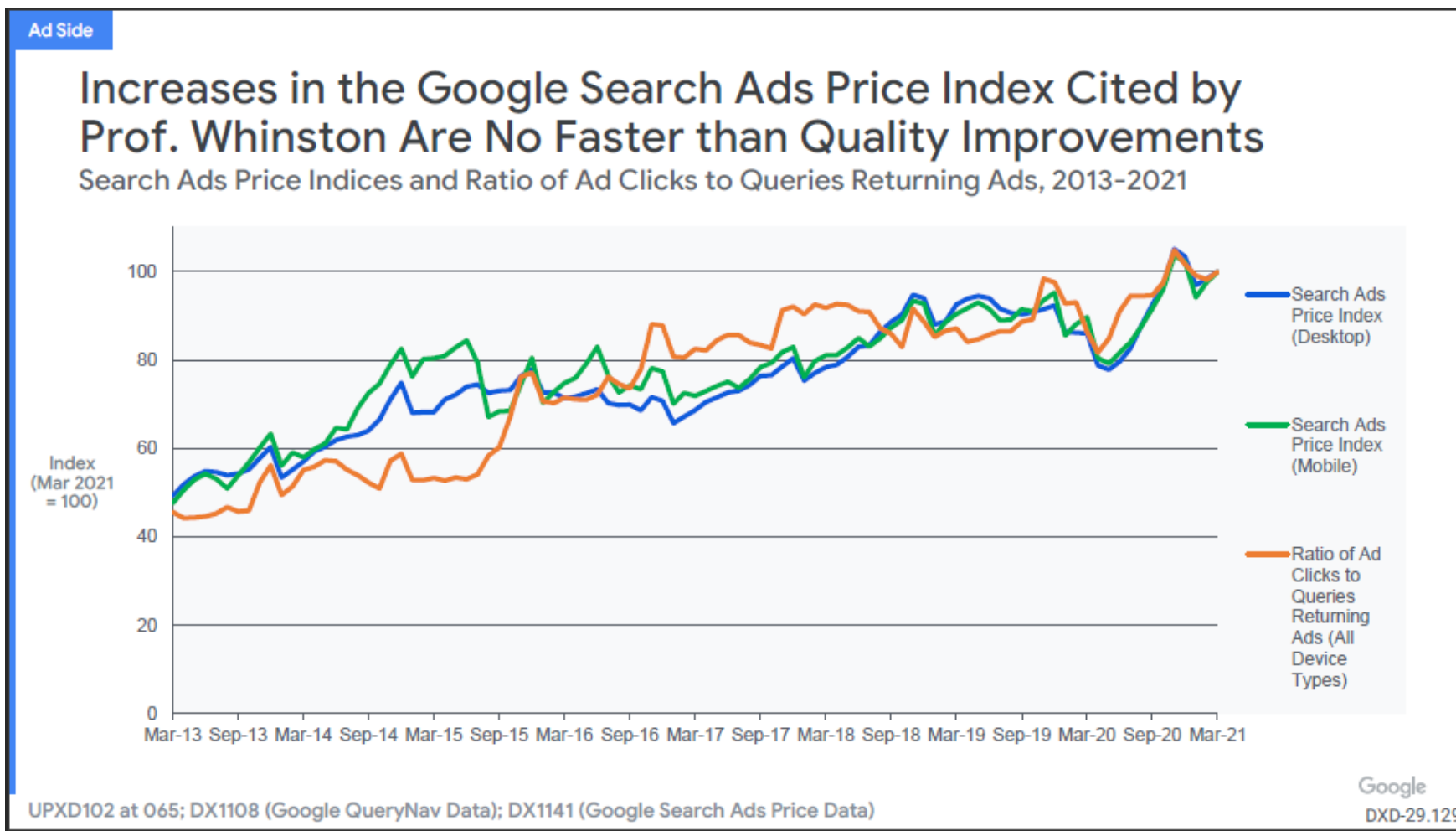
- Search Ad spend was effectively constant.

- Facebook Ad spend was primarily reallocated to Display Ads during pause period.

- Additional investment in Search Ads remained post pause period.

REDACTED FOR PUBLIC FILING

Ad Side

Increases in the Google Search Ads Price Index Cited by Prof. Whinston Are No Faster than Quality Improvements

Search Ads Price Indices and Ratio of Ad Clicks to Queries Returning Ads, 2013-2021

UPXD102 at 065; DX1108 (Google QueryNav Data); DX1141 (Google Search Ads Price Data)

Google
DXD-29.129

- Trend line of ad clicks is not a proxy for quality.

- Decreasing organic clicks does not imply quality improvements.

- No evidence clicks alone equal quality.

REDACTED FOR PUBLIC FILING

2018

Message
From: Jerry Dischler [Redacted@google.com]
Sent: 10/22/2018 3:44:10 AM
To: Prabhakar Raghavan [Redacted@google.com]
CC: Vivek Raghunathan   Redacted   @google.com]; Vishal Sharma [Redacted@google.com]
Subject: Re: Really basic video ads questions

Inline

On Sun, Oct 21, 2018 at 8:19 PM Prabhakar Raghavan <Redacted@google.com> wrote:
 Gents - I'm looking

PRIVILEGED & CONFIDENTIAL
go/insidertrading
go/compliance

Overview of Search and YouTube Ads Revenue

October 12, 2018

Google

GOOGLE CONFIDENTIAL   1

Yes! Although no advertiser really says zero tolerance and we're still trying to seek out what an acceptable level is for many of the top brand advertisers.

Thanks.

--
p.r.

Ex. No.
UPX0342
1:20-cv-03010-APM

HIGHLY CONFIDENTIAL   GOOG-DOJ-04183957

"[A]dvertisers care, in the end, about conversions/purchases, not clicks."

Sundeep Jain
Former VP, Product Management (Mar. 2013-Oct. 2018)

A.   Redacted

. . . . **[W]e can't draw the correlation on the click.** We have to draw the correlation to the quality of the post-click experience.

Tr. Testimony

REDACTED FOR PUBLIC FILING