IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA, ET AL	.,)
Plaintiffs,))) CV No. 20-3010
VS.) Washington, D.C
GOOGLE LLC,) May 3, 2024) 9:00 a.m.
Defendant.) Day 2 Morning Session

TRANSCRIPT OF
BENCH TRIAL CLOSING ARGUMENT PROCEEDINGS
BEFORE THE HONORABLE AMIT P. MEHTA
UNITED STATES DISTRICT JUDGE

APPEARANCES:

For DOJ Plaintiffs: Kenneth M. Dintzer

U.S. DEPARTMENT OF JUSTICE

1100 L Street, NW Washington, D.C. (202) 307-0340

Email:

kenneth.dintzer2@usdoj.gov

APPEARANCES CONTINUED:

For Plaintiff States: Jonathan Bruce Sallet

COLORADO DEPARTMENT OF LAW Consumer Protection Section,

Antitrust Unit Ralph L. Carr

Colorado Judicial Center

1300 Broadway Suite 7th Floor Denver, CO 80203 (720) 508-6000

Email: jon.sallet@coag.gov

William F. Cavanaugh, Jr.

PATTERSON BELKNAP WEBB & TYLER LLP

1133 Avenue of the Americas

Suite 2200

New York, NY 10036-6710

(212) 335-2793

Email: wfcavanaugh@pbwt.com

For the Defendant: John E. Schmidtlein

WILLIAMS & CONNOLLY LLP 680 Maine Avenue, SW Washington, D.C. 20024

(202) 434-5000

Email: jschmidtlein@wc.com

Court Reporter: William P. Zaremba

Registered Merit Reporter Certified Realtime Reporter Official Court Reporter E. Barrett Prettyman CH 333 Constitution Avenue, NW

Washington, D.C. 20001

(202) 354-3249

Proceedings recorded by mechanical stenography; transcript produced by computer-aided transcription

1	PROCEEDINGS	
2	COURTROOM DEPUTY: All rise. This Court is in	
3	session; the Honorable Amit P. Mehta presiding.	
4	THE COURT: Good morning. And please be seated,	
5	everyone. Thank you.	
6	COURTROOM DEPUTY: Good morning, Your Honor.	
7	This is Civil Action 20-3010, United States of America,	
8	et al., versus Google LLC.	
9	Kenneth Dintzer for the DOJ.	
10	Jonathan Sallet and William Cavanaugh for	
11	Plaintiff States.	
12	John Schmidtlein on behalf of Google.	
13	THE COURT: Okay. Good morning, everyone.	
14	Sorry for the delay. I was having a	
15	non-Google-related tech issue.	
16	All right. So day 2, ads markets.	
17	Mr. Dahlquist, unless there's anything	
18	preliminarily, I'll turn the floor over to you.	
19	MR. DAHLQUIST: Nothing from the DOJ Plaintiffs,	
20	O Your Honor.	
21	MR. SCHMIDTLEIN: No, Your Honor.	
22	MR. CAVANAUGH: No, Your Honor.	
23	THE COURT: All right. The floor is yours.	
24	MR. DAHLQUIST: Good morning, Your Honor.	
25	David Dahlquist on behalf of the United States.	

Your Honor, advertising revenue is what drives
Google's monopoly power today. Without advertising revenue,
Google's feedback loop would stop spinning.

1.3

2.2.

Without money, Google cannot pay the billions in revenue share that you heard about yesterday.

Advertisers paid billions of dollars to advertise on Google.

Google is not free for advertisers. They keep paying Google, price increases and all, because they have no viable alternatives.

Advertisers testified at trial that Google Search ads, including text ads, are a mandatory or always-on platform for digital advertising.

Ms. Tracy-Ann Lim from JPMorgan was here in this court and testified to Your Honor that search ads is an always-on channel, like an Evergreen Media channel, running every day of every week of every month year-round.

I apologize, Your Honor, I forgot to hand you your binders, because that's what we do, create more binders.

While other advertising campaigns may come and go,
Google Search ads are constant. Advertisers continue to use
Google Search ads and text ads and pay Google's monopoly
prices, because advertisers have no real choice.

Google knows this fact very well, so well, in fact, that they boast in their own documents that they have

no real market pressure.

2.

1.3

2.2.

The trial record established that the Google of today does not even consider prices charged by its competitors. It doesn't need to.

I asked Dr. Adam Juda, one of the architects of the search ads pricing auction when he was on the stand here, if he recalled anyone at Google ever doing any analysis of search ad pricing at Bing, and his response was, "Nothing immediately comes to mind."

Since there's no meaningful competition, Google can manipulate advertising pricing through the search ads auction. Google intentionally chooses more revenue over improving quality in search ads.

As one example, in 2014, Google launched a pricing update called squashing, which Your Honor heard about at trial and you'll hear more about today, perhaps more than you want to hear; and in Google's own words, it ranks ads suboptimally in exchange for more revenue. Only a monopolist can make a product worse and still make more money.

Google manipulates pricing while also restricting the information it shares with advertisers. Google keeps advertisers in the dark as to how search ads really work and how their advertising dollars are spent.

In response to Google's lack of transparency, one

advertiser, HomeAdvisor.com, also known as Angi, wrote in an
email that "Working with Google is like being in the ring
with a sumo wrestler with the lights turned off."

1.3

2.2.

Google has used price increases, as well as many other levers and tuning knobs, in order to manipulate the ad auction, in order to fuel its massive growth which today has exploded over \$150 billion, and an increase of over 400 percent in less than ten years.

Today, Google's advertising machine exists to meet its own revenue targets and to fund its monopoly payments to search partners.

Mr. Jerry Dischler, Google's Vice President of search ads, was here in court, and I asked him about an email that he wrote in 2019, where he used the words "Code Yellow," which is an all-hands-on-deck call to action, in order to put his search ads team — in order to accelerate revenue launches, to extract even additional revenue from advertisers to meet Wall Street earnings forecasts.

The ability by Google to raise price whenever it desires is the definition of a monopoly, according to the Supreme Court.

Only monopolies can consistently raise price on demand year over year without worrying at all what their competitors will do in response.

Your Honor, the trial evidence demonstrated that we believe Google violated Section 2 of the Sherman Act in maintaining its monopoly power in search advertising, and we seek assistance from this Court to end Google's monopoly power over search ads.

So, Your Honor, I --

1.3

2.2.

THE COURT: Mr. Dahlquist, I'm sorry, can I just ask you a sort of big-picture, general-overview question in terms of your thinking of the case.

The question of Google's ability to raise price, in the analytical framework, I know it falls as evidence of monopoly power, that's direct evidence of monopoly power, are you also going to argue that it's also an actual anti-competitive effect; that is, advertisers have been paying super competitive prices to Google?

MR. DAHLQUIST: Your Honor, I think it falls in a couple places.

First of all, we agree it is direct evidence of monopoly power, and we intend to use it and we have used it to show such.

Second, I believe it helps to define the markets that we have here.

There's certainly a question that Google that has raised as to, are we or are we not properly defining markets, we believe we are, and I believe this evidence

1 directly helps to define the antitrust markets that we have.

2.2.

However, to go to the Court's immediate question, all of the pricing evidence that we have goes to advertiser harm, right; that the advertisers who are an important piece of this market, as I just explained it, is how Google funds its entire general search engine, that those advertisers have been harmed, and that's a price that they're paying, and they are paying monopoly prices.

As to they're super competitive, Your Honor,

I submit, and I'll show you in some of the evidence today,
there's no boundary of competition, and that's where your
question on effects, I think, anti-competitive effects,
really goes to the competitive effect and what has happened
in competition with regard to search ads. And I think
that's caused by the contracts. The contracts have created
the environment, the ecosystem, if you will, whereby there's
no meaningful competition for search ads, and the prices are
the harm that is being caused to advertisers.

THE COURT: Okay.

Just to be clear, your contention is that, to put it simply, in a more competitive environment, advertisers would be paying less?

MR. DAHLQUIST: Yes, Your Honor.

THE COURT: Okay.

MR. DAHLQUIST: So, Your Honor, today I plan to

cover at least three topics: One, monopoly power and search ads in text ads; two, the relevant product markets; three, to the point we were just discussing, that advertisers had been harmed and that's the direct-evidence piece; and then finally, if time permits later this afternoon, about the procompetitive justifications, if you will, that Google has put forward. And while we don't think there are actual procompetitive justifications, we'll -- we can talk about this afternoon as to where they might fit into the Microsoft analysis.

1.3

2.2.

I had intended to begin with monopoly power, but taking guidance from Your Honor yesterday, this is the advantage of going second, we're going to flip it and jump into relevant markets first, and we can come back and circle back to monopoly power if time permits.

And, Your Honor, just in case we don't get there, the monopoly power, the exercise of monopoly power here in search ads is highly relevant to inform our market definition, and so we do think that at least in search ads, those two pieces of evidence should be viewed together.

THE COURT: And let me just say -- I should have said this at the outset.

I mean, again, the schedule here reflects my thinking of two-plus weeks ago, and now -- I do recognize that the issue of pricing goes to the heart of the monopoly

- 1 | power question, and to sort of subsume that in with market
- 2 definition in 45 minutes may be a little bit ambitious.
- 3 | So if it needs to trickle into the next, you know, part of
- 4 | this, then don't feel that you need to be sort of
- 5 hermetically sealed in these blocks of time.
- 6 MR. DAHLQUIST: I appreciate that, Your Honor.
- 7 And if there's any one section that might bleed
- 8 | over, it's this one into the next one. But, nonetheless,
- 9 | I want to be responsive to your questions, so that's where
- 10 | we'll take our guidance.
- 11 Your Honor, starting with relevant market then, as
- 12 | Your Honor knows, we have put forth, the DOJ Plaintiffs, two
- 13 | proposed product markets: First, search ads; and, second, a
- 14 | narrower market of text ads which is nested entirely within
- 15 our broader market of search ads.
- And search ads, as you know, are search ads that
- 17 | can appear anywhere, on a general search engine, on an SVP
- 18 or on other digital platforms. Text ads, the narrower
- 19 | market, is focused only on general search engines.
- 20 And so if -- Mr. Penado, if we can go to Slide 40,
- 21 please, 4-0.
- 22 To talk about relevant market, you saw some of
- 23 | this yesterday with Mr. Dintzer and so I don't intend to
- 24 repeat it, but I think a couple points are worth emphasis
- 25 here with respect to text ads -- or with respect to our ads

1 markets.

2.

2.2.

The goal, as is stated in *Brown Shoe*, in any relevant market analysis is a factual approach, a pragmatic factual approach and not a formulistic legal one. No specific test is required in order to define a market.

The courts have obviously given us helpful guidance as to what to look at. Our briefing laid out extensively, as you saw, the *Brown Shoe* factors, and I think we satisfied -- each of our markets satisfy those factors.

But it's important to note that the market definition is merely a tool used to understand competition. And it also, as Your Honor well knows from *Sysco*, that it must be supported by ordinary-course documents. And that's our charge and that's our goal here, and it must also be consistent with the business realities.

If we can go to the next slide, please.

Let me take an example. And this is from United States versus Visa and actually is a predicate perhaps.

While the parties agree that the market definition should be reasonable substitutes under the case law and a willingness to substitute is the requirement, we have a disagreement with Google as to what should be included in that. Google believes that all digital text ads -- all digital ads, text ads, search ads, display ads, social ads,

retargeting ads, a whole host of other types of ads should be in this. We simply disagree.

2.2.

While all digital advertising may have a broadly similar purpose in that they're all trying to advertise to consumers, they're all trying to actually make a sale. So is TV advertising, billboard advertising, magazine advertising. All of that is the same broad purpose. But having a similar purpose does not make them reasonably interchangeable, that does not make them substitutable.

And to go to this example from *U.S. v. Visa*, in that case, the defendants argued that cash, checks, debit cards, and credit cards were all the same relevant market. The Court rejected this because, looking at -- because they were not reasonable substitutes. While they all are forms of payment in one sense or another, and the Court in *Visa* even said that they may take share from each other, but that doesn't actually mean they're reasonable substitutes, that doesn't mean they're part of the same market. Looking at what might happen with regard to checks or debit cards tells you nothing about the credit card market.

Your Honor, the same is analogous to here.

THE COURT: Can I -- if I could --

MR. DAHLQUIST: Please.

THE COURT: I'm sorry.

Maybe I can move to the -- at least what

I understand to be the heart of the dispute between the
parties, and that is the issue of substitutability and how
one measures whether it's significant or not.

1.3

2.2.

I understand Google to be saying, look, what is driving advertisers' decisions is where they can get the best return on their investment. That's been, you know, their theme throughout: Return on investment, return on investment.

We had advertisers come in, and I think all of them said, yeah, maybe we can't calculate it to a mathematical certainty, but we do rely on ROI and we allocate our money where the ROI -- we will shift channels if we think the ROI may be better somewhere else.

I guess a couple questions.

One is, do you dispute that advertisers' primary consideration in determining where to spend ad dollars is ROI?

MR. DAHLQUIST: We do not dispute that ROI isn't a factor and that advertisers look at ROI. We absolutely dispute that they use ROI in order to substitute across channels. And I think that's what's borne out in the document.

And we can go right to Slide 128, please.

Let's start with what Google says about this and then I'll show you exactly what the advertisers said about

it. 1 2 In Slide 128, Google itself said that what's 3 important is ROI within a channel, not across a channel. 4 And this is a document from 2017, where they asked 5 this very question that the Court is asking. The document 6 is a macro ROI investigation. 7 They wanted to figure out, how do advertisers look 8 And here you can see that cross-channel ROIs were 9 extremely difficult. They attempt, they make efforts at it, 10 but they simply couldn't do it with any precision or 11 accuracy. However, within a channel, within a channel of 12 1.3 search ads or within a channel of text ads, or within a 14 separate channel of social ads or display ads, certainly you 15 can do an ROI analysis. 16 If we can go to Slide 132, please. 17 And that's what advertisers said. 18 Mr. Booth, who was here in front of Your Honor, 19 from Home Depot, said: "Do you shift ad spend frequently 20 between display and Google? 2.1 "No, because they're distinct and separate." 2.2. Next slide, please, at 133. 23 Ms. Tracy-Ann Lim asked the same thing: "Do you 24 shift your spend between text ads and digital display ads?

"No, because they're separate and distinct, they

25

are not fungible." 1 2. So while JPMorgan testified a lot about ROI, 3 I think she was the witness who coined the term, 4 "I'm obsessed about ROI." Yes, agreed, they're obsessed 5 about ROI, but within channel, and that's the distinction. 6 I think the best quote is perhaps on the next 7 slide, please, 134, which, from Mr. Lowcock, who you heard 8 about, IPG, advertising agency, where he said, "That means in-channel optimization." He was asked that specific 9 10 question about ROI, in-channel, within search ads. 11 And Ms. Tracy-Ann Lim perhaps put it best. 12 was asked the direct question: "If you learn that your ROI 1.3 on search text ads was greater on Bing than on Google, would 14 you switch? 15 "Answer: No, no. Our Bing spend maxes out and 16 there's nowhere else to go." 17 Submit, Your Honor, that that's the best evidence 18 to show if ROI was really most important in her mind, she'd 19 say, oh, yeah, we went to social ads, we went to display 20 ads. But, no, she's saying there's nowhere else to go 21 within channel. 2.2. THE COURT: So maybe it was the witness from 23 Home Depot, I thought. 24 MR. DAHLQUIST: Mr. Booth.

THE COURT: Mr. Booth -- let me back up.

25

It was my impression, as we were going back through the evidence, that nearly all of the witnesses, advertising witnesses, ad side witnesses, to one degree or another, said not only, one, we follow ROI, it's an important fact, but, two, that we do do some cross-channel switching based on ROI. And, of course, now we also know that there are tools that can do that automatically, do cross-channel switching.

1.3

2.2.

And what Google's theme was and its defense is that is evidence of substitutability, that is evidence that advertisers don't simply look at, you know, these artificial distinctions between text ads and display ads, but what they do is they put their money where it's most likely to result in conversions.

Your response is, well, they're different. Part of the reason they're different is this issue of expressed intent versus display ads, which are more about creating awareness.

I guess the question ultimately is, how am I supposed to determine on this record, where we have no quantitative analysis, whether the substitution is, in fact, significant?

Because at the end of the day is the question:

Is there significant substitution?

Google seems to be saying, yes, there's

significant substitution; you all are saying, no, there's not significant substitution.

Where would you have me look in the record to determine that there is not significant substitution?

MR. DAHLQUIST: Certainly, Your Honor.

And I think I can -- if you bear with me, a three-part answer, of course.

THE COURT: Sure.

1.3

2.2.

9 MR. DAHLQUIST: First, let's look at Slide 135, 10 please.

Your Honor asked about these models. I think they're called MMM models or -- they have other types of names. I think Google has their own name for it.

Right here on Slide 135 is from Kohl's. This is an example of them running that type of a model.

And what does it do? It changes and fluctuates digital ads, it changes and fluctuates social ads, display ads, taking them in and out based on whatever that model's calculating. But what is constant is the blue line. Search is constant.

We don't dispute that ROI might convince an advertiser to pull or enter more money into search. Maybe they got \$100, they'll jump it to \$200. Maybe \$100, they'll drop it to \$50. But it's constant; they keep money in it at all times. That is not true for other advertising channels.

Social ads may go up to a thousand but drop to zero.

1.3

2.2.

Digital ads, up to a thousand but drop to zero.

That is different, very distinct and different from search ads.

But to go to Your Honor's other question, perhaps back into the market definition discussion, I think we need to be careful here, is what *Kodak* warns us about, of when we're looking at pricing and when price increases or a monopoly pricing is at play, even poor substitutes begin to look reasonable, and I think that's what we have that's occurring.

And so to Your Honor's question as to where to put in the analysis, I disagree with Your Honor's question in that you don't have to find an amount or level of substitutability. We think you need to find that these products, in the product market definition, doing a hypothetical monopolist test definition, that these are not reasonable substitutes for each other and that it does not — that there is not competition sufficient to constrain a price increase. That is the ultimate question for Your Honor.

And I think if we can turn to Slide 54, please, when Mr. Dischler was here, we asked him: "Have you increased price increases" -- "Have you had prices increase

```
by 5 percent?
 1
 2.
               "Yes, for the typical advertiser.
 3
               "And did that result in an increase in revenue?
               "Answer: Yes."
 4
 5
               And what he added there is, it not only resulted
 6
     in a 5 percent price increase, which Your Honor mentioned
 7
     yesterday a SSNIP test. This is a SSNIP test being done in
     real life.
 8
 9
               "Did it increase revenue?
               "Yes."
10
               And the additional transcript cite below this is:
11
12
     "Did it result in fewer ads even being sold?
               "Answer: Yes."
1.3
14
               So advertisers may have purchased less ads but
15
     they bought more ads at higher prices, ultimately Google
16
     made more money. That is where this falls in the analysis.
17
               It's not just a hypothetical monopolist test, it's
18
     an actual monopolist test. It's an actual monopoly,
19
     exercising their market power, increasing prices, and
20
     finding out it is profitable.
21
               And this isn't just an aberration.
2.2.
               If we can go to the next slide, please.
23
               Dr. Whinston talked about how Google tested this,
24
     they probed it over time. They came in and they said, well,
25
     we're increasing prices, we're still making more money,
```

- advertisers aren't going elsewhere, how far can we push this?
- They raised prices 5 percent, they tried 10, they
 tried 15. They did a test on 20. All of them profitable.

 And over time, durably profitable not just for an isolated
 period in time.
- THE COURT: So let me -- I thought we'd get to this a little bit later, but we're on the topic now.

- I understand Google's response to all of this to be, look, I think -- it's twofold. One is, it's not unlawful for a monopolist to increase price, right? I think you'd agree with that.
- And, yes, we've increased price. We've also increased ad quality. And what really matters is the quality adjusted price of the advertising, and that at least which is why I asked you to all help me understand that one chart that we'll talk about at some point that has essentially not only kept pace, those qualities kept pace with pricing increase, Dr. Israel has testified that quality adjusted pricing has actually gone down.
- So I guess a question for you is: Do you disagree with Dr. Israel that quality adjusted pricing has, in fact, gone down?
- MR. DAHLQUIST: We do disagree with Dr. Israel in short.

And quality adjusted pricing is certainly a topic I have a lot to say about. And I'm going to do it -- I was planning to do it this afternoon, I can hit it now, but let me give you a preview.

1.3

THE COURT: Give me the preview. Yeah, sure.

MR. DAHLQUIST: Here's the preview.

And maybe go to the next slide; it will help to resonate with this a little bit more.

In Slide 56, and this is UPX36, Google asked, "do we want to raise prices?"

The answer to that, they answered themselves was, "yes, 10 percent is believed to be safe."

And the bottom comment is what I draw your attention to. This is Dr. Juda. And he said, "How should we price it? 1 penny less than the breaking point is the right amount."

This is Google saying the right price in this market is 1 penny below the breaking point, the difference between an advertiser buying an ad with us or leaving the market, not that it would go somewhere else but leaving us.

And so to your question, quality adjusted pricing, pricing should be determined by competition. Competition should set where that is, not Google's own internal perception as to how much value or how much quality they may be providing to a customer but what is the level of

competition.

2.

1.3

2.2.

This entire document from 2017 which related to one of these ad experiments, Gamma Yellow, or GY here,

Gamma Yellow is an experiment they ran and they increased prices for 20 percent on mobile on average, and it stuck.

As a result of that, that is them getting very confident that they can price and that they don't have to worry about what a competitor will do.

This entire document, which I ask you to read in its entirety, maybe you already have, but there's no mention of competition, there's no mention of what might Bing do, what might Facebook do, what might anybody else do. It's just their own perception. That's not competition, Your Honor. That's a monopolist setting a price. And that's where Kodak comes into play as to when are you pricing.

And as *Kodak* talked about with the cellophane fallacy, when you are pricing cellophane so high that people have to start wrapping their food in newspaper or wax paper or anything else, this is what's happening. This is a real-life version of the cellophane fallacy occurring — or Google's argument is a real-life version of the cellophane fallacy.

THE COURT: I guess I don't understand that.

And it didn't really come up yesterday, but as

- 1 I understand this notion of cellophane fallacy is that just
 2 because there is substitution doesn't mean there isn't
- 3 | monopoly power. And just because you're seeing
- 4 | substitution, even to an inferior product, doesn't mean
- 5 | there isn't -- you're seeing some substitution, even if it's
- 6 to an interior product, doesn't absolve the monopolist of
- 7 being a monopolist.

platform.

12

16

17

18

19

20

21

22

23

- But this isn't like wrapping a sandwich in

 newspaper, right? I mean, if you move your ad money from

 Google to Amazon, you know, you're not wrapping your ad in

 newspaper, you're wrapping your ad in a pretty good ad
- TikTok, pretty good ad platform and growing.
- Facebook, posting record revenues based upon its newly redesigned ad platform.
 - So I don't quite understand how the cellophane fallacy has anything to do with this case in the sense that they're not substituting away to something that's inferior, they're substituting away to something that they think can be effective with their ad dollars.
 - MR. DAHLQUIST: Your Honor, we respectfully disagree. It is absolutely substituting to an inferior product.
- 24 Your Honor mentioned earlier "intent."
- A search ad, the unique principle of search ad, it

has high intent. It is a user entering a query for whatever that user wants to enter and an advertising being returned in direct response to that query, in real-time, immediately.

1.3

2.2.

If I'm looking for new shoes, I'll get an ad for shoes. I'm looking for a Chicago Cubs baseball card, I'll get that. Every other form of advertising as to why it's a different market is on a much, much, much different and lower level of intent.

We're in the realm of inferred intent or even multiple steps removed of intent: Time-delayed intent. You heard a lot about that from Professor Jerath and others as to the value of intent and all of those types of display ads, re-targeting ads, et cetera, is significantly less.

So we submit this is the cellophane fallacy if you're including those within -- we believe it is a cellophane concern, because you would be including very inferior products.

THE COURT: How does that measure up with reality?

I mean, it can't be that Facebook's ad platform is
an inferior product and they're making billions of dollars,
right?

I mean, he didn't sell billions of dollars' worth of the newspapers to wrap your sandwich. They are selling billions of dollars of ads that advertisers are coming to the platform and selling billions of dollars of ads and

somehow have figured out how to recover from whatever Apple did to them.

And so I just don't see how -- okay, maybe that's a slightly different product, but to say that's an inferior product doesn't seem to me to line up with reality, particularly given -- and we're talking about -- just look at the revenues.

MR. DAHLOUIST: Sure.

2.2.

THE COURT: These aren't people going to Facebook out of desperation.

MR. DAHLQUIST: Sure.

Your Honor, "inferior" may be my argumentative word, but it is certainly a different product, in the same way that a debit card is different from a credit card, in the same way that a check is different from cash. It is significantly a different product.

Maybe it has the ultimate use of advertising, of getting your product out there, being known. But I think it's significant at a minimum that from Facebook,

Your Honor, Mr. Levy, and this is in designated testimony at our P file 584, described how Facebook tried to enter the search ads market multiple times and failed. They couldn't make money in it.

They're a different product. They have display ads, they have social ads. That's fine. They're very

profitable at it, but that's a different product and that's a different product market.

1.3

2.2.

THE COURT: So your point is the one you made yesterday, which is that, okay, there may be some substitution happening — let's leave cellophane aside, I don't think it's terribly useful, but there's some substitution happening. But the fact that there's some substitution doesn't mean it's significant substitution and ultimately doesn't mean these other platforms provide different — are different markets, right?

I mean, just because there's some substitution, there's some competition doesn't make these other platforms substitutes?

MR. DAHLQUIST: Correct, Your Honor. That's our argument.

Just because there's some substitution, and that, we believe, is in *Visa*, *H&R Block*, *Sysco*, there was some substitution. There was a larger market in which each of those products operate in.

In H&R Block, it was do-it-yourself tax preparation. Certainly a substitute for that is hiring an accountant to do your taxes, but that wasn't the relevant market here.

THE COURT: So how much of that construct depends upon the marketing funnel?

The marketing funnel that I've heard more about than I ever thought that -- certainly more than I need to, but I know a lot about the market funnel now, and I'm finding myself circling down the drain of the marketing funnel.

1.3

2.2.

But how much of the marketing funnel and your theory and the States' theory that these ad types correspond with locations in the marketing funnel, how much of your markets theory rests on that — convincing me that that's correct?

MR. DAHLQUIST: Certainly, Your Honor.

And I want to be respectful of the States' time.

They've asked for 15 minutes in this, so I'm happy to answer many other more, but I do want to respect their time.

But let's go to Slide 131.

131 is -- I figured this would come up at some point today, Your Honor. And, yes, I've learned more about funnel than I wanted to.

But this is Google's document from 2019, UPX427. They're here, they're criticizing the funnel, what we say about the funnel. They use the funnel, okay? All that the funnel shows is complementary of the various channels. This shows you the various levels of the funnel and how multiple different advertisements, multiple different channels of advertising can drive to a purchase, which, as I said, is --

the ultimate goal is a purchase, getting a consumer to buy something. They all complement in that way.

1.3

2.1

2.2.

The same site Mr. Dintzer referenced yesterday, peanut butter and jelly, the goal here is to have a sandwich. But here, the goal here is to sell a product, and search ads have a unique function in that funnel.

So in answer to your question, how much of that does our arguments rely on? Nothing, except that it helps to explain where everything fits within -- where the different advertising channels fits within this realm, this large universe of digital advertising, that's the largest possible, but search ads and text ads are a unique product within that large universe.

And I'm happy to cede time to Mr. Cavanaugh or happy to answer.

THE COURT: We can hear from Mr. Cavanaugh.

You know, we actually thought last night as we were doing this that we should have restructured our morning, but let's sort of stick with the structure that we have and we can cover territory that you clearly have not been able to.

MR. DAHLQUIST: Sure.

THE COURT: Because this issue of monopoly power is such a critical one.

MR. DAHLQUIST: I'm happy to talk about search ads

all day long, Your Honor, which I'm sure you're not.

THE COURT: Mr. Cavanaugh.

2.

1.3

2.2.

MR. CAVANAUGH: Your Honor, just to be clear, the Plaintiff States believe search advertising is a cognizable market. It's why we incorporated all the allegations of DOJ's complaint into our complaint.

And like the United States, we think search text advertising is a nested market within there. However, we have a second nested market, general search advertising, which, as I have up on the screen, it is the mirror image of general search services.

And that was very deliberate on our part, because that is how advertisers look at it. Who would go in on general search engines? They have a certain level -- when they're doing their queries, they have a certain level of intent.

And as you see, Your Honor, it is our general search advertising market, it's largely comprised, significantly comprised, of text ads, because text ads provide certain value to an advertiser, their ability to create a message.

Now, nonetheless, advertisers will use both shopping ads and search text ads to some degree for those that can do that. Banks, law firms, they're not doing PLAs.

THE COURT: Mr. Cavanaugh, I guess I'll ask you a

- 1 quick question, I'm sorry, just so I have clarity in my
- 2 mind.
- 3 Your market, this general search ads market, does
- 4 | it include more than PLAs? Does it include hotel
- 5 | advertising? Airline advertising? And if the answer is
- 6 | "no," is that because it doesn't fall immediately on the
- 7 SERP?
- MR. CAVANAUGH: That's correct, Your Honor.
- 9 To the extent it's in an immersive, it would not be
- 10 included.
- 11 THE COURT: Got you.
- MR. CAVANAUGH: Because that requires that second
- 13 | step, much as going to Amazon or Tripadvisor would be.
- Now, the reason they use both is they want to own
- 15 | the SERP for those that can do it, that have a product that
- 16 | lends itself to a PLA. But the goal is the same. It's that
- 17 | user mindset. That's what they're looking for.
- And they distinguish it from SVPs, because they're
- 19 | closer to the point of purchase.
- 20 As we talked about a bit yesterday, Your Honor,
- 21 | with an SVP, I can complete the purchase there. I'm not
- 22 only closer to the point of purchase, I can make the
- 23 purchase there. But they give me limited information in
- 24 response. They only give me the information that's within
- 25 | my -- that's within their limited inventory.

And I can't navigate away from Amazon when I'm on the Amazon website.

But for general search engines, the testimony is roughly 12 percent of all queries are navigational queries.

Again, another fundamental difference between them.

Professor Amaldoss made the same point about that point of purchase.

But general search ads -- and this goes back to the questions Your Honor was asking Mr. Dahlquist about general search ads and the substitutability. As Mr. Hurst pointed out, they're essential.

And this also goes to the issue of monopoly power, that the reason that they're quintessential is what corresponds to their monopoly power that Google has within general search ads.

Even though these companies have seen their advertising costs rise and rise, because blue links have been demoted and Google decided to monetize search, they've seen their costs go up. But what do they still do? They still go to Google and search ads.

THE COURT: Mr. Cavanaugh, can I ask you the following, which is, we've cut this ad market up pretty finely, and the difference between the general search text ads market and the general search ads market is PLAs.

The question I have for you is, is there evidence

1.3

2.2.

- that advertisers view those as distinct markets? They may view them as distinct advertisements, different forms of advertisements, but view them structurally as different markets, as different nested markets.
 - Does Google view these as differently nested markets? That's the struggle I'm having in terms of these two -- this concept.
- 8 MR. CAVANAUGH: Well, Your Honor, I think the
 9 difference -- there are meaningful differences between text
 10 and PLAs.
 - The primary one, I would say, is there are vast numbers of advertisers that can't use PLAs. It's not available to them. Only texts are available to them.
- 14 THE COURT: Right.

5

6

7

11

12

1.3

15

16

17

18

19

20

21

2.2.

- MR. CAVANAUGH: The second point is that text provides something PLAs can't. They give greater control to the advertiser on the messaging.
 - On PLAs, you give the information to a general search engine, creates they create the PLA, you don't have that degree of control.
- I think that's what -- that's why the substitutability there is some -- is rather limited.
- THE COURT: So I don't think there's any dispute
 what you've just described as the differences between the
 ads types; they're certainly different ad types.

I guess the more precise question I should have 1 2 asked you is this: Why is this one market instead of two 3 separate submarkets? You've got a separate -- you've got a 4 market for text ads, market for PLAs. Why is there a market 5 for both? 6 MR. CAVANAUGH: Because, I think, Your Honor, as I 7 showed a moment ago, there are advertisers that use both within a general search -- within a general search ad context. 10 And there is some degree of substitutability 11 within there such that we think general search advertising 12 comprised of those two. 1.3 And admittedly, it is largely comprised of text 14 ads. It's -- you have the -- the percentage is redacted 15 out, but Your Honor has it, what it is. 16 THE COURT: I recall Mr. Booth testifying, 17 I think, that in his view, there is substitutability between 18 the two, and I think that would -- that weighs in your favor 19 in terms of defining this market the way you have. 20 But doesn't it also cut the other way, that this 21 is a unified market, that there are large swaths of 2.2. advertisers that can't advertise in this market? 23 MR. CAVANAUGH: Well, the --24 THE COURT: The credit card companies, service

industry providers, they can't advertise in PLAs, so I'm not

25

sure why this is the same market as opposed to, again, two separate markets.

1.3

MR. CAVANAUGH: Your Honor, given the prevalence of text ads within general search ads, we think it's appropriate to consider it as one.

And we recognize that there is some degree of substitutability by those advertisers that can utilize text and PLAs. And we think, given that there is some degree of substitutability there, whereas distinguish that from general search ads to display ads, social media, there, we go back to the essentiality of advertising in general search, and that display and others don't provide that essential need, because that's where, you know, as Mr. James and Mr. Hurst, Mr. James from Amazon and Mr. Hurst testified, that's where we get our new customers. That's where — they've expressed some intent, and that's where we can go to get them.

THE COURT: But if there's some substitutability between text ads and PLAs, is that enough to put them in the same market?

Because, again, the substituting needs to be sort of significant. In other words, such that if the ads, text ad prices were increased, folks would go over into the PLA market, and so that's the same market then, right?

Is there evidence of significant substitution

- 1 between the two?
- 2 MR. CAVANAUGH: I would say as to those
- 3 | advertisers that are -- there is some. I wouldn't say that
- 4 | there's overwhelming evidence that -- as to a clear
- 5 delineation.
- 6 You know, there is -- for those that can't use
- 7 | PLAs, yeah, obviously there's a clear delineation.
- 8 THE COURT: Right.
- 9 MR. CAVANAUGH: For a Home Depot and others, they
- 10 utilize -- they utilize both.
- And both -- in an effort to own the SERP, that's
- 12 | the idea of using both of them within a general search ad.
- 13 | It's that over -- it's the overall effect of the two ads
- 14 | simultaneously appearing on the SERP; I now own the SERP.
- 15 Your Honor, let me just make one or two points on
- 16 | monopoly power.
- 17 If we can go to Slide 19.
- So there's no dispute that, as a result of the
- 19 | monetization of search, that the utilization of blue links
- 20 have gone down.
- 21 Dr. Baker did an analysis of that, of the impact
- 22 of PLAs and text ads and how it reduces first clicking on a
- 23 | blue link, which obviously advertisers weren't happy about,
- 24 | and has forced them to spend more on advertising. And so
- 25 | their customer acquisition costs have gone up. Vrbo,

Booking, Expedia, we provided the evidence as to that. 1 But we asked them, but you -- "You're SVPs, you 2 3 keep buying Google Ads. 4 Why? 5 "Well, there's not a replacement for a high-intent 6 traffic. We don't have a choice." 7 And why is that? It's two things. 8 One, the essentiality of general search ads, we 9 have to be there and we have to be there in a big way, 10 because that's where we get our new customers from. 11 where we get the high-intent customers. 12 And within there, Google's the only game in town. 13 That's -- you know, Mr. Dijk testified to that and Mr. Hurst 14 testified to that. Growing without Google from where we 15 start, I don't think it's mathematically possible. 16 Why? 17 Mr. Dijk gave the answer, it's what we talked 18 about yesterday, Your Honor, "Because the scale is kind of 19 too small. So even if Bing would be far cheaper, it really 20 wouldn't work for us." That is the essence of monopoly power, Your Honor. 21 2.2. It's reflected in their market share. It's reflected in the

And these are SVPs that they can't advertise on

fact that, year after year, who are the biggest advertisers

23

24

on Google? Major SVPs.

- 1 other SVPs. Target and Walmart don't advertise on Amazon.
- 2 | They compete against them. So there's only one place for
- 3 | them to go for those high-intent customers.
- And the other reason why they go to a general
- 5 | search engine, many SVPs, is they want to own the customer
- 6 | relationship, and general search ads allow them to do that,
- 7 and the SVPs take a percentage of the deal. Google doesn't.
- 8 | Google make its money on the ads.
- 9 Thank you, Your Honor.
- 10 THE COURT: Thank you, Mr. Cavanaugh.
- 11 Okay. Mr. Schmidtlein.
- 12 MR. SCHMIDTLEIN: All right. Good morning,
- 13 Your Honor.
- 14 THE COURT: Good morning.
- 15 MR. SCHMIDTLEIN: I'm going to jump right in here.
- Here are the markets we're obviously talking about
- 17 | today, and how they divvy up, you know, between the various
- 18 | plaintiff groups here.
- 19 You know, as I noted yesterday, if plaintiffs fail
- 20 | to establish that the search distribution agreements are
- 21 exclusionary, then obviously this is all academic, because
- 22 | their claim would fail whether it's a -- whatever the ads
- 23 | market is. If the conduct is not exclusionary, we're not
- 24 there.
- Your Honor has, I think, made reference to this,

and I know you've seen this and you heard evidence of this during trial.

1.3

Over sort of this time period that the plaintiffs have focused on in the case, we see varying, varying shifts in total digital ad spend, we see enormous growth, as Your Honor has observed, on the Facebook Meta -- or the Instagram Meta side of things, enormous growth on Amazon, enormous growth on TikTok. And sort of the question is, what explains that?

They exclude sort of all of these developments, and they seem to sort of suggest that these other various firms don't have information, they don't have intent information. They're somehow not able to convert or give advertisers, you know, sort of a competitive place to win customers, drive conversions, things like that.

You know, respectfully, Your Honor, we would suggest you don't go from, you know, the size of these platforms -- Meta today is over \$60 billion in revenue.

Now, that tells us that Instagram, Facebook have got very, very, very powerful intent signals.

And, you know, Mr. Dahlquist made reference to, and -- to an exhibit that he put up on the screen. It's UPX519. And he called out some language in that document about pricing and about Google talking about only looking at ROI within certain channels.

It was a 2017 document. And part of the document was discussing challenges, certainly back in that time, of -- and different types of advertisers trying to get at that ROI, because different advertisers do it differently. And there's not some easy -- or I should say singular way that all advertisers look at ROI, because their advertising goals may differ, and what counts as a conversion or a value to them may differ.

1.3

But that very same document, that he quotes this language about channels, says, "When it comes to ROI, perception is what really matters today. Google and Facebook seem to be at par." That's what the document says.

And when Mr. Dahlquist suggests that, well, when we look in Google's documents and we asked witnesses at Google, when you think about innovating or when you think about sort of improving your advertising technology and competing on the ad side of things, you know, do you look at Bing? Is that sort of the primary place you look for innovation? And people typically would say, well, not really.

And the reason for that is clear. It's right here. This is as big or a bigger threat to Google than Bing is, and that's for a whole variety of reasons.

One, it's because they've got really, really good, effective advertising technology, and they have an audience

that overlaps more with Google's audience.

1.3

2.2.

The same with Amazon. Amazon has grown to, by 2021, the evidence in the case was, a \$25 billion advertising platform.

Does Google get valuable information from search queries that helps it that they think is useful, and does Google try to make the most of the information it has?

Absolutely.

But let's not kid ourselves. Facebook, Instagram,
TikTok, Amazon, all of these companies have very, very
detailed and very useful information that allows them to
give advertisers lots and lots of different options to reach
the consumer groups they're most interested in.

And, again, I think when you look at the rise of this, of their technologies and success of their platforms, it's hard to escape that. TikTok has gone from zero to a multi-multibillion-dollar advertising platform.

Yesterday I think I may have blown through on some of the slides yesterday when we talked about general search. You may recall some of the internal documents at Google talking about the prevalence of Gen Z people now using TikTok as a search engine. This has grown to such a concern it was presented in a board deck to the Google Board, and it talks about the percentage of people using these different social media platforms for search and the types of

1 | information they have.

2.

1.3

2.2.

When young adults are spending as much time as they are on TikTok, and TikTok is a multi-multibillion-dollar advertising platform, then absolutely they're a competitor and somebody that Google is thinking about.

And I think the internal documents reflect that.

I mean, the idea of Google doesn't — they would suggest to you, and I think Your Honor knows this just isn't true because you've heard the testimony, you've seen the documents, the notion that Google doesn't acknowledge or believe internally that it faces competition in its search ads business from all of these other massive growing platforms is just not borne out by the evidence. That's just fantasy.

THE COURT: So, Mr. Schmidtlein, can I ask you to -- I think this was my first question out of the box to you yesterday in terms of -- these ad platforms do have differentiation. I mean, there's -- in many ways.

As I understand it, for example, Facebook's ad platform, although dramatic and quite lucrative, a small percentage of their ads are actually coming from search ads.

MR. SCHMIDTLEIN: Correct.

Certainly at the time that we were sort of studying that, I think.

1 THE COURT: Right.

1.3

2.2.

MR. SCHMIDTLEIN: Subsequent developments have occurred. But at the time of the data that was submitted in trial, that is true.

THE COURT: Yeah.

And I think the same is true for TikTok. Yes, they've got some search capability. And I use TikTok to search just to see how it works. And it's extra-evidentiary-record stuff. Not that I have it on my phone, just to be clear. These are — they may be lucrative, no questions, huge dollar amounts.

The question, I think is, are they competing in the same market? And certainly Google is competing for display ads. And their theory is that what is happening over here is more comparable to display ads than what is available on Google.

And for advertisers, there is really no comparable substitute. We can spend billions of dollars on Facebook and TikTok and Instagram to promote awareness, but it's only Google where we can get that directly declared intent, because at best on these other platforms, at best right now, it's trying to divine intent from indirect signals or from signals as opposed to the actual declared intent of the user.

So why doesn't that make advertising on Google,

```
certainly in terms of text ads, different than all of these
 1
 2.
     other platforms?
 3
               MR. SCHMIDTLEIN: Because even if you're not
     searching on, let's say, Instagram, which I think now is as
 4
 5
     big a platform as Facebook is, or even if you're not
 6
     searching on TikTok, those social media sites are making
 7
     recommendations to you and feeding you content; you know,
     you have your feeds on those. And what are they basing that
 9
          How are they constructing content to send to you that
10
     is keeping you on these platforms for long stretches of
11
     time? It's because they have lots of information about your
12
     interests.
13
               You may recall Mr. Sommer's golfing shirt
14
     exploits.
15
               THE COURT: I think it was his shorts.
16
               MR. SCHMIDTLEIN:
                                 Shorts.
17
               MR. SOMMERS: Thank you, Your Honor.
18
               MR. SCHMIDTLEIN: These sites have lots of
19
     information that, respectfully, I would say is as powerful.
20
               THE COURT:
                           Right.
21
               And I guess the question is, do you think it makes
2.2.
     a difference how they use the information?
23
               Google gets the information directly from a user.
24
     I want golf shorts, punch into the search engine, and you
25
     get ads for golf shorts. A stronger signal, at least some
```

would say, for a buyer's intent at that moment, buyer's commercial intent.

1.3

2.2.

On these social platforms, at least the argument is, they are using signals, in some instances, sort of to create intent. You don't know that, just because somebody is looking at golf swings and golf highlights on TikTok or videos on Instagram of golfers, that at that point in time, they really want to buy something.

And the way those ads have been effective on those channels is that they are showing ads that match interests and, in a sense, sort of creating demands. They're the sort of push versus pull, I think, Dr. Jerath talked about.

MR. SCHMIDTLEIN: And I think that's also true on Google.

I mean, the notion -- I think you saw evidence of this in the case in some of the internal documents from some of the advertisers. And, again, the funnel types of documents, you saw a number of different advertisers talking about search ads being used up and down the funnel.

So the notion that, you know, they would like you to believe that all search ads is about is at the bottom of the funnel. And what I think the internal documents, if we're going to -- if we're going to live with the funnel in this case, I think what the funnel establishes is, there's no singular, neatly delineated -- search ads are down here

```
and social media ads are up here. That's just not true.
 1
               THE COURT:
 2.
                           I think that's right.
 3
               I mean, I don't know that anybody is going to
 4
     defend the sort of regimented --
 5
               MR. SCHMIDTLEIN: Well, I think that's what
 6
     Dr. Jerath, that's what their experts were trying to sell
 7
     you.
               THE COURT:
                          Well -- I think what they had said at
 9
     the end of the day is that the funnel comes in different
10
     shapes and sizes and conceptions, but at the end of the day,
11
     it's still about -- and it's not linear, it's not linear --
12
     sort of the users' intent starting at awareness, interest in
13
    purchasing, to actually purchasing. And, again, we can call
14
     it a funnel, we can call it -- whatever you want to call it.
15
               But, again, you know -- and it's true that
16
     certainly there's testimony that -- or certainly documentary
17
     evidence that Google can be used anywhere along that path in
18
     search ads, not -- I mean, we're talking about Google's
19
     display ads --
20
               MR. SCHMIDTLEIN:
                                 Right.
21
               THE COURT: -- but search ads.
22
               I think the question is, at the end of the day for
    me, is, these advertisers who came in and sort of
23
24
     consistently said, is, look, we can't move away from search
25
     ads, they are unique in that they are capturing somebody who
```

wants to look for a credit card, somebody who is looking to purchase a wrench. That's where people are going.

And why does that not make it so unique that, in fact, under the *Brown Shoes* factors, that's what we're talking about, because we have no SSNIP test here, at least not one done by an expert --

MR. SCHMIDTLEIN: And that's really an important concession.

THE COURT: I know.

1.3

2.2.

And I meant to ask him but we'll talk about that in a moment.

But why doesn't that -- isn't that sort of a distinguishing feature, when we're just talking about marketing realities under *Brown Shoe*, that make search ads and text ads different?

MR. SCHMIDTLEIN: Well, you know, this case would have looked a lot different and probably the discovery and the expert analyses would have looked a lot different if the alleged relevant market in this case was search advertising for credit cards, or some narrow market where they came in and said, okay, the market is just this sort of little piece, and that's -- but that's not what their case is.

They have grabbed a small number, a small number of advertisers, who've come in and said, yeah, if I'm looking -- if I'm trying to sell a credit card or advertise

a credit card, yeah, there's various different places, but I
find search to be sort of the most effective.

1.3

2.2.

Now, I'm not -- I don't think that somebody coming in and saying, in the current market state, the fact that search is performing really, really well doesn't mean that if somehow search fell off a cliff and did poorly -- because, remember, I'm going to get to the ROI chart that you flagged for us -- if the evidence in the case is Google is constantly improving and improving ROI and doing all of these things to stay competitive, the fact that people are happy with Google and that they're getting that good ROI doesn't mean necessarily that if somehow that changed, if somehow Google degraded the product or did something, because none of them came in and said, Google's terrible.

"Mr. Vandyke, did you always have good ROI?
"Absolutely."

What they came in and they complained about was the fact that there was a lot of competition in their industry, that Airbnb, Vrbo, all of these travel competitors had come in and they were competing super hard for advertising and they didn't like that.

THE COURT: Right.

MR. SCHMIDTLEIN: So I mean, Your Honor, to your point, what's really remarkable about this case is, huge data advertising market.

Where's the regression analysis? Where's the marketwide assessment? Where's the -- what they've come in with is a handful of anecdotal advertisers in some very specific verticals -- and the great price document is the -- and, again, we've talked about return on investment, and they all agree return on investment is key --

And Mr. Levy said, "Have you had conversations or heard of advertisers depending on return on investment and other factors that shift pend from Google to Facebook, Facebook to Google?

"Yes."

2.2.

So the fact that you've got this substitution, it doesn't have to be 100 percent substitution. The fact that you have this substitution is significant. But where is — and you can look in the — this is our funnel, you know, things like this.

Where is the big analysis? Where is the big SSNIP test? Where's the price effect? And they don't have it.

They have a single internal Google document about a CPC index that doesn't take into effect -- or doesn't take into account quality adjustment.

THE COURT: I think what Mr. Dahlquist would say is, yes, we don't have an expert's regression analysis and we don't need it, and the reason we don't need it is we've got Google's live experiments, Google performing live

1 experiments in which it, with very creative names, increases

- 2 | price at 5, in some cases, 15 percent, for weeks, and it's
- 3 demonstrated that advertisers not only don't -- well, I
- 4 | shouldn't say that. What those, sort of uniformly, those
- 5 | experiments showed is that Google was able to sustain
- 6 | 50 percent of its revenues even after increasing the price
- 7 by that percentage.
- And so you're not seeing this sort of massive
- 9 | fleeing of the market from Google based on these
- 10 | experiments, that one would expect, if you're seeing
- 11 | increases of 5, 10, 15 percent. It's just not happening.
- 12 At least 50 percent of the advertisers are still, weeks and
- 13 | weeks later, still sticking with Google in those
- 14 experiments.
- And so why isn't that, you know, a real life SSNIP
- 16 | test that's equally as compelling evidence?
- 17 MR. SCHMIDTLEIN: So I think what's unique about
- 18 | this case, and what's unique about search ads in a way, is
- 19 | the fact that it is this auction. You know, Google isn't
- 20 setting the price. The price is determined by a very, very,
- 21 | very complicated auction. I think we had witnesses here
- 22 | who, I think, tried to present the most high level, kind of
- 23 | simplified version, because that's all I could, frankly,
- 24 understand --
- 25 THE COURT: Right.

1 MR. SCHMIDTLEIN: -- and we wanted to present it 2 to you.

1.3

2.2.

But the truth of the matter is, and I think the internal documents say it is, when Google -- Google has a hard time assessing what the value of their product is in the market.

THE COURT: But you wouldn't dispute that, based upon the evidence, Google -- I suppose this is true with any advertiser, but it has the ability to sort of raise price through various changes to the auction. I mean, that's been shown. It can change the auction in certain ways. It can either thicken the auction. It can sort of decrease the distance between the first and top bidder in terms of how the auction gets defined.

So, yes, it's a complicated, unique way than simply identifying what the price is for the 30-second ad, but Google still, at the end of the day, has these controls. And I don't think that's in dispute. The question is, can they use those controls in a way to sustain an increase in price at a monopoly level without losing customers, and some of the documentation suggests that that's exactly what they can do.

MR. SCHMIDTLEIN: I think what the documentation and the testimony that you heard at trial was a couple different things. One, it's very difficult to -- for Google

to assess and understand the value that the winning bidder is ascribing to an ad, because they're always paying — they're not paying the price they bid, right, it's this complicated formula.

THE COURT: Right.

2.2.

MR. SCHMIDTLEIN: And if over time the same person wins and wins, their price is going to come down.

So in other words, if Google is doing a better job at sort of matching, their price is going to come down. And so Google is trying to figure out ways, and I think this is — in most markets, Your Honor, if I've underpriced my product, there's — there are ways for — and people do this all the time in competitive markets, my price might be too low and I'm going to try to see if, even in a competitive market, if, in fact, people value my price — my product more that I can take a price increase.

That happens all the time in markets. And that's what you're seeing what happens inside of Google. Google is trying to assess, are we actually getting the value that our product provides to these advertisers? And in some cases, after we've made a product improvement, that actually is driving more value for them.

And a lot of these auctions, and a lot of the things that get introduced, it's not some uniform price increase. You'll see some of these where actually prices go

down for a lot of advertisers and prices might go up for others. It's a very complicated process, because the advertisers are constantly reacting and evaluating their bids.

1.3

THE COURT: So what's the answer to the question, or the observation -- and this is, in fact, noted in
Microsoft you'll recall -- there really isn't any evidence
of Google looking at competitors when they are adjusting
these pricing knobs and trying to gain the headspace, right?

I don't think -- at least as my understanding of the competition law, there's nothing necessarily unlawful about Google trying to acquire as much of that headspace as it can. If it improves the product, it should be able to raise the price, right? I don't think there's anything wrong with that per se.

I don't think the question is, is Google able to raise the price to capture that headspace in a way that's — it can do so now that it would not be able to do so in a more competitive market?

And isn't evidence of that the fact that Google doesn't -- when it makes these adjustments, it doesn't look at, you know, well, what's the pricing over at Facebook?

What's the pricing over at Bing? What's the pricing over somewhere else? There's no evidence that Google ever looks at a competitor's pricing, to my knowledge, certainly not

often, in determining the impacts that these adjustments
would have on customer retention.

MR. SCHMIDTLEIN: Well, I think one of the answers is, this is not like a Coca-Cola rep walking into a grocery store and observing — I can easily observe what the price of Pepsi is, and say, well, let's see, if I move it up, you know, a penny or two, what's going to happen? We don't have insight into all of the auction and the pricing mechanisms that are going on in these platforms.

I mean, they hear from advertisers. They certainly understand from advertisers, and Mr. Dischler and Mr. Raghavan testified to it, that when they go and talk to advertisers, advertisers tell them, hey, I'm getting better ROI over here, or you guys aren't doing so well, you know, for these types of campaigns, you know, we're moving our spend.

But Google doesn't have some easy way to observe, oh, I know that for this type of ad, the price on Facebook is X. So if we move our prices --

THE COURT: Right.

But in a competitive market a -- and let's say, for sake of argument, yes, there isn't as much price transparency as if you walked into a grocery store. I think that's obvious.

But there doesn't seem to be, when pricing

- adjustments are made, just any concern about losing customers.
- 3 MR. SCHMIDTLEIN: I disagree.
- THE COURT: Or losing advertisers -- actually I

 shouldn't say that. That's not true. These experiments are

 being done to see how many people you would lose as

 advertisers.
 - And what they've consistently shown, again, is that you're still able to maintain sort of 50 percent of the revenue, all the various names of these experiments, but that was sort of the consistent finding.
- MR. SCHMIDTLEIN: As quality improvements are being made.
- 14 THE COURT: Right.

2.2.

- MR. SCHMIDTLEIN: So, again, we're seeing quality improvements, better value being provided to advertisers, improvements in the auction, innovations occurring, and they're trying to figure out how do we -- can and how do we capture some of that?
 - And, respectfully, I would suggest that's just not proof of monopoly power. That doesn't mean you don't have competition from other people. The fact that you're making the improvements, the fact that you're making the innovations and that you're trying to capture some of that increased value, that doesn't -- and that everybody -- you

know, and, again, most of these -- most of these launches
result in winners and losers. It's very, very complicated
to know in advance how something is going to perform.

1.3

2.2.

- And some of these -- you've heard testimony about, like, format pricing. That's delivering obviously much better, bigger value.
- THE COURT: But doesn't what the economists say
 that, yes, Google can capture -- has the right to capture
 whatever additional value it's giving its advertisers.
- I think the question is whether it would be able to capture
 as much as it does in a more competitive market. And maybe
 that's in some sense tautological, I don't know.
 - But if Google can capture 85 to 90 percent without losing a large number of advertisers, is there not sort of the economic theory that if there were, in fact, more direct competitors, it would be only able to capture 25, 35, 40 percent?
 - MR. SCHMIDTLEIN: No, because, Your Honor, I think if what you saw was Google not making any quality improvement I mean, if Google is a monopolist, why are they trying to improve anything? Just jack the price up. That's not what the record in this case is. The record, as Dr. Israel testified, we see quality outrunning even their CPC, which we say isn't a valid measure. So the fact that Google's able to do that and the fact that Google is

1 | continuing to innovate is absolutely proof.

And let me just make one other quick point,

because I know you want to stay on schedule.

THE COURT: No, no, you've got time.

5 MR. SCHMIDTLEIN: The testimony in the case,

6 I think, was consistent -- and this is a point that,

7 | I think, even -- if I can find it -- even Professor Whinston

8 | agreed to -- is that there is -- I've lost it -- there is

9 this notion that you have separate audiences on Bing, in

10 other words.

4

13

14

15

16

17

18

19

20

21

2.2.

23

24

25

11 THE COURT: Right, the overlap issue.

MR. SCHMIDTLEIN: Yeah.

I mean, people -- I don't know, maybe there's somebody out there who does a search on Google; and if they don't like the results, they immediately go -- every time, they go and they're going back and forth between the two, but that's not typical sort of behavior. The advertisers know that.

There are people who prefer Bing and there are people who prefer Google. So from an advertiser's perspective -- and I think the data shows this and we have some data on this, all the large advertisers are on both.

So in that -- when you have that dynamic, is

Google constrained more by Bing, or more by Facebook, TikTok

and all of these people? The evidence in the case was

uniform: Google is much more constrained by these other people if for no other reason than the audience overlap.

That's where the same audience on Google -- and it's true on Bing. Bing's constrained by them, too. Those same audiences are more likely to be on these other social media websites -- and I don't think anybody thinks -- every time we go on the Internet, no matter where we are, we get plenty of ads. The advertisers know where to find us and they're gathering that information, and they view -- they view the same audiences more with Google on these other sites than they do Google versus Bing.

THE COURT: So can I ask this? Does your theory of substitutability rest entirely on ROI? Or is there other — are there other metrics that you think establish substitutability?

MR. SCHMIDTLEIN: Well, I mean --

THE COURT: Or demonstrate substitutability,

I should say?

1.3

2.2.

MR. SCHMIDTLEIN: Well, I think ROI is obviously the thing that advertisers are most interested in, so it's certainly the metric that people look at.

And it also takes into account sort of different costs. There may be different costs on these different -- and they may be priced somewhat differently, but if they're getting a really good comparable ROI, they will switch.

THE COURT: So what about the following, which is that what's more important in ROI is traffic volume. That you can have the best ROI out there, but unless you've got the traffic, the ad spend isn't going to shift. And I think the evidence here has shown, at least it's been suggested, that the ROI on Bing is actually better than Google in part because there are fewer advertisers and less thicker auctions over there.

2.2.

But even if the ROI is better at Bing, it doesn't mean advertisers are all going to flee to Bing and take their money over there, and the reason is there aren't as many users.

And there's a reason that the ad spend has essentially -- essentially corresponds with the market share for search. I think we've heard everybody say, our ad spend on Bing sort of tops out at around 10 percent, and that's because that's sort of the market shares in terms of where the users are.

So if that's true, then while ROI is important, it's not clear to me that it really is the primary consideration for advertisers in terms of making substitutability determinations.

MR. SCHMIDTLEIN: Well, and I think that the question is, is there constraints?

I would say there are constraints.

But we absolutely agree that the even larger constraints are from these other sites where the eyeballs are. Absolutely, there are more people overlapping on Google on — probably on Amazon and Facebook and TikTok and these other places than there are with Bing. And so our position is, yeah, they could move some of their spend over because the more spend, the more ROI. They're not sort of advertisement constrained.

1.3

But absolutely, there's more for them to gain, there's more competition, if you will, vis-à-vis these other sites. And that is why Google is so focused on them as they're making innovations and they're improving their technologies over all this period, and I don't think can be in dispute.

If Google was a fat, happy monopolist who didn't have to worry about all these other people and it was — they had everything locked up and Bing was just over here in its channel, they would just be sitting back, no innovation, and just raising price, and that's not what the record in this case has established, Your Honor.

THE COURT: And how does that then square with -
I mean -- how does that square with what every case has

said, is that even the monopolist has an incentive to

innovate? It's a little unclear to me how that cuts, right?

If you have a market in which there's no

- innovation, you're a monopolist. If there's a market in
 which you're innovating, well, monopolists innovate too. So
 I'm not quite sure how it cuts under the case law.

 MR. SCHMIDTLEIN: I would submit, Your Honor, back
 - MR. SCHMIDTLEIN: I would submit, Your Honor, back to Dr. Israel's chart, the 129, I think he testified based on his observation of the ClicData, in other words, what percentage of time were ads being clicked on, and I think this is over a time period where there's certainly not an increase in the overall ads, and you made a remark about Bing having Bing actually shows more ads than Google does.
- 12 THE COURT: Right.

5

6

7

8

9

10

11

- 13 MR. SCHMIDTLEIN: But over that time period,

 14 I think he observed it went from a 10 percent ad click rate

 15 to a 30 percent ad click rate. That's pretty impressive -
 16 a pretty impressive proxy for improvement of ad quality.

 17 There's been no testimony in the case that Google has fooled

 18 people into clicking those ads or that advertisers haven't

 19 been spending the price.
- 20 THE COURT: Do you think that's the best proxy we 21 have --
- 22 MR. SCHMIDTLEIN: That's the best --
- 23 THE COURT: -- the best proxy Google has? Because 24 you don't have transparency into whether those clicks result 25 in conversions or the degree they result in conversions

```
unless, for example, you're on SA360, for instance.
 1
 2.
               MR. SCHMIDTLEIN: Well, but even there we don't
 3
     have perfect marketwide ROI information.
 4
               I mean, we build a lot of tools, we provide
 5
     customers with lots of information to allow them to perform
 6
     their own ROI assessments, and, again, I think as you heard,
 7
     like, different customers do it differently. They may look
 8
     at the metrics and value things differently.
                                                   So it's
 9
     very -- it's impossible for Google to say, marketwide, we
10
     know, you know, ROI is going up by X.
11
               But I think this is, to our mind, it's certainly a
12
     very, very good indicator of customer reaction and
1.3
     interaction, and you would expect that.
14
               THE COURT: You would expect with more clicks,
15
     there would be more conversions?
16
               MR. SCHMIDTLEIN: You would expect, absent some
17
     other people being fooled or deceived or something, you
18
     would expect there to be a pretty good correlation between
19
     ad clicks and ROI.
20
               All right. I want to be respectful of what the
21
     timing here is.
2.2.
               THE COURT:
                           Okay.
23
               MR. SCHMIDTLEIN: So if you don't have any other
24
     questions, Your Honor...
```

25

THE COURT:

I don't.

1 MR. SCHMIDTLEIN: Thank you. 2 THE COURT: Mr. Dahlquist. 3 MR. DAHLQUIST: A few points, Your Honor. 4 Let's, perhaps, start where we left off. 5 And Your Honor has it exactly right. 6 In the Microsoft case, this is at, I'm reading 7 from page 57, stated, "Moreover, because innovation can 8 increase an already dominant market share and further delay 9 of the emergence of competition, even monopolists have a reason to invest." That's a direct quote from Microsoft. 10 11 Your Honor, Mr. Schmidtlein spent a lot of time 12 talking about the emergence of Facebook, TikTok, these other 1.3 platforms. 14 If we can go to Slide 26, please, Mr. Penado. 15 And, Your Honor, a lot of this is redacted from 16 the public, but I just need to focus on the public piece of 17 this. 18 This is Exhibit 7002A, which is a stipulated 19 financial statement for Search Plus, which is the majority 20 of Search Plus' search ads. That was what Dr. Raghavan 21 testified to. 2.2. If Facebook, TikTok, Instagram, if all of these 23 other companies are growing so much and eating Google's 24 lunch, why is their revenue increasing consistently, 25 dramatically, year over year over year over year?

And to the confidential portion that only

Your Honor can see, their margins, effectively constant,

their profit margins, effectively constant.

1.3

If Facebook, TikTok, if all these other companies were actually competing for search ads and being a constraint on search ads, we would see some change in those numbers. We simply do not.

THE COURT: So your explanation for why these other companies have been as successful as they have been is just that the pie is getting bigger? Because they're not acting as a constraint on Google, it's just a bigger pie that everybody can take a bite of?

MR. DAHLQUIST: More people on the Internet, more people using their phones, more people -- yes, correct, Your Honor, the pie is getting bigger.

But that is not changing Google's share.

Mr. Schmidtlein put up one of his first slides,

I don't need to put it up, Your Honor, remember that it's a

Dr. Israel slide of the growing pie. It's all digital ads.

If you look at it, Google's piece is pretty constant. And even if there's a shift in share at some point, I'd submit that's exactly what H&R Block and Visa and Sysco tell us. Yeah, there might be some minor impact on share but it is pretty constant. The growth of Facebook, TikTok, Instagram are coming at the expense of others.

On that same chart, the biggest part is a gray part that's "other," and that's exactly what Facebook, TikTok, Instagram are making.

1.3

2.2.

Yes, they're making money. Yes, they have a successful product, but it is a different product.

In order to look at that, all we have to do is look at -- the advertiser testimony tells you that.

THE COURT: So, Mr. Dahlquist, what do we make of Mr. Schmidtlein's argument that if one looks at Google's business documents, there's not a lot of records that are comparing ad quality between Bing and Google. When they're looking over that at other places where ad dollars can be spent, it's at Amazon, Facebook, Instagram. I mean, isn't that fairly strong evidence of — that Google believes it has competitors in the market for advertising?

 $$\operatorname{MR.}$ DAHLQUIST: It shows you that Google wants to make more money in different products.

Let's go to Slide 52, which I think is the direct response to that, Your Honor.

Because Google saw that these other companies,

Facebook, Instagram are so profitable, they launched a new

product called Discovery Ads to compete directly with those

products. And we agree, this new product, and that's the

chart you show, the green is their brand-new product that

they launched in 2020, or approximately 2020, in order to

compete, in order to get some of these social buyers, and some of those dollars in the social ads.

1.3

2.2.

But if you look at this document, UPX33, it's a different channel, it's different from Search, it's different from Display. They themselves put these in different categories. You don't need to believe — take my word for it, you can take Google's word for it. These are distinctly different products. That is all we need to look at, is the advertiser testimony.

And let's go to Slide 50, 5-0.

Mr. Lowcock himself: "I don't consider search and display substitutable. Search ads are the one that's mandatory."

Slide 51, Mr. Booth: "Search ads are unique."

Google had the opportunity to call advertisers.

They could have called Facebook, they could have called Instagram to trial.

They had plenty of time. We were with you for ten weeks, Your Honor. They didn't. They didn't call these advertisers to say, yes, we're competing in search ads or, yes, or any other advertisers to say, yes, we're switching. These are substitutable. That evidence simply doesn't exist.

Your Honor, we began some of this discussion talking about case law, and I think there's just one case

that's a more recent case -- if we go to Slide 43 -- IQVIA,

FTC versus IQVIA, Mr. Schmidtlein referenced this yesterday
so I want to make sure we put it out there. This is a very
recent case from Judge Ramos from the Southern District of
New York, which found that search ads are not substitutable
for other types of advertising.

1.3

- Directly on point, sure, this was programmatic advertising for healthcare professionals, yes, but that is what they found was the market.
- A similar analysis here, Dr. Israel was the expert in this same case and put forth the same theory, that social ads, display ads, all these other types of ads should be in that market, and Judge Ramos rejected that opinion because they are not reasonably interchangeable for another.
- Now, Your Honor asked a question, which I want to be responsive to, and if we can go to Slide 16, asked, and I'll ask the question of myself: Why didn't Dr. Whinston do a SSNIP test?
- The short answer is, he didn't have to. We have a real-world SSNIP test here at Slide 16.
- Google did it for us. Google and the testimony of Jerry Dischler talking about a 5 percent increase.
- Go to the next slide, please.
- 24 Slide 17, he talks about a 10, 15 percent 25 increase.

We didn't need to do a SSNIP test because we have a real-world SSNIP test done by Google. This was the predicate in all their additional experiments.

2.2.

But even Professor Israel or Dr. Israel himself stated, and this is at the transcript 8386, that "It's more normal than not that an expert does not do a full quantitative hypothetical monopolist test." Even Dr. Israel agreed what Professor Whinston did was a qualitative test.

That's what's required under Brown Shoe. Looked at the factors, the various Brown Shoe factors, in order to determine, is this a market? And the answer was yes.

THE COURT: I mean, doesn't -- I mean, it's certainly the case that you're not required to present a qualitative analysis, you're not required to do a regression analysis. But -- and you couldn't do one when it came to search. But, in theory, you could have done one here.

And I guess the question is, why not? I mean,
I know you've got some of these documents that you want to
point to and have pointed to as substitutes for it, but,
I mean, shouldn't I have expected to see some kind of
regression analysis here from an expert?

MR. DAHLQUIST: I think, Your Honor, you're trying to put a burden on plaintiffs that just doesn't exist, candidly. The evidence, the direct evidence showed that customers, advertisers are not switching in the light of

price increases. That is all this Court needs to find.

1.3

And if you want to talk about, since I know

Your Honor asked the question yesterday, about Dr. Israel's

analysis, 142 -- and I say Dr. Israel didn't do a regression

analysis, he didn't do an econometric analysis, and he

stated that as well. He didn't even put forth a market, nor

did Dr. Murphy. Neither of them actually opined. They have

this vague audience theory but they don't actually opine on

market.

But Your Honor asked about DX29.129. And the short answer to Your Honor's question is, this shows nothing. Dr. Israel's analysis shows nothing. He tries, and he claims that he's doing some type of proxy analysis for quality.

But what this is -- and let's start with the baseline of what it is. This is -- starts with Google's price -- search ads index, right. That's the blue line. The blue and the green line are, that's data from Google, mobile and desktop. As the price is going up, this, you know, shows that prices have increased over 100 percent over this time period.

And what he does is he layers on top of it this orange line, which is just a trend line, and is it defined as ratio of ad clicks to queries, returning ads, which Your Honor asked an exact question of Dr. Israel about this.

"What does this show?

2.2.

"This is text ads, this is search ads, this is mobile ads, this is desktop. It's all combined in one."

It is not case adjusted, if you will.

Google's own analysis takes a basket of goods like a CPI, right, some from healthcare, some from consumer goods, and creates its own price index.

Dr. Israel doesn't attempt to do that. This number could be going up for any multitude of reasons.

Because Google's putting more ads on a page. It could be because there's more text ads being sold than search ads, more mobile ads than Desktop ads. We simply don't know why.

I could very easily just take a trend line of number of runs scored by the Chicago Cubs since the beginning of the season and have a trend line going up in the same way and overlay it on the same chart.

THE COURT: And this is the question I have -- and, Mr. Schmidtlein, obviously, you'll get an opportunity to discuss this as well -- which is, I understood the blue and the green line and I understood the axes in which they appeared.

What I didn't understand was how a ratio of ad to click line, ads to click, could be superimposed upon those two lines when they aren't defined by either axis.

And so that was my confusion about this chart and

```
how Dr. Israel suggested that this evidence of click ratio
 1
 2
     could sort of map on to this.
 3
               And maybe he's just saying, well, the trend lines
 4
     are the same, and maybe that's the end of the day.
 5
     that's what I was confused about and that's the reason I
 6
     raised this particular --
 7
               MR. DAHLQUIST: And Your Honor is asking the right
 8
     question, and we don't think it shows anything.
 9
               He's attempting to create a correlation, or a
10
     causation, perhaps, between clicks and quality, but even
11
     Google says that's not right.
12
               Let's go to the next slide, 143, please.
13
               Google itself has said, the advertisers care in
14
     the end about conversions, not clicks.
15
               And even Mr. Jain, this was some designated
16
     testimony, says, "We cannot draw a correlation on the
17
     click."
18
               So this evidence --
19
               THE COURT: But isn't that a fair proxy?
20
               I mean, this is what I just talked about with
21
     Mr. Schmidtlein.
2.2.
               Google doesn't have full transparency into how
23
     successful the ads are ultimately, at least that's my
24
     understanding, and so why isn't the increased click rate a
```

fair proxy for improved ad quality?

25

In other words, why isn't it a fair inference that 1 2 if the clickthrough rate has increased from 10 percent to 3 30 percent, that the conversion rate would have gone up too, 4 or at a minimum, at a minimum, revenues would have gone up? 5 MR. DAHLQUIST: I'll start by, Your Honor, saying, 6 there's simply no record evidence to that. 7 Neither Dr. Israel performed any type of real 8 study to analyze that. Google itself didn't perform --THE COURT: But it can't be that the increased 9 10 clickthrough rate is sort of -- I mean, increased click rate 11 is meaningless. 12 I mean, you're right it could be because there's 13 more ads. On the other hand, more ads is a good thing 14 maybe. The format ad pricing made certain ads more 15 desirable than just simply the single, you know, line. Now 16 you can add things like, we've got a sale, 30 percent off. 17 It provides more information and allows you to click in 18 different places. 19 And so I don't think anybody would dispute that 20 the format ads, for example, are better ads. Would you 21 disagree with that? 2.2. MR. DAHLQUIST: I think that's in the eye of the 23 beholder, Your Honor, whether the advertiser thinks it's more valuable or not. 24

Mr. Schmidtlein talked about, it's really hard for

25

Google to figure out what the value. We agree because
there's not sufficient competition to determine that value.

2.2.

If there was competition, Google would have a very good answer, because -- I'm sorry.

THE COURT: But don't the plaintiffs bear some burden here to establish that advertisers aren't getting what they're paying for?

That advertisers are in what is purportedly a noncompetitive market, they aren't getting what they're paying for; that, in fact, ad quality has degraded, that the conversion rate hasn't gone up, or that revenues haven't gone up as a result of the clickthrough rate growing up.

You all haven't presented evidence of that either, and I'm not sure it's Google's burden to do that.

MR. DAHLQUIST: But, Your Honor, I think, again, you're imposing a burden on the plaintiffs that simply doesn't exist.

Do we dispute that some of these launches, and we're going -- in the next session, we're going to get into detail in the various launches, do they have some incidental occurrence of value or quality? Perhaps, perhaps. As Microsoft said, even a monopolist has some incentive to innovate and provide some additional value.

But that's not the question. The question is, can competition restrain prices? And here the answer is

```
definitively no. Google has tested that time and time
 1
 2
     again, and that is why we have prices that are monopoly
 3
     prices in this marketplace as opposed to competitive prices.
 4
               THE COURT: Yeah. There's more to talk about and
 5
     we'll do that in the next session, because I am curious why
 6
     you think ad quality has not gone up, but we can talk about
 7
     that.
 8
               Mr. Cavanaugh.
 9
               MR. DAHLQUIST:
                               Thank you, Your Honor.
10
               MR. CAVANAUGH: Very quickly, Your Honor.
11
               Your Honor asked Mr. Schmidtlein about the direct
12
     signal produced by queries on general search, and I think
1.3
     that answers Your Honor's question to me about putting PLAs
14
     and text in the same market.
15
               And it's the point that both of them are going
16
     after that same mindset of the user, the intent expressed by
17
     that direct signal, and that is what permits -- that is why
18
     they should be in that same market, because that's the
19
     demand subs -- that answers the demand substitution
20
     question.
21
               I'd also note, Your Honor, Mr. Booth, at 518182,
2.2.
     testified that Home Depot would look at --
23
               THE COURT: Right.
24
               MR. CAVANAUGH: -- reallocating between the two.
25
               The second point very quickly, Your Honor.
```

```
If all of these -- if the Facebook display ads and
 1
 2
     the TikTok display ads are actually in the same market, one
 3
     would expect that, over time, the ROIs would all equalize,
 4
     but we see different ROIs.
 5
               And the second point relating to that, Your Honor,
 6
     is that if the world really turned on ROIs, all the money
 7
     would move to the channel with the best ROI. But that isn't
 8
     the case, because they're different products with different
 9
     attributes with different advertiser objectives.
10
               Thank you, Your Honor.
11
               THE COURT: All right. Thank you, Mr. Cavanaugh.
12
               All right. So let's take our morning break.
13
     don't we plan to resume at about five of 11:00 so we can try
14
     and stay on schedule.
15
               Thanks, everyone.
16
               COURTROOM DEPUTY: All rise.
17
               This Court stands in recess.
18
               (Recess from 10:43 a.m. to 10:56 a.m.)
19
               COURTROOM DEPUTY: All rise. This Honorable Court
20
     is again in session. Be seated and come to order.
21
               THE COURT:
                           Thank you, everyone. Please be
2.2.
     seated, everyone.
23
               Mr. Dahlquist, ready when you are.
24
               MR. DAHLQUIST: Great. Thank you, Your Honor.
25
               Your Honor, the next section we're going to focus
```

1 on, advertiser harm.

2.

3

4

5

6

7

8

9

10

11

12

1.3

14

15

16

17

18

19

20

2.1

2.2.

23

24

25

And a Slide 74, please, Mr. Penado.

As Your Honor previewed in the very beginning of this morning, or asked where this analysis fits in, this next section, at least until Your Honor's questions draw me otherwise, are going to be focused towards what Google actually does and the efforts that it takes in order to increase price.

And under the American Tobacco cite that's up there, that the definition of a monopoly is a firm that can raise prices when it desires to do so. And I believe that's what this direct evidence shows, that Google does, in fact, increase price when it desires to do so.

One of the keys to Google's price increases and in revenue is the search ads auction.

And this Court heard a lot about the ad auction, and we're going to focus on just a couple components. But maybe it's best to take a step backwards for a minute.

And, Mr. Penado, if we can please go to Slide 23, please.

Over time -- and let's --

It's the same deck.

MR. SCHMIDTLEIN: Thank you.

MR. DAHLQUIST: No problem.

In its early history, Google relied on query

growth for growing its volume, for growing its volume and 1 2 growing its revenue. 3 THE COURT: Sorry, relied on what? 4 MR. DAHLQUIST: Its query growth. 5 More people joining the Internet, more people 6 signing on, more people entering inquiries. Query growth 7 was the primary driver of Google's revenue. At some point 8 in time that changed, and Slide 23 shows a document 9 identifying that. 10 The graph's redacted, but that's irrelevant 11 because the graph just shows two points. One, the dotted 12 line is that Google's year-over-year target growth was at 13 that percentage of the dotted line, and they hit it, they 14 hit it year over year, and query growth was the primary 15 driver, until where the Number 1 shows, sometime in around 16 mid-2015, queries began to slow. 17 Google then needed some other tools in order to 18 monetize, in order to increase its revenue or to hit its 19 revenue goals. 20 And as the slide shows, monetization gains are now driving the primary growth -- are driving the majority of 21 2.2. revenue growth at Google. 23 Now, let's jump back to where we were --24 Thank you, Mr. Penado. 25 -- at 74 talking about why Google and how Google

started raising prices as they want to.

2.

1.3

2.1

2.2.

If we can go to text slide, please, 75.

In this similar time period, and all these documents are related to similar topics, Your Honor, but this was a summary of when Google said, we need more ways to extract more value, since revenue growth as was -- since query growth was no longer the driving force, we needed other ways.

And they state here, "We need pricing mechanisms with pricing knobs."

And there's a variety of ways that they do this.

They do this through the complexity of the ad auction —

through the complexity of the ad auction, and Google often

says, well, through the ad auction, we're always increasing

value, we're always increasing quality. That's what we're

doing, we're innovating.

If we can go to the next slide, 76, please.

Google's documents are very clear. Sometimes they might be increasing value, sometimes there's a quality component. But what are we tuning? Prices. That's what their focus is.

Next slide, please.

In 2018, a Google document talked about sometimes there are some launches that improve quality and have touching on pricing, and they call that an incidental

- 1 | occurrence of pricing. But at this time period, they were
- 2 | looking for more intentional pricing knobs. What can we do
- 3 | in order to intentionally increase our pricing? And they
- 4 | identify here format pricing, squashing, and reserves.
- 5 THE COURT: Mr. Dahlquist, could I ask you a
- 6 question as a legal proposition?
- 7 Assume for me for a moment that ad quality has
- 8 improved. Just -- I know you disagree with that, but assume
- 9 ad quality has improved.
- 10 Is a monopolist permitted to increase the price of
- 11 | its advertising commensurate with the quality improvements
- 12 | in your view?
- 13 MR. DAHLQUIST: Your Honor, we are not taking a
- 14 position that price increases in and of themselves are
- 15 | illegal, no, we're definitely not.
- 16 THE COURT: Okay.
- 17 MR. DAHLQUIST: However, price increases should be
- 18 | bounded by competition. It should be the market that should
- 19 be deciding where those price increases are. That is what
- 20 | Congress requires to do in the Sherman Act, saying that
- 21 | competition is the best form as opposed to what we see here,
- 22 | a firm trying to come up with intentional pricing and trying
- 23 | to decide what it should be pricing, because it has no
- 24 boundary of competition.
- If we can go to the next slide, please.

The three pricing knobs or pricing levers that we talked about most at trial and are most featured in our P file are format pricing, squashing, and rGSP.

Let's talk about format pricing. And I know Your Honor asked about this, as to doesn't format pricing increase some value?

But let's show what the documents show was actually Google's focus.

First, Mr. Dischler agreed that format pricing was, in fact, a pricing knob that he had available to him, and the answer is "yes."

Next slide, please.

2.2.

Now, format pricing was launched over a series of different launches and updates to the ad auction. And this one, called Momiji, which was one we featured at trial — and Momiji, as Your Honor previewed, they have unique names, is a traditional Japanese doll with a small space in the bottom where secret messages can be hidden.

Google saw the opportunity of Momiji to make billions more in format pricing. They expected a 10 percent RPM increase just from this alone.

Google was very clear on this. Because of the Gamma Yellow test that I referenced in the prior session, they knew, they state here, "Prices could be higher, and we think we would keep the money."

```
So this is them validating their own test, saying
 1
 2
     they, we did the test, we know it will work, and, as they
 3
     say here in red, "Format pricing is our best knob to
 4
     engender large price increases."
 5
               And it worked. Google, in fact, did make
 6
    millions. For the typical -- made billions.
 7
               "For the typical advertiser, there was a price
 8
     increase.
 9
               "Answer: Correct. Yes, for the typical
     advertiser."
10
11
               This worked, their test borne out in reality.
12
     it wasn't just a hypothetical that they tested. The reality
1.3
     is they launched it and it worked.
14
               THE COURT: So let me ask you this: We've just
15
     talked, and you've agreed, that pricing increases in and of
16
     itself is not a Section 2 violation; however, price
17
     increases in an anti -- excuse me, in a noncompetitive
18
    market is.
19
               And I guess the question is, is there any evidence
20
     of what the competitive price would have been or an
     estimation of what the competitive price would be, such that
21
     I could sort of tangibly say, advertisers had been harmed to
22
23
     the tune of X dollars?
24
               MR. DAHLQUIST: No, Your Honor. In short, no.
25
               And submit that that's not evidence that is
```

1 | required or necessary.

2.

1.3

2.2.

The question shouldn't be how high could prices go? The question should be, how low should prices have been?

If there had been competition, if there had been a constraint on Google, where should prices have gone?

So I think that's asking the wrong question.

Not, could we increase by 10, 15, 20 percent and did we, in order to figure out what the price should be, this is a scenario where prices could have, should have been much lower as a result of competition.

But to add insult to the injury, Google keeps talking about value that is added, but that's not what they communicated to their advertisers, to their customers.

If these launches, such as format pricing or others, were so value add, why didn't they talk to their customers about it? Why didn't they tell their customers? This one, they said, "There will be no proactive communication of this change, and no comm doc or impact list will be shared with sales."

Even people within Google were not supposed to know about this change in 2017. Only monopolists need to hide their price increases not just from their customers but from their own employees. If this launch were really about quality, they would have shouted it from the rooftops.

And this is what contributes to the idea that — and the supported idea that Google Search ad auction is, in fact, a black box. Advertisers do not know how this works, and Google wants to keep it that way.

2.2.

THE COURT: Does it matter to your case that advertisers don't know how other ad platforms seem to work either?

MR. DAHLQUIST: I'm sorry, Your Honor?

THE COURT: As I understand it, advertisers don't necessarily know how these other ad platforms work either, or at least there's not a lot of evidence that they do.

So how do we -- how do I view that fact? I mean, do advertisers have greater insight into how Bing's ad platform or pricing mechanisms work?

MR. DAHLQUIST: Your Honor, you're right, that's the only other sample we have to look at, really, of a GSE that is a far weaker, but a rival, certainly, to Google here.

And I submit that Google's setting the market here. They're setting the market price, they're setting the market conditions, they're setting it as to how much information is out there; and Bing is following along.

Now, that doesn't prove -- that doesn't prove anything, to be perfectly honest. A monopolist is still pricing and there's others that are free-riding along,

perhaps. But that doesn't tell us as to what a competitive
marketplace would actually create, a marketplace where there
is more transparency or there --

2.2.

THE COURT: I'm sorry, how do I know that Bing has been increasing its price? I mean, it's not clear to me -- how does Bing know what Google's pricing is?

Again, this is not a -- there's -- so far, it doesn't seem like perfect -- far from perfect information in the market. So say Google has increased its price for ads, how does Bing know that that's happened and, therefore, can follow suit?

MR. DAHLQUIST: I don't know that we have a lot of evidence in the record as to how Bing prices or what they do to price, Your Honor. And I don't think we need to, because I think we've shown that the price increases that Google is launching through format pricing and squashing, that Bing is not a competitive constraint on it, and so Google is proceeding ahead with these price increases.

I think Google -- I think most likely Bing is doing its own process and figuring out where its market pressure is, what it can do and can't do, until an advertiser leaves it and perhaps goes to Google. That is a substitute in that way.

But I don't think we have the reverse to show where Google's pricing is so great and the advertiser leaves

to Bing.

1.3

2.2.

Your Honor, moving on to squashing, and I think squashing is helpful to show — if we can go to the next slide — because, again, they use it to engender a more broad price increase, again, this is another intentional pricing knob by Google.

And now, what is squashing? It's the concept is very -- or, well, the implication of it is complex, but the concept is, at least in theory, simple.

When Google engages in squashing, it manipulates one specific input to the ad auction, which affects two ways. One, it affects which ad will actually win; and, two, how much the winner pays.

So the result is that squashing may at times show a lower quality ad, quality in the terms of how Google's measuring it under their LTV calculation, or, on average, it has a price increase. It increases that price by squishing the first and the second, the winner and the runner-up.

Now, while the precise effect of squashing is different in every auction, Google knew that it would increase price, and that's really the focus.

Professor Whinston testified about squashing and its impact and his conclusion is that, at the end, it would "raise the price against the highest bidder."

Now, we've often questioned as to whether these

launches are increasing quality or not, but here is one launch which was very focused as to what it was doing. "The goal is to recover lost revenue from launches which create for our users and advertisers — create value for our users and advertisers but reduced revenue for Google."

That was their very clear goal. Some other launches that they did may have created some value, and they didn't charge enough for them. And so here with this launch, they're trying to come back and recover all lost revenue.

There's no mention of competition. There's no mention about what a competitor might do in response, just, we deserve more money, and let's recover the revenue here.

This is how a monopolist talks.

Again, squashing worked. It made more money.

"On average, the winner paid more?

"Yes."

1.3

2.2.

Now, if we're looking at the quality story, what Professor Whinston explained with -- specifically with squashing, and with other implementations, but specifically with squashing, Google traded inefficiency for higher price.

And Professor Whinston identified that and said that this thing, they made the auction more inefficient in order to raise revenue.

But you don't just have to take

Professor Whinston's word for it. Google's documents in 2 2017 showed that this launch, squashing, had "a negative user experience and a negative impact on the long-term incentives for advertisers to improve quality."

5

6

7

8

10

11

12

1.3

14

15

16

17

18

19

20

21

2.2.

23

24

25

This is Google making a deliberate determination to make their product worse, to make the ad auction worse in order to make more revenue.

But Google is willing to do it, because it brought in more revenue, and they needed that additional revenue to hit their targets.

They were even clearer. And I previewed this in my introduction. "They did this revenue efficiency tradeoff and they ranked ads suboptimally in exchange for more revenue."

And so while we can sit here and listen to Google argue, well, we've created all this quality, there might have been a quality increase, but this was a direct price increase, a direct effort in order to increase prices and make the product worse.

Final launch that we're going to discuss,

Your Honor, is rGSP or randomized generalized second-price
auction.

In 2019, Google introduced another intentional pricing knob called rGSP.

rGSP was introduced through a launch called

Polyjuice. And in case you haven't read the *Harry Potter*books, my kids have informed me that Polyjuice is a magic

potion designed to make you look like someone else. And as

4 you will see, the name is very appropriate.

1.3

2.2.

In short, rGSP manipulates the search ads auction in order to make lower bidders look like higher bidders. Again, the details of rGSP are very complex, but the concept is simple.

Google will randomly swap the top two bidders in a search ads auction. And even if that swapping doesn't actually occur, the rGSP function increases the price that is paid by the winner.

In short, rGSP does two things. One, it shows a lower quality ad, similar to squashing, different mechanism but similar result; and, two, charges the winning bidder more. Again, same effect, very different tool but same effect.

THE COURT: And is there evidence the extent to which -- I mean, as I understood the explanation for this, it was to ensure that smaller retailers, for example, could win auctions from time to time against Amazon. And is there evidence in the record as to how -- whether that, in fact, happened? In other words, does the evidence actually support the idea that, in fact, this sort of elevating of smaller retailers was, in fact, happening?

I've seen that in the record as 1 MR. DAHLQUIST: 2 well, Your Honor. There's certainly some statements that 3 that is one of the effects, or perhaps one of the goals. 4 But I submit where I started, that this is -- they 5 describe this as an intentional pricing knob, an intentional 6 pricing knob in order to increase price. 7 The rGSP launch replaced format pricing, and the 8 issue with format pricing was that advertisers could 9 actually opt out. 10 You asked a question earlier, Your Honor, as to 11 whether advertisers -- everybody would agree that format 12 pricing was better. No, not everybody. An advertiser had 1.3 that ability to choose. Do I want my ad to have format 14 pricing and have these additional components or not? And 15 format pricing made, as you saw, Google billions of dollars. 16 Here, they decided that rGSP was a better 17 pricing knob. And why? Because they couldn't opt out of 18 This would be implemented over -- across every single 19 auction. 20 That's what they said, they found it's a better 21 pricing knob than format pricing and would replace it. 2.2. And let's jump a couple slides ahead. 23 I'm sorry, I can't find the slide. 24 Here we go.

Dr. Adam Juda was asked the direct question:

25

```
"If they enter into a launch, are they subject to rGSP?
 1
 2
               "Yes, it's how the auction works today."
 3
               There's no ability to opt out of this. Whether
 4
     the advertiser likes it or not, it's happening behind the
 5
     scenes and they're subject to this random swapping and price
 6
     increase.
 7
               Professor Jerath explained this, and Your Honor
 8
     had some discussion with him, and this slide, just for your
 9
     purposes to examine later, therein is the detailed
10
     explanation as to how it happens and exactly how the
11
     mechanism works.
12
               But the summary is that Google artificially
1.3
     inflates the ad rank of the runner-up, the winning ad may
14
     lose, and the winning ad gets a price increase.
15
               And what was the effect?
16
               THE COURT: I'm sorry, can you just --
17
               MR. DAHLQUIST:
                               Please.
18
               THE COURT: -- help me understand that one more
19
     time.
20
               So Google flips the first and second place
21
     winner -- excuse me, the first and second place bidders, and
2.2.
     that increases the price how?
23
               MR. DAHLQUIST: Certainly.
24
               As Your Honor recalls, Google runs what's called a
25
     second-price auction.
```

1 THE COURT: Right.

2.2.

2 MR. DAHLQUIST: And so the price of the winner is 3 set by the runner-up.

THE COURT: Right.

MR. DAHLQUIST: Here, in rGSP, Google artificially inflates the second place winner. So inflates its LTV to get closer up to the winner.

That increases what that second price bid is ultimately, and what the winner may ultimately pay. Now it might swap it, and where it artificially increases, it display as lower quality ad. But even if it doesn't, it increases the price that that winner ultimately bids.

THE COURT: Because the second bidder's price is artificially inflated. And the reason it's artificially inflated is to, what, create a smaller delta between the first and second ad so that in some instances they would flip?

MR. DAHLQUIST: Correct, Your Honor.

And this is where Your Honor's explanation or the rationales, one rationale of Google is to prevent runaway auctions, where the winning bidder is always the highest, and maybe we should inflate someone else to get there.

But the problem is, as Professor Israel identified here, it incentivizes advertisers to bid higher. If you don't want to get randomly flipped, if you don't want to get

```
randomly switched, you need to bid even higher, and this
 1
 2
     pushed up all the auction prices, on average, of course.
 3
               Now, to go back to our discussions about this
 4
     quality tradeoff -- please.
 5
               THE COURT:
                           I'm sorry to ask.
 6
               Can I -- what's your understanding of how
 7
     advertisers -- if they didn't know about Google doing this,
 8
     how it is that they responded by the first bidder, say
 9
     Amazon, increasing its ad bids -- I mean, what metric were
10
     they looking at to determine that they were, I guess, losing
11
    more auctions than they had in the past?
12
               MR. DAHLOUIST:
                               Sure.
13
               THE COURT: And then reacting and saying, well, if
14
     we're losing more auctions, we need to increase our bid
15
    price. Is that the chain of events that you believe
16
     occurred?
17
               MR. DAHLQUIST: In part, yes, Your Honor.
18
               And something is, that we'll address a little more
     this afternoon, but Google provides search query reports or
19
20
     SQR reports --
21
               THE COURT: Right.
               MR. DAHLQUIST: -- to everybody that tells you,
22
23
    here's what you won on, here's what you lost on. Here are
     the queries that returned your ads.
24
```

And that's the primary method that advertisers

25

used in order to figure out where they were winning and losing bids. So that was at least one tool.

1.3

2.2.

The other one is just seeing how their ad spend worked, where they were determining ads.

I think Mr. Schmidtlein will probably come up and say that's ROI, and that's where they're trying to figure out and measure what they were doing.

Sure, within this channel, within search ads as to how they were making, where they were making money or where they were most profitable with their ads.

But to go to Your Honor's question as to what advertisers knew or didn't know, Google was very worried about that, as to how to explain to the advertisers how this actually works.

And in Slide 97, they had a whole discussion about this, a whole memo of how do we explain this to our advertisers, and they came up with some explanations, they had talking points.

But the last bullet point, "We don't want to have to say that we randomized, that will have perception problems." They were very worried about telling their advertisers the truth about how this actually worked.

We've had a lot of discussions about quality, and I think this next point is important.

Mr. Penado, can we go to 101, please.

rGSP, they asked, "Is there any component of this launch, this rGSP launch, quality?"

The answer: "Does not directly touch quality.

"Does the exploration lead to better quality?

"Haven't seen that it does."

1.3

2.2.

An intentional pricing launch focused on prices, and this is direct rebuttal to Google's claim that all these launches, all these innovations were an improvement of quality. The record simply doesn't support that, Your Honor.

Your Honor, those were the three points I wanted to cover with respect to advertiser harm and the ad auction. Happy to answer additional questions.

THE COURT: Can I ask you, in terms of the framework again, we are at a point, just in terms of how we've been discussing this, where, let's assume I agree with market definition and that Google has monopoly power in these ad markets and the anti-competitive conduct here is not what you've just described. It's the contracts, the exclusive agreements.

So does not *Microsoft* still require me to look at foreclosure, market foreclosure in these markets as an initial step before I even consider some of the evidence that you've identified as the anti-competitive effects? And if that's the case, what's the evidence of market

foreclosure? 1 2. MR. DAHLQUIST: Certainly, Your Honor. 3 And the short answer is yes. Everything we just went through is put forward as 5 harm evidence to the advertisers. 6 The actual anti-competitive effect comes from the 7 contracts, from the loss of competition related to the 8 contracts. 9 Professor Whinston, and we put forth foreclosure 10 numbers not just for the GSE but also for the search ads 11 markets, it's detailed in our P file, I can get you the 12 detailed P file cites in a moment. 1.3 But the foreclosure numbers are similar but a 14 little bit less because our markets are different. 15 makes sense. Here we're focused on different products than 16 the GSE, but we do certainly present foreclosure numbers, 17 and they're escaping me at the moment. 18 THE COURT: So just my notes, our notes indicate 19 36 percent for search ads, and 45 percent for -- in the text 20 ads market, as your foreclosure numbers. 21 MR. DAHLQUIST: That sounds right. 2.2. If that's direct from your P file, we agree with 23 that, Your Honor. 24 THE COURT: Okay. 25 And that number, those percentages are --

- 1 represent the ad revenue of all search ads, including
- 2 Amazon, for example, of all search ads that go through the
- 3 default.
- 4 MR. DAHLQUIST: Correct.
- Our foreclosure numbers, the coverage numbers that
- 6 | we did for the search ads markets were based on revenue,
- 7 yes.
- 8 THE COURT: Okay.
- 9 And just to return to a question that I had a
- 10 | conversation with Mr. Dintzer yesterday, in terms of the
- 11 role of foreclosure.
- 12 And I asked him yesterday, well, if you establish
- 13 | foreclosure, is that sort of the end of the -- you don't
- 14 | have -- do you have to -- you don't have to do anything
- 15 | more? Or is there more you need to do?
- And I think his answer was, No, once we've
- 17 | established foreclosure, the burden then shifts.
- 18 Is that right?
- 19 MR. DAHLQUIST: Yes, certainly agree with that.
- THE COURT: Okay.
- MR. DAHLQUIST: And I think that's what this
- 22 evidence shows.
- I think Mr. Schmidtlein got up in his last session
- 24 | and said, all of this is academic. We certainly disagree,
- 25 | Your Honor. Charging advertisers monopoly prices is not

1 | academic, it's real world.

2.

3

4

5

6

7

8

9

10

11

12

1.3

14

15

16

17

18

19

20

21

2.2.

23

24

25

So we present this evidence in order to show the harm that is being -- that is occurring.

THE COURT: Right.

MR. DAHLQUIST: And so while I completely agree once we show the foreclosure numbers, you can stop there, we've done more. We've shown additional evidence as to the actual harm that's occurring in the search ads market.

THE COURT: Let me just read the following from the Eleventh Circuit's opinion in McWane. This is on page 835. They write, "The difference between the traditional rule of reason and the rule of reason for exclusive dealing is that in the exclusive dealing context, courts are bound by Tampa Electric's requirement to consider 'substantial foreclosure,' but foreclosure is usually no longer sufficient by itself. Rather, it serves a useful screening function as a proxy for anti-competitive harm. Thus, foreclosure is one of several factors we now examine in determining whether the conduct harmed competition. also look for direct evidence that the challenged conduct has affected price or output, along with other indirect evidence such as the degree of rivals' exclusion, the duration of the exclusive deals, and the existence of alternative channels of distribution."

So I read McWane, and it cites Microsoft.

And maybe it's putting a gloss on *Microsoft*, but do you agree with the *McWane*'s court's framing of foreclosure, which is slightly different than the question and answer that I just got from you, which is that, foreclosure doesn't end your burden, it's just the door you need to walk through to present evidence, other evidence to satisfy your burden.

MR. DAHLQUIST: And I think, Your Honor, we'd say that we agree with the *Microsoft* ruling, the D.C. Circuit's ruling in *Microsoft* is how they formulate the foreclosure analysis, which *McWane* is obviously relying on.

But with that, we agree with *McWane* in the fact that you can present additional direct evidence of price increase, and that's exactly what this is.

So we're consistent with that, aligned with that, but I think we read foreclosure analysis --

THE COURT: I think the question is, sort of, is foreclosure, it's necessary in *McWane*'s world, it's not sufficient, but you're suggesting it is sufficient?

MR. DAHLQUIST: Understood, Your Honor.

And I think I'd say, if you did a foreclosure screen, and I think as *McWane* is describing, and you found foreclosure of 5 percent, you would need a lot more, you would have to show a lot more in order to actually show --

THE COURT: If you are only going to show 5 percent, there's kind of a safe harbor and you don't even

need to go further.

2.

2.2.

MR. DAHLQUIST: Here, where you have foreclosure at 50 percent on the general search engine and here where you have similar numbers slightly lower on the search ad side, I think the analysis can end there; however, we don't end there, we present additional evidence in both general search and in search ads in order to demonstrate even further that Google not only has monopoly power but to McWane, using price as — and exercising that monopoly power through increases in price.

THE COURT: Okay. Right. Okay.

All right. Well, that's sort just of a legal construct I've been wrestling and I wanted to get your opinion on it and I think I understand what your view is.

MR. DAHLQUIST: Thank you, Your Honor.

With that, I'll cede time to the States.

17 MR. CAVANAUGH: Just a few points, Your Honor, on 18 the issue of harm.

In Findings of Fact 83, we quote testimony from Mr. Dijk and Mr. Hurst as to what the effect has been of the lack of scale, which is attributable to the exclusionary conduct.

And what they say is, "Google has made us pay far more for the same traffic." This is Mr. Dijk: "The reality that we have to pay more, more, and more to get more or less

1 | the same results or be able to grow our business."

2.

1.3

2.2.

Mr. Hurst, in a similar vein, said, "We had spent a heck of a lot of money on Google for no incremental business value." That's what the people in the market are saying.

THE COURT: So what's the answer to Google's response, which is: The reason Mr. Hurst's return on investment on his advertising dollars is not as great as it used to be is because of competition?

Airbnb has come into the market, it's been extremely successful, and so as a result, in order to achieve greater customer acquisition, they have had to spend more, and they get less return because some of their customers that they otherwise like to get are going over to Airbnb.

MR. CAVANAUGH: There's no doubt that they have faced a more competitive environment. But what they attributed the increased cost of Google to is they have nowhere else to turn. It's Mr. Hurst's point about it's mathematically impossible to achieve the results that they're looking for through another competitive general search engine.

And, Your Honor, all of this ultimately -- I mean, it all goes back to scale. As Mr. Parakhin said, "Once your relative scale is larger, your quality is better, so people

are more likely to prefer your results, and advertisers are
more willing to come to you so you have more revenue and you
have more money to invest."

1.3

2.2.

I mean, it's -- when we talk about the ad market, it's just -- it's the same feedback loop that we see and that we talked about at length yesterday.

And SVPs are the largest advertisers. So to the extent the plaintiffs collectively have demonstrated harm to advertisers, it's the SVPs in particular who are bearing the brunt of this.

And they can't avoid these effects. You know, that's what Mr. Dijk is talking about on Slide 4.

You know, you can't stop the reliance on Google, because you don't have good alternatives.

THE COURT: And is your view -- I remember -
I went back and I looked at this testimony. Mr. Hurst, for

example, was cross-examined quite sort of aggressively about

alternative efforts not to acquire new customers but to

retain customers they already have, loyalty programs, you

know, that are freestanding, that they're standalone

applications which actually don't require folks to come

through Google.

In your view, in your estimation, that's still not enough? In other words, they're still relying heavily on search ads?

MR. CAVANAUGH: And it goes to the point I made 1 2 yesterday in citing some of Mr. Hurst's testimony -- I think 3 I may have also earlier this morning -- new customers. 4 That's -- they need new customers. 5 Mr. James made the same point for Amazon. 6 new customers. That's why SVPs, these are -- Your Honor, 7 you made the point yesterday. These are large, 8 sophisticated companies. And if they had a better way to do 9 this, you know, they wouldn't be spending the numbers 10 reflected on the chart I had up a moment ago on Google. 11 they don't, because general search gets them to those 12 high-intent customers and the new customers. That's the 1.3 lifeblood of their business. And they don't have an 14 alternative. That's the point Mr. Hurst made, it's what 15 everyone, all the advertisers said. 16 You know, Mr. Lowcock said, on the slide I had 17 from this morning, that there are no substitutes for Google 18 Amazon, running ads on Amazon isn't a substitute. 19 witness, no advertising witness in this case testified that 20 they viewed running ads on SVPs as a substitute for a 21 general search engine. And when we say general search 2.2. engines, Your Honor, we're talking about Google. 23 Thank you, Your Honor. 24 THE COURT: All right. Thank you, Mr. Cavanaugh. 25 Oh, one question for you.

1 MR. CAVANAUGH: Sure. 2 THE COURT: Foreclosure, we've got numbers for search ads, text ads. Is there a foreclosure number for 3 4 general search ads? 5 MR. CAVANAUGH: Your Honor, what we would rely on 6 is the number for text ads, given the fact that text ads is 7 the percent I showed you this morning of general search ads. 8 That's what we would rely upon. 9 THE COURT: Okay. 10 I guess what -- it could be a little lower, 11 because why, you'd have some product listing ads on Bing 12 that are not reflected on it? 13 MR. CAVANAUGH: Yeah, if you did the math, you'd 14 take our percentage, the text ads constitutes the general 15 search, and you take that percentage, it's X percent of 16 45 percent. 17 THE COURT: I'm sorry, say that again? 18 MR. CAVANAUGH: I think the way you could do the math is you would say, text ads are X percent of our general 19 20 search ad market. 21 The other is PLAs essentially. 2.2. THE COURT: Right. 23 MR. CAVANAUGH: And so you could take that 45 percent, and I think you would, if I'm doing the math 24 25 right, Mr. Sallet will correct me if I'm doing it wrong,

```
I think you would take it down.
 1
 2.
               MR. SALLET: To about 37 percent.
 3
               MR. CAVANAUGH: To about 37 percent.
 4
               THE COURT:
                           Okay.
 5
               And you'd take it down because there are PLAs on
 6
     Bing?
 7
               MR. CAVANAUGH:
                               Yes.
 8
               THE COURT: Right. Okay.
 9
               Right, because, say there were no PLAs on Bing,
10
     your number would actually go up.
11
               MR. CAVANAUGH: Right.
12
               THE COURT: Right.
13
               MR. CAVANAUGH: Okay? Thank you.
14
               THE COURT:
                           Thank you.
15
               MR. SCHMIDTLEIN: Your Honor, I just want to
16
     respond to a point that Mr. Cavanaugh just made, and I want
17
     to go back to a slide that was on the set of slides we gave
18
     you this morning, and it's Slide 22.
19
               And this is -- this is red-boxed for Your Honor,
20
     because this is sort of confidential, third-party data that
2.1
     we have used.
2.2.
               So it's Slide 22. I think it's the last slide in
23
     that binder. Just let me know when you're there.
24
               THE COURT: Okay. I'm with you.
25
               MR. SCHMIDTLEIN:
                                 What this shows, contrary to
```

Mr. Cavanaugh's statement that Expedia and various of the other folks who came in and testified, they have — they're beholden to Google, they just can't get customers to come to their sites. And I think as you mentioned yesterday, these are billion-dollar companies, so customers are coming to their sites.

2.2.

But what this study demonstrates is that, for all of these folks, and Expedia is right in here with them, the overwhelming majority of their traffic comes from sources other than Google Search ads. When somebody goes into their browser and types Expedia.com, they're directed to Expedia.

And what you heard, I think you were -- you did channel my response to this, which is, what you heard over time is not that Google was doing something, exercising monopoly power or doing something wrong, what Mr. Hurst was complaining about, and what others were complaining about, was competition. They were complaining about the fact that, over time, several things were happening.

One, as Mr. Holden, I think, walked you through, Google was competing in this space. So Google was making a very, very valuable and useful immersive around traffic, and people were going there.

The other thing that was happening was there were a lot more people in this space, and so they weren't getting as many of those free organic clicks, because people were

```
preferring to go elsewhere. And so they found themselves
 1
 2
     having to compete more in all sorts of different ways,
 3
     including for search advertising. That's competition.
 4
     That's not a lack of competition.
 5
               And, again, I didn't get to this this morning, but
 6
     I wanted to reference this slide.
 7
               THE COURT: Can I ask why this slide is helpful?
 8
     And the reason is, what this shows is that, you know, a
 9
     number of these SVPs are getting traffic directly from Maps,
10
     for example. But that's not part of any ad market, right?
11
     So this is ways of getting there without even --
12
               MR. SCHMIDTLEIN: Well --
1.3
               THE COURT: -- without even needing to advertise.
14
               And so the question is a narrow one, which is,
15
     when SVPs are using ad dollars to -- when they're using ad
16
     dollars, where that is going, not how the traffic is getting
17
     there.
18
               Now, there may be some correlation, but the fact
19
     that, you know, for example there's -- those large
20
     percentages are coming from direct apps, I don't know how
21
     that tells me very much in terms of competition within the
2.2.
     market --
23
               MR. SCHMIDTLEIN:
                                 No.
24
               THE COURT: -- the ad markets.
25
               MR. SCHMIDTLEIN: But what it, I think, does
```

suggest is, to the extent that they are successful in 1 2 advertising -- and they all do advertise all over the 3 Internet and all over television. You certainly see no 4 shortage of Booking.com commercials and Expedia 5 commercials and everything else. They are very, very 6 successful at driving people and getting brand awareness and 7 getting traffic. And they're not just getting traffic from 8 They're originating traffic from all sorts of 9 different places. 10 So, again, the notion that when they come in here 11 and say, oh, woe is me, I only can -- I can only advertise 12 on Google, that's the only way that people come to me and I 1.3 get discovery and everything else. The data completely 14 undercuts that. That's not what -- that's not what's going 15 on in the market. And to the extent they're unhappy, 16 they're unhappy about competition, not a lack of 17 competition. 18 I want to turn --19 So, I'm sorry, could I just ask a THE COURT: 20 quick question about the chart? 21 Direct web, is that sort of search engine 2.2. optimization traffic? 23 MR. SCHMIDTLEIN: No. That's literally people 24 going and sort of navigating when -- there's a reason why

Expedia named itself .com. When people start to type in

25

```
Expedia.com, the browser --
 1
 2.
               THE COURT: Right.
 3
               MR. SCHMIDTLEIN: -- directs them right to their
 4
               It's not even -- they don't even -- it's not even
 5
     a navigational search.
 6
               THE COURT: Right, these are direct .com.
 7
               MR. SCHMIDTLEIN:
                                 Exactly.
 8
               THE COURT: Okay.
 9
               MR. SCHMIDTLEIN: To the point, Booking.com,
10
     same situation.
11
               Now, I want to talk about -- I apologize,
12
     Your Honor. I want to do one minor piece of housekeeping
1.3
     from this morning.
14
               Mr. Dahlquist showed you a slide about a launch of
15
     a Kohl's ad campaign, where he showed that -- he thought
16
     what he showed was the search ads sort of being flat and
17
     different other types of ads.
18
               I just want to hand up to Your Honor a slide with
19
     the testimony from Ms. Christine Raymond that she gave, and
20
     this was submitted, she was deposed in the case, and what
21
     she gave.
2.2.
               THE COURT:
                           Is it possible to just -- this is,
23
     there's nothing confidential -- is this confidential?
24
               MR. SCHMIDTLEIN: Well, this was designated
25
     confidential way back -- this had not been submitted to
```

1 | Your Honor for screening, and so --

2.

THE COURT: Yeah, I don't know that -- if you would just put it up. I don't know if there's anything in here I need to be particularly sensitive about.

Okay. Great. Thank you.

MR. SCHMIDTLEIN: Okay.

So this is what she said in her sworn testimony.

"So I would shift money. If I saw Google not performing because they got too expensive, or whatever, I will look across all of our lower funnel tactics to see where I would shift.

So I would move money to affiliate. I would move money to retargeting, to some of our social dynamics ads, those feeds, all I talked about, and I would move money to Bing. It's still a lot of money to move, so, for sure. But that's how I would look at it, yeah."

So, again, I think what Mr. Dahlquist has suggested based on that snippet of a document, that somehow Kohl's is locked into search ads, I think the testimony undercuts that.

So now I want to talk a little bit about the prima facie case, and I want to come back to a question that Your Honor was just asking counsel about, because I want to make sure that we're laser-focused on this multi steps and sort of where these different questions enter in.

And I'm certainly not going to sit here and review all of the evidence from yesterday regarding exclusionary conduct. But, again, just to sort of reset ourselves, the conduct at issue, we have browser defaults, search engine agreements, we have Android search distribution agreements.

2.2.

And then we've got SA360 conduct, that is a — that is conduct that only the Colorado Plaintiffs have alleged. That's not part of the DOJ's case. So not related at all to any of their advertising markets, and we'll talk about SA360 later this afternoon.

The point here is, and, again, just a level set on a couple of principles.

Even a monopolist, it's not unlawful for a monopolist to raise prices; in other words, a monopolist raising price by itself. That price increase is not exclusionary conduct.

I think the plaintiffs would agree with that.

They've never come in here and said the exclusionary conduct is a price increase.

Because we know, I mean, even in competitive markets, we see price increases.

What you have to be able to do to establish anti-competitive effects in a case like this, is you have to connect the price increases. If you say that's the evidence of conduct, that's the anti-competitive effect, you have to

```
connect those to the conduct.
 1
 2
               So they spent a lot of time talking about the
 3
               They've spent precious little time trying to
 4
     connect that conduct to any sort of -- I'm sorry, connect
 5
     the effect to the actual conduct.
 6
               So I just want to make sure --
 7
               THE COURT: Right.
 8
               MR. SCHMIDTLEIN: -- that we're keeping all of
 9
     that straight, because they can't substitute what they claim
10
     is an effect for exclusionary conduct. Obviously that's a
11
     very, very important line to keep straight.
12
               THE COURT: But, again, the bridge is what you
1.3
     said, it's causation, and I think that standard is set forth
14
     in Microsoft.
15
               MR. SCHMIDTLEIN: Well, and -- well, this comes
16
     back to your foreclosure question.
17
               I mean, they have -- this is why you have the
18
     screen.
              This is why you have all of those layers, and you
19
     are absolutely correct that it is foreclosure plus a showing
20
     of anti-competitive effects.
2.1
               If the foreclosure is low, game over, because --
2.2.
               THE COURT: Right.
23
               MR. SCHMIDTLEIN: -- we have a presumption that
24
     low foreclosure, no effect.
25
               If we have higher foreclosure, you know, you have
```

1 to look more, you have to look at -- look at things in 2 addition to that.

But, nonetheless, you have to sort of connect these two if you're going to be able to demonstrate that second step beyond foreclosure. And, you know, I would submit they haven't -- they actually haven't done that.

So let's jump in here, and we'll talk a little bit about their allegations of anti-competitive effect, again, keeping that separate from exclusionary conduct.

If we have demonstrated that none of the conduct, the browser agreements, the Android agreements, are exclusionary, then --

THE COURT: Right.

1.3

2.2.

MR. SCHMIDTLEIN: -- whatever is going on in ad pricing is irrelevant. It could be, as according to them, it could be monopoly pricing, we dispute that, but it could be monopoly pricing, but it's not unlawful.

So let me jump right in and talk about some of the evidence or lack of evidence in the case.

There was a reference made to the *IQVIA* case, I just want to say a couple things about that. I'm obviously happy to answer questions about it.

Preliminary injunction case. They said that the judge, Judge Ramos, in that case, rejected Dr. Israel.

He didn't reject Dr. Israel in the sense of he found that

the plaintiffs had at least created enough of a substantial 1 2 issue that he would grant a preliminary injunction pending 3 them having to litigate on the merits before the agency. 4 This was not what Your Honor had. You know, 5 oftentimes, and it depends on what the agencies are doing, 6 sometimes they will just bring the case -- when it's the 7 DOJ, they have to bring the case in court. 8 THE COURT: Right. 9 MR. SCHMIDTLEIN: When it's the FTC, you're never 10 100 percent sure where they're going. They can go to court 11 or they can try to do it at the agency. 12 And if they try to do it at the agency, what they 13 sometimes have to do is run into federal court and get a TRO 14 or a PI pending the resolution of the agency. 15 That's what happened in Sysco too. THE COURT: 16 MR. SCHMIDTLEIN: Right. 17 But what happened there, and obviously you know 18 better than I do, oftentimes what happens in the DOJ cases, 19 in my experience, is the parties agree to sort of an 20 expedited combo PI on the merits. 21 THE COURT: Right. That's what we did. 2.2. MR. SCHMIDTLEIN: So you don't have to do it 23 twice.

Judge Ramos did. That wasn't the standard he was applying,

My point is simply this. That's not what

24

because he -- unlike you, you were asked to enter a permanent injunction. He was asked for a preliminary injunction. So you can go through and see how he analyzed it, and he admits what the standard is.

1.3

2.2.

The second point that I'd ask you to consider when you're reviewing that case is, and, again, it was a PI case, so like right out of the box, early days, look at the mountain of evidence, the economic evidence that's referenced by Judge Ramos in that case compared with what we have here.

There was all sorts of pricing analyses and effects and everything else. There were all sorts of very detailed studies done by the expert in that case about impacts on pricing that are completely absent in this case. It's quite shocking that after years and years, we are at the merits end of the road, and they don't have any — they don't have even a fraction of what the FTC tried to put forth at a PI standard in that case.

So let's talk a little bit about what they've produced and what they haven't produced here.

So, you know, Google has introduced lots and lots of different ad launches over the years. And the plaintiffs haven't done any analysis, any empirical analysis that shows that the implementation of any particular ad launch, in fact, resulted in higher CPCs.

In other words, they've tried to snippet out little individual pieces of people talking, Google talking about what might happen or, you know, might it go up for some and go down for others, but they actually haven't done an empirical analysis that demonstrates what actually happened on these implementations.

1.3

2.1

2.2.

And, again, here you can see, there's lots of different ad launches happening over lots of different time periods, and they haven't even attempted to isolate on any of those.

We've talked a little bit about what Professor -or Dr. Israel did. Let me see if I can try to answer
Your Honor's question.

What he tried to do, and, again, the left side here is kind of -- is an index.

THE COURT: It's a pricing index, right?

MR. SCHMIDTLEIN: Right.

And what he did was, he took the click rates over time and imposed that on a relative kind of a percentage basis to try to correspond with the percentage of the price increase.

So what he did was match, sort of match them.

Even though they're measuring different things, what he did
was show on a relative basis, how the two were comparable.

So that you can look over time -- because, again, this

```
index, these aren't -- these aren't measuring actual
 1
 2.
    price -- real dollars on the left side. It's an index.
 3
               THE COURT:
                           Right.
 4
               MR. SCHMIDTLEIN: It's all relational.
 5
               And what he did was, he looked at the ClicData and
 6
    he translated into that same sort of relative relational
 7
     concept.
 8
               THE COURT:
                           So how does -- I mean, is there any
 9
    meaning to -- did the Y axis there, does it provide any
10
     information in terms of what is going on with his ratio? Or
11
     is he just simply superimposing his relative determination
12
     onto this to show that, look, this is essentially tracking,
1.3
     in his estimation?
14
               MR. SCHMIDTLEIN: Tracking and a little bit
15
     exceeding. That's exactly right, Your Honor.
16
               I mean, what he's trying to do, again, is look at
17
     the same sort of high level that they are. They're sort of
18
     looking at high level -- they're not looking at individual
19
    prices for any individual auction. This is an index which
20
     looks at some fraction of auctions. It's not a perfect --
2.1
    but it's an index.
2.2.
               And what he's doing is saying, okay, you've given
23
    me this sort of generalized trend line. What do I see if I
24
     look at that same generalized trend line for click
25
    percentages?
```

And what he's seeing is something that tracks very, very favorably, if not and — and exceeds those same lines, and that was the point is to show that we at least have some indicia here that quality is increasing at or higher than the level of the relative pricing.

2.2.

And, you know, again, the idea that a firm improves the quality of its product and captures some additional price for that product is not proof of monopoly power in my view.

I mean, if I -- there are any number of products on the market that if you come out with a new -- if I come out with a really cool, you know, Internet-capable screen in my car, chances are my car dealer is probably going to charge me an add-on for that, they're going to expect to make some additional money by implementing that. That's not evidence that the local car dealer has monopoly power.

THE COURT: So I think the —— but the point that Mr. Dahlquist is making by walking through these various launches and the sort of memos associated with them that he put up on the screen, is that Google's able to capture this quality improvement and increase price; and, again, there's nothing inherently unlawful about doing that, but Google is doing it in a way that doesn't factor in competition; in other words, Google is able to decide on what that margin that they are going to acquire is, and that's why they're

- running experiments to ask, well, if we up it by 15 percent,
 how much are we going to lose in revenue? If we up it by
 5 percent, how long can we sustain revenue?
- I mean, that's only something a monopolist can do.

 MR. SCHMIDTLEIN: I absolutely disagree,

Your Honor.

- THE COURT: How else could somebody just say,

 look, let's do some pricing exercises, and if it sticks,

 without having to even look about what the consequences are

 going to be in terms of what competitors will do or what
 - MR. SCHMIDTLEIN: Any number of firms in the market can have some degree of market power.

will happen if advertisers leave?

And what's -- as we talked a little bit about this morning, what's unique about this market is, it's very, very hard for any of these firms -- frankly, when you're dealing with these complicated auction mechanisms, it's very, very difficult for firms to be able to figure out what is actually the true value of my product; in other words, how are my customers valuing it and how do I experiment with pricing to try to figure out whether I am, in fact, you know, sort of priced at the right competitive price? Am I priced too low vis-à-vis sort of what the competitive market would permit?

25 There's all -- again, I think there's all sorts of

industries where people experiment or even raise prices because they believe I've underpriced my product or services, and I can do that even though I'm not a monopolist.

2.2.

And what's -- what I want to talk a little bit about here is what's oftentimes going on here is this is happening in connection with something that will, either in the short run or the long run, Google believes, actually improve the auction, improve the quality of the auction and deal with this issue of runaway winners, which I'm happy to talk about, but I sense you have a question for me.

THE COURT: Yeah, I'm just, you know, look, you know, take, for example, the squashing example and, you know, the Kumamon study, which actually reports back negative user experience consequences, negative impact on the long-term incentives for advertisers to improve quality, but yet, as I understand it, you know, that Google continued to do that, continued to use squashing and maybe even does so today.

How do I square that with what you're saying, which is that you don't lack monopoly power, and that is, you know, you're able to tune these prices in a way that may not even result in improved ad quality and still proceed with the price increases?

MR. SCHMIDTLEIN: So I'm not sure, are you looking

```
at UPX1045, is that the --
 1
 2.
               THE COURT:
                           It's UPX16 -- I'm sorry, PSX161, it's
 3
     slide 92 from --
 4
               MR. SCHMIDTLEIN: I don't have that one in front
 5
     of me.
 6
               But I've got -- there's certainly other
 7
     documents --
                           There are a number of these documents.
               THE COURT:
               MR. SCHMIDTLEIN: -- that deal with these issues.
 9
10
               And oftentimes, and I think squashing, there are
11
     certainly documents around squashing that do reflect a
12
     concern about this winner-takes-all result, and let me see
1.3
     if I can explain sort of what the concern there is and how
14
     that, in fact, does impact long-term auction sort of
15
     dynamics.
16
               What squashing -- and just a couple of things
17
     about squashing.
18
               I mean, squashing has been an auction technique
19
     that has been discussed in the literature for many, many
20
     years. Professor Whinston acknowledged Microsoft uses it.
21
     This isn't some, you know, notion or something that Google
2.2.
     just kind of, I think, invented out of the blue. I mean,
23
     I think there's academic literature around this.
24
               And it didn't increase in CPCs uniformly over
25
     time.
```

But what it does do is that it tries to compress -- it compresses the long-term value scores between the auction participants, and doing that has a couple of effects.

Advertisers with the lower PCTRs, in other words, the predicted clickthrough rates, will have their auction time PCTRs pulled up closer to the advertiser with the highest one.

And as a result, that may prevent runaway winners, because what the lower advertiser now sees is, hey, you know what, if I improve my ad quality or if I improve my bid, I might actually -- I can now try to win this auction, because if the same firm -- this is -- it's a variation on rGSP, which is, if they're already really close together, Google might in some instances flip them.

THE COURT: Right.

1.3

MR. SCHMIDTLEIN: So that they can get discovery about, hey, how would the person who's second actually perform? Because if, you know, particular advertisers, really, really large advertisers are always winning, they're sort of dominating particular auctions, then -- and they're dominating because Google has improved the technology over time. Then the little guy never gets to win the top ad slot, and that has at least the potential to disincentivize -- if the top person knows, I can always win,

they actually have an incentive to decrease the quality of 1 2 their advertising. 3 THE COURT: Right. 4 MR. SCHMIDTLEIN: Decrease the quality of what 5 they're sort of putting out there, and that decreases 6 Google's search results page. 7 THE COURT: If I can -- it's a little bit 8 challenging to do this, I think, but let me just at least 9 try with one of these launches, because there have been so 10 many. 11 And so the Momiji launch. I'm looking at UPX456. 12 MR. SCHMIDTLEIN: By the way, Momiji is a Japanese 13 maple tree. I think Mr. Dahlquist's reference was a little 14 bit off there, but go ahead, Your Honor. 15 THE COURT: And on one of the -- you know, one of 16 the descriptions of the outcome of the launch, I think, is 17 how it reads, is that for lower positions, generally aimed 18 to tie the cost of formats to the cost of going up a 19 position in the aggregate. 20 Do you want to grab it? 21 MR. SCHMIDTLEIN: I don't have a hard copy of it 2.2. with me but --23 THE COURT: Okay. 24 What it says is that, "However, the vast majority

of the potential gains from format pricing" -- this is about

25

- 1 | format pricing -- "are in the very top position. And in
- 2 | this position, there's no clear principle for how to set
- 3 format prices. We believe that advertisers get
- 4 disproportionate value from formats in the top slot, and we
- 5 | recommend tuning format pricing to better reflect the added
- 6 value."
- 7 Am I reading that wrong? Is it basically Google
- 8 | is saying, look, this isn't -- format pricing really isn't
- 9 about elevating second, third, fourth place bidders. The
- 10 | value is coming from the top bidder with format pricing, and
- 11 | what we're trying to figure out is how we can get the most
- 12 bang for our buck from that increase.
- And if that's the philosophy, I guess I'm not
- 14 | clear on how something like format pricing is actually
- 15 | improving quality across the board as opposed to, for
- 16 | example, just the top-ranked winner?
- 17 MR. SCHMIDTLEIN: So what format pricing was was
- 18 | a, I think, a Google innovation that I think others have now
- 19 | tried to -- have copied, which allows for not just that
- 20 | singular text ad --
- 21 THE COURT: Right.
- 22 MR. SCHMIDTLEIN: -- line, but it also allows the
- 23 | advertiser to sort of put in a whole variety of other web
- 24 | pages below that and different information that might
- 25 | actually be -- I think in some instances it might actually

be data that Google gets on a feed, because it might be —
it could be like when the hours of your store are open, you
know, things like that that really add real value for the
advertiser.

So Google has innovated. It's obviously a lot more complicated to serve format pricing and a lot more complicated for Google to evaluate, because now you're just not just evaluating a single line web page, now that auction, in a nanosecond, has to evaluate all of these different format pricing competitors, if you will, if advertisers choose to submit a format price for that, and now Google has got to do the auction evaluation of those formats versus non-formats and then serve that -- serve all of that information in the blink of an eye.

THE COURT: Right.

1.3

2.2.

MR. SCHMIDTLEIN: So -- and that information -- and if Google believes that that format pricing information is the best fit, I would submit to Your Honor that that is an improved user experience, it's an improved advertiser experience, and it is going to lead to higher clickthroughs. And all of that is -- that's increasing value for everyone.

So the idea that Google having done that and innovated on that would consider how do we also increase the price for this new ad format, that is much more complicated for us to serve, I don't think that, by itself, that's not

- 1 demonstration of monopoly power. That's actually
- 2 demonstration of an innovation that we believe and hope will
- 3 | actually lead more advertisers to want to advertise on
- 4 Google. I think it's just as consistent with that as some
- 5 | notion that Google has monopoly power.
- 6 THE COURT: So another one of these is Iron Pot.
- 7 | And I'm just looking at UPX737, I know you don't have these
- 8 | in front of you. It was sort of a lowdown -- not a lowdown,
- 9 a report on squashing.
- 10 From what I understand, the sort of report
- 11 | basically says, look, squashing doesn't actually change the
- 12 | ads shown very much, and it sort of generates the same ads
- 13 on probably 95 percent of queries.
- And so it doesn't really -- it's not as effective
- 15 | as you've suggested in terms of actually improving the
- 16 | second bidder's position, and that, really, this is sort of
- 17 | leaving the ads in essentially the same order that they were
- 18 before.
- 19 MR. SCHMIDTLEIN: In the short -- maybe in the
- 20 | short run, but, yes.
- 21 THE COURT: And so I mean, isn't that -- again,
- 22 | this is an example of a launch in which the quality actually
- 23 isn't following the price.
- 24 Again, I know this is -- it's a little -- these
- 25 | are hard because these are individual launches, but I mean,

that's the takeaway I took from this one, for example, this
Iron Pot study, that there wasn't a correlation between
quality improvements and the price going up.

1.3

2.2.

- MR. SCHMIDTLEIN: I think what you see with squashing -- and, again, this sometimes is -- it is applied with -- in connection with other launches.
- So we've got a couple of different things that are going on at the same time, and this is a -- this is a mechanism that has, in part, allowed Google to try to price test a little bit.
- But there's going to be some price effect; and to measure and value whether that price test, particularly when it is oftentimes occurring with another value-increasing launch.
- But I think over time what you can see, and, again, this is in some of the documents, too, depending on which ones you look at, it is looking at this winner-takes-all, it is -- we are worrying about a couple of different things. The person at top always winning, and so they now have an incentive to lower their ad quality. They also will -- they will also start lowering their price. But they will lower their ad quality because they can win both of those.
- The other thing that happens is the people below who are also continually bidding in these auctions, they're

never winning. So they lower or don't work or try to innovate as hard to try to win as well.

2.2.

And we do want to keep that dynamic of the advertisers continually wanting to help improve, because the predicted clickthrough rate is some on Google, but it's also dependent upon them also improving their technology, improving their ads, and those things together is what makes Google a great platform.

THE COURT: I'll just give you another example.

There was a set of perception interviews done in 2018 and 2019 in which advertisers were interviewed about ad spend on Google. Essentially they recognized that ad prices had gone up, but they sort of attributed the ad shifts to themselves, competition and seasonality in 85 percent of the cases and not Google. Again, I know you don't have this in front of you.

MR. SCHMIDTLEIN: Which one is this, I'm sorry?

THE COURT: This was called "ROI perception interviews."

This is paragraph 698 of the Findings of Fact for the States, I believe, for the States or for -- in any event.

So, again, I mean, if that's -- if that's the case, there's a study in which Google is taking a survey of advertisers, and the advertisers, even when they're noticing

a price increase, are not thinking, well, this is Google
changing the price, this is either something that I've done,
competition or seasonality.

I mean, isn't that sort of yet further evidence that Google is able to change prices in the background, and advertisers are none the wiser? In fact, they kind of say, look, it's me, not you?

MR. SCHMIDTLEIN: Well, again, I think what they're focused on is the ROI. I mean, if their ROI is going down, I don't believe they were perceiving or the findings were that ROI was --

THE COURT: That may not be, but it's certainly that the prices were increasing, I believe.

MR. SCHMIDTLEIN: Right.

THE COURT: Right.

1.3

2.2.

MR. SCHMIDTLEIN: And if prices are increasing at the same time that ROI is increasing due to improvements — I mean, one of the things I think that is difficult is, Google's innovations, Google's technology innovations, all of the work that goes on behind the scenes to make sort of the magic work, Google's really not in a position to go out and "advertise" all of its technological, its trade secrets, all of the things that it's doing to help improve what it does know or what it does hope that these things are going to do is improve ROI. That's what they care about.

So, yeah, we're not running around advertising all of the improvements that we're making so that Bing can then go and try to copy them or Facebook can copy them or other people can try to copy them. What we're sort of trying to do over time is, you know, do all of these things.

They don't necessarily even understand or credit Google for all of the innovation that it's doing behind the scenes. But what I think they do credit and what they do recognize is Google is getting them a really, really good ROI.

As I think, to paraphrase Your Honor, they're getting what they pay for, and we would say more. That's why it's been so successful over the years.

THE COURT: Okay.

1.3

2.2.

MR. SCHMIDTLEIN: I mean, we do see, for example, you know, internal documents. I mean, there's a lot -- there's a lot of documents in this case and you can quote different snippets and slices as the plaintiffs do, and we can quote them as well.

You know, this is an rGSP document. It enables a better discovery of ads' performance in various positions, avoiding winner-takes-all scenario. So there's lots of different evidence.

But what's actually missing is, and, again, it's a little surprising, is, where was -- we produced an

incredible amount of data in this case, and, again, when you read *IQVIA*, it's quite shocking at the PI standard how much very, very complex economic data was presented in that case.

Interestingly, in that case, they actually found search ads were not in this very, very narrow healthcare professional programmatic ad market, because Google actually doesn't target for very, very specific types of healthcare-related products and things.

THE COURT: Right.

1.3

2.2.

MR. SCHMIDTLEIN: And what was interesting about that cases is unlike this case, they say, all search ads, what they did in that case was they took a very, very narrow market definition.

They haven't come in here and said, we have a relevant market for travel advertising. They didn't -- that's not the case they've brought.

THE COURT: I seem to also recall that the judge was confronted with the question of ROI, or at least the argument that ROI shifts actually -- or that ROI is what the driving force is, and because there's evidence that advertisers move some channels across -- you know, based on ROI.

And my recollection is what he basically said is that the fact that there's some shifting based on ROI doesn't necessarily establish these other channels as

substitutes. What really matters is larger ad budgets and whether we're seeing large shifts in ad budgets based upon price shifts.

Yes, he had a little bit more econometric evidence in that case, but the opinion also relies a fair amount on testimonial evidence and business records and the like.

MR. SCHMIDTLEIN: Right.

2.2.

And what you have in that case was a situation where, because of kind of the peculiar nature of advertising to healthcare professionals, I mean, doctors, nurses, how do drug companies or pharmaceutical firms, you know, how do we get access to them?

And there was, I believe, in that case, very, very specific evidence of peculiar data that only these sort of specialized kind of programmatic DSPs had about healthcare professionals; in other words, there was almost like a market for going out and acquiring data and information about doctors.

THE COURT: About doctors and others, right.

MR. SCHMIDTLEIN: And all those people, right.

And so it's almost like, these folks had really, really detailed, and it was almost -- it was an industry unto itself.

We have gone out and acquired all of this and we are laser focused at only on providing kind of the best

matches for those people. We have something that's very, very unique and different.

1.3

2.2.

Again, I think that's very, very different than what we have here, which is, again, our view is, Facebook, Amazon, TikTok, you know, all are these other people, yes, Google has valuable information, they have the search query, but that's not the only valuable information. We don't have on a search-ads-wide market the critical piece of information that nobody else across all search ads can compete with. That's our position. We think that case is very, very different.

THE COURT: Can I ask you to address one other ad-related issue in terms of Google's choices that it's offering advertisers. It's the question of the negative keywords.

We heard testimony that once upon a time, advertisers could opt out of sort of the exact -- and the various matching, exact match, phrase match, broad match, I think there's sort of three different categories of matching, and they were able to actually just say, we don't want to be part of that. We want to be part of any auction in which the exact keyword that we've identified is the one that is -- we want to enter those auctions, not if there's a synonym, for example.

And Google no longer allows advertisers to do

that, and I gather some 30 percent did so beforehand.

2.

2.2.

And one of the results of this is that there are now more bidders in the auctions, the auctions are getting thicker, there are more participants, results in higher prices. More competition is a higher price for ads.

Can I ask why Google did that and why it isn't indicative of essentially of monopolistic behavior when a firm can basically say, look, we know 30 percent of you wished this functionality, but no longer? We're not going to let you do that anymore. You can use negative keywords but those are much harder and more cumbersome to manage.

MR. SCHMIDTLEIN: So I believe, and I can get the record cite, I believe the evidence we've submitted on that point is the following.

Over time what Google found actually was that offering everybody all of these various different combinations actually made it more confusing, particularly for smaller advertisers, versus what Facebook and other social media companies were doing, which was a much more simplified advertising options. I mean, there are documents, I believe, in testimony we've submitted on that.

So what Google did was, this was designed to help the small-to-medium-sized advertisers who frankly don't have all of the expertise and the technology to get at all of these broader keywords.

1 THE COURT: But --MR. SCHMIDTLEIN: And for the --2. 3 THE COURT: But weren't they the ones who were 4 ultimately hurt by this? In other words, it was more likely 5 the case that the small and medium-sized advertisers would 6 opt out. 7 MR. SCHMIDTLEIN: No. I think it was -- I think 8 the people who -- as I understood that they were complaining 9 about, the people who were complaining were the larger 10 advertisers, but the larger advertisers are the ones who 11 absolutely know how to use negative keywords. 12 THE COURT: Right, exactly, which is why I would 1.3 have thought this would have benefited the small and medium 14 folks. 15 The purpose of this was to MR. SCHMIDTLEIN: 16 actually improve things and make it easier for them to buy 17 versus -- because we knew they were compete -- we were 18 competing with Facebook and we were getting feedback back 19 from the market saying, yours is too complicated for us, we 20 want something more simple, simplified and straightforward, 21 like Facebook has, and that's our response to that. And 2.2. I can get you the specific findings but we've -- I think 23 we've got a piece on that in our submissions. 24 THE COURT: Okay.

I sort of hit the time,

25

All right.

- 1 Mr. Schmidtlein. If there's anything else you'd like to
- 2 | add; otherwise, I'll turn the floor back over to
- 3 Mr. Dahlquist for rebuttal and Mr. Cavanaugh.
- 4 MR. SCHMIDTLEIN: No, Your Honor, I think we've
- 5 | addressed the issues we wanted to address in response to
- 6 your questions and in response to plaintiffs' submission.
- 7 | Thank you.
- 8 MR. DAHLQUIST: Thank you, Your Honor.
- 9 A couple responsive points.
- I guess let's start with *IQVIA*. Mr. Schmidtlein
- 11 | said that it was only a preliminary injunction, in some ways
- 12 | like it's less important or less binding.
- Mr. Schmidtlein knows, he's tried these cases,
- 14 | I've tried these cases. That is the only trial that occurs
- 15 | in most of those cases. The PI is the trial, and if the
- 16 | party doesn't prove it, the party's abandoned, as is what
- 17 | happened in *IQVIA*.
- 18 | So it's odd to say that it somehow wasn't a real
- 19 trial, but then also say there was these mountains of data,
- 20 | which, understood, there's mountains of data because there
- 21 | had been an investigation for a while they produced at the
- 22 PI.
- But the whole question in a PI, any PI is, what is
- 24 | the future going to look like? They're trying to predict
- 25 | what will happen after that merger, after that transaction.

Here we have real evidence. We don't need to predict. We have direct evidence of what actually happened. Google ran tests and implemented price increases.

1.3

2.2.

So we submit that *IQVIA* is certainly a relevant precedent for Your Honor to review, and we submit that it supports here both the market, as well as the fact that the direct evidence that we've submitted here.

Second, if I could ask to put up our document page 49, please, Mr. Penado, of our deck.

Mr. Schmidtlein handed the Court an excerpt of a Kohl's witness in order to try to impeach something that we're saying here, which is our theme is search ads are constant.

And I think it's important to look at a difference between a hypothetical world and a real world. The exhibit that we have here, that we've shown, Your Honor, at DX412 is the real world of what Kohl's actually did.

The witness, it's hard to go back and ask -- she was asked a hypothetical. "If you could switch all of your sales away from Google to Bing," if you could switch away from Google to Bing, "what would you do?"

And this was her answer. All the things that she would do.

And the point I'd like to make, "It's a lot of money to move."

So she was given a hypothetical of what she might do, could do in this hypothetical world, and, sure, look for less — or look for different alternatives if she couldn't go to Google. So we still think that the Kohl's example where it shows search ads is constant as the best example.

Mr. Schmidtlein spent a while talking about rGSP and its effort to stop runaway winners. Let's return to that for a minute.

Mr. Penado, at slide 81, please.

This is from the Momiji deck.

1.3

And Momiji might be a Japanese tree as well, but Google's the one that put the character of the Japanese doll on their document, so I'm just stating what they do.

But if rGSP was really intended to stop runaway winners, then think about it. Google thinks that the runaway winner, that ad quality under LTV ratio is so much better, how they calculate LTV, which incorporates the bid price, the quality, all the components of an LTV, it is so much better, but yet they need to swap, they need to make a less -- I'll call it a less quality ad, and flip it above is squashing, same. They need to manipulate it in order to bring someone else, make them better? And what that does, Your Honor, is it increases the auction pressure and increases price.

Let's go to Slide 14.

THE COURT: Mr. Dahlquist, can I ask you a question?

MR. DAHLQUIST: Please.

1.3

THE COURT: In thinking through all of this, there is -- you've sort of mined what Google has done with respect to different pricing knobs, et cetera.

Google has, I think in each instance, come forward with some reason procompetitive that they have done this, or let me ask you this: Do you think that their explanations, for example, that we have -- we've swapped in order to promote smaller advertisers and to adjust the incentives, as Mr. Schmidtlein said, in your view, is that a procompetitive benefit that ultimately needs to be weighed, or is it something else?

MR. DAHLQUIST: Your Honor, we submit it's a pretextual explanation for their price increases, trying to justify as to, although they harmed the advertiser market, trying to justify that in some way, shape, or form.

And I think I'd go back to where we think, we submit the Sherman Act requires, Congress requires us to have that be enforced by competition, not by a single firm trying to decide where they think prices should be. And so it's really competition that should be setting the market rate, yes.

THE COURT: So I mean, just help me understand

what you want. If you were writing this opinion, would you say, all right, this is what Momiji did, it increased prices. Google, however, has said that there's this other reason for doing Momiji.

1.3

2.2.

- The Court then does what, says, nah, Google is full of it, it's total pretext. The only reason they did this was to increase price. And if I disagree with that, I say, no, it's not pretextual, there's some there there, am I then, in terms of competitive, balancing on each of these different ad launches?
- MR. DAHLQUIST: So I'd say each of these are not really procompetitive justifications, I think, and that's in the next session so I'll preview what I'll say there is, these explanations if you will or justifications for the price increases do not relate to the contracts.
- I think if we're saying the contracts are where you show the anti-competitive conduct, the anti-competitive effect is the reduction of competition as a result of those contracts. So we have a void of competition in the search ads market and we've established direct evidence of harm.

 These are not really, therefore, rebuttals to the contracts.
 - THE COURT: Fair enough.
- MR. DAHLQUIST: They're attempts to show they're attempts to show or explain why these price increases are not as bad.

1 THE COURT: Right.

1.3

2.2.

So those aren't -- that's helpful.

These aren't procompetitive justifications for the contracts, but, rather, you're saying these are consequences of it, it's the power Google has. Ultimately it's going to be my decision whether what Google's justification is makes sense.

MR. DAHLQUIST: Correct, Your Honor.

And I think this is information you can use as direct evidence of monopoly power, as direct evidence of our relevant markets, and you could use it as intent as well.

All of that bleeds together, I think, as part of your analysis.

THE COURT: Okay.

MR. DAHLQUIST: I guess a final point, Your Honor, that we may get into a little bit more in the next session, but on the slide in front of you, we have this question of -- Mr. Schmidtlein says it's really hard for Google to figure out how to price these things. And yes. And here Dr. Juda himself says, "We try to come up with more fair places where these new prices are higher than the previous ones." And the reason for that is because of the ad auction. They run this ad auction.

And we agree there's nothing inherently wrong with increasing price. There's nothing inherently wrong with

using an ad auction. But to claim that the ad auction is creating fair prices is wrong. The ad auction creates pressure between advertisers. So advertisers are bidding against each other for the ad slot that is driving up the price, but it is setting the highest price possible for the seller.

2.2.

No one is in competition with Google for running the ad auction. That's where we lack competition. We lack an alternative for the advertiser to be able to say, I don't want to get into the Google ad auction, I'm going to go elsewhere. They have nowhere else to go.

THE COURT: So the -- one of the -- I mean sort of the nub of this, it seems to me, is this question of quality adjusted price. You know, is what Google is doing non-monopolistic behavior because it's simply raising price because of better ad quality, or are you suggesting or your position is that this isn't about ad quality, this is a way to increase price?

Help me, if that's your position, that this is not about ad quality, in fact, the ad quality has not improved,

Google has said it has, because we've got this proxy

increased percentage of CPCs -- excuse me, the CPC rate has

gone up, what is the evidence that you would rely on to say,

no, in fact, the ad quality has gone down or has not

improved in a manner that is commensurate with price

increases?

2.

1.3

MR. DAHLQUIST: Your Honor, first of all, I think it's setting up a strawman that we don't need to knock down.

To ask, has ad quality gone up or can the plaintiffs disprove that ad quality has gone up is trying to implement a burden that doesn't exist.

THE COURT: Can I ask why, though? And I'll let -- I'm sorry to interrupt.

MR. DAHLOUIST: Sure.

THE COURT: Because let's take this out of ads.

Ads is a little bit more, it's less tangible; but, you know, take a car. If in model year 2004, the car costs 50 grand -- I'm sorry, the car has a V4 -- a V4 engine, the next year's model has a V6 engine. It's a strong -- it's a faster, better car. You would assume that the price would go up for the car. It's a better product.

And so I don't -- it's hard for me to understand how you have no obligation to show that the pricing isn't, in some way, consistent with ad quality, that the two can be separated from one another.

I don't know -- maybe you're right that Google is still acting as a monopolist because its ability to raise that price is not the product of competition, but it's hard for me to think that you can simply divorce quality from the pricing, because there can be, and the cases recognize that

there is a relationship.

2.2.

MR. DAHLQUIST: And I guess to go with your current example is that competition will help determine that. If the V4 engine costs 50 grand and they went out to market with the V6 engine at 75 grand, the competition will determine, if no one buys that car, because their competitor down the street released the same V6 car for 55 grand, then no one will buy it. They have an option. They have a reasonable substitute to deviate from and go buy that alternative car.

Here, Google may have created that V6 engine and is charging more for it. But here I take your example and say that's a world where there's only one car dealer and one car manufacturer and they're the only ones. Customers have to come and buy that car, whether they want it or not, to pay 75 grand for that V6 engine because they don't have substitutable options to go to.

And the quality question, I understand why the Court is grappling with it. And I can turn to quality adjusted pricing, that's really the focus of my -- the final session that we are going to spend today.

THE COURT: Okay. That's fine. We can wait.

MR. DAHLQUIST: And we can get into it.

But the long and short of it is quality is the wrong measurement in order to determine what the competitive

pricing is here. Competition should be the measurement of pricing. That's the overall theme that we have.

1.3

2.2.

But I'll even preview further is that Google itself can't decide how much quality it's giving. It doesn't know. It can't calculate it. And nobody has been able to actually approximate it.

THE COURT: Well -- okay. We'll talk this after -- I guess -- you're right, it's -- in the sense that there's no perfect metric, it doesn't seem to me to, how good is an ad, right? How good is an ad? It's not just limited to digital advertising, we could take it to television. How good is an ad? We don't know. Some ads are going to drive more than others.

And what Google has done, at least with respect to digital ads is say, well, one way we're going to measure whether the ad is better, more people are clicking on the ads, right?

You know, just as a car manufacturer would say, all right, well, we ran this ad campaign and we saw more foot traffic into our dealers. Maybe they don't have perfect information that the ad caused sales to go up, or put it this way, that — yeah, they may have that, I guess they would have some information, but it doesn't seem to me that the fact that there's not perfect information defeats the fact that there's some proxy that's a fair estimate of

- whether the ad is better or not. I mean, I think that seems 1 2 is to be an issue with any product. 3 MR. DAHLQUIST: And I think maybe what the Court 4 is struggling with is there may be a correlation, but 5 I don't think you can infer causation between those two 6 things. And I don't think Google -- Google has tried this. 7 Google, remember, has, what was their number, 15,000 Ph.D.s, 8 and their very smart people have been unable to figure this out, despite trying, and I think that's the point. 10 So it's if you want to look at quality, that's 11 fine, we can look at it as a component of it. To rely on it 12 entirely we think is flawed because it's not seemingly set
 - by competition. You're not determining what is the advertiser actually willing to pay or should pay because of other options. You're looking at a monopolist firm deciding for the world, deciding for all advertisers what it believes the value is, what it believes the quality is.

And we think the record here shows that many, many times good enough is enough, and that's the problem that we have with it, Your Honor.

> THE COURT: Okay.

13

14

15

16

17

18

19

20

21

22

23

24

25

All right. Mr. Cavanaugh, I'll give you few minutes.

MR. CAVANAUGH: Nothing further, Your Honor.

Okay, terrific. THE COURT:

```
Thank you, everyone. So we'll take our lunch
 1
    break now. We will resume at 1:35. We'll see everybody
 2
 3
     then.
               COURTROOM DEPUTY: All rise. This Court stands in
 4
 5
     recess.
               (Recess from 12:35 p.m. to 1:35 p.m.)
 6
 7
 8
 9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
```

CERTIFICATE

I, William P. Zaremba, RMR, CRR, certify that the foregoing is a correct transcript from the record of proceedings in the above-titled matter.

Date:__May 3, 2024____

William P Zouds

William P. Zaremba, RMR, CRR

466/7 466/20 468/12 469/2 469/7 469/15 **COURTROOM** 470/4 **DEPUTY: [5]** 339/2 MR. SOMMERS: [1] 339/6 410/16 410/19 379/17 481/4 THE COURT: [173] MR. CAVANAUGH: **[26]** 339/22 365/3 366/8 366/12 368/8 \$100 [2] 353/23 353/23 368/15 369/6 369/23 **\$150 [1]** 342/7 370/3 371/2 371/9 **\$200 [1]** 353/23 409/10 409/24 434/17 **\$25 [1]** 376/3 435/16 437/1 438/1 **\$50 [1]** 353/24 438/5 438/13 438/18 **\$60 [1]** 374/18 438/23 439/3 439/7 439/11 439/13 480/24 MR. DAHLQUIST: [69] 'substantial [1] 432/15 339/19 339/24 343/16 344/23 344/25 346/6 348/23 349/18 351/24 .com [2] 442/25 443/6 353/5 353/9 356/24 357/6 359/21 361/8 361/11 362/14 363/11 0340 [1] 337/15 364/22 364/25 398/3 399/13 400/16 403/22 406/7 407/5 407/22 **10 [4]** 356/3 385/11 408/15 409/9 410/24 402/24 417/8 411/24 412/4 414/13 10 percent [5] 357/12 414/17 416/24 418/8 394/16 396/14 407/2 418/15 419/12 424/1 415/20 425/17 425/23 426/2 **100 [1]** 384/13 426/5 426/18 427/12 100 percent [2] 404/20 427/17 427/22 430/2 448/10 430/21 431/4 431/19 **10036-6710 [1]** 338/10 431/21 432/5 433/7 **101 [1]** 428/25 433/19 434/2 434/15 **10:43 [1]** 410/18 470/8 473/3 473/15 **10:56 [1]** 410/18 474/11 474/23 475/8 **1100 [1]** 337/14 475/15 477/2 477/9 **1133 [1]** 338/9 478/2 478/23 480/3 **11:00 [1]** 410/13 MR. SALLET: [1] **12 [1]** 367/4 **128 [2]** 349/23 350/2 439/2 MR. SCHMIDTLEIN: **129 [1]** 396/5 **[84]** 339/21 373/12 12:35 [1] 481/6 373/15 377/23 378/2 1300 [1] 338/5 379/3 379/16 379/18 **131 [2]** 363/15 363/16 380/13 381/5 381/20 **132 [1]** 350/16 382/7 382/16 383/23 133 [1] 350/22 385/17 386/1 386/23 **134 [1]** 351/7 387/6 389/3 390/3 **135 [2]** 353/9 353/14 390/12 390/15 391/18 **14 [1]** 472/25 392/5 392/12 393/16 **142 [1]** 404/4 393/19 394/23 396/4 **143 [1]** 406/12 396/13 396/22 397/2 **15 [3]** 356/4 363/13 397/16 397/23 398/1 417/8 411/23 439/15 439/25 15 percent [4] 385/2 441/12 441/23 441/25 385/11 402/24 453/1 442/23 443/3 443/7 **15,000 [1]** 480/7 443/9 443/24 444/6 **16 [2]** 402/16 402/20 446/8 446/15 446/23 17 [1] 402/24 447/14 448/9 448/16 **19 [1]** 371/17 448/22 450/17 451/4 **1:35 [2]** 481/2 481/6 451/14 453/5 453/12 454/25 455/4 455/9 **20 [2]** 356/4 417/8 456/17 457/4 457/12 457/21 458/17 458/22 20 percent [1] 358/5

459/16 460/19 461/4

462/17 463/8 463/14

463/16 464/15 465/10

20-3010 [2] 337/4

20001 [1] 338/19

339/7

20024 [1] 338/14 **2004 [1]** 477/12 **2014** [1] 341/14 **2015 [1]** 412/16 **2017 [5]** 350/4 358/2 375/1 417/22 422/2 **2018 [2]** 413/23 462/11 **2019 [4]** 342/14 363/19 422/23 462/11 202 [3] 337/15 338/14 338/19 **2020 [2]** 400/25 400/25 **2021 [1]** 376/3 **2024 [2]** 337/5 482/7 **212 [1]** 338/11 **22 [2]** 439/18 439/22 **2200 [1]** 338/10 **23 [2]** 411/19 412/8 **25 [1]** 391/16 **26 [1]** 398/14 **2793 [1]** 338/11 **30 [1]** 407/16 **30 percent [4]** 396/15 407/3 468/1 468/8 **30-second [1]** 386/16 **3010 [2]** 337/4 339/7 **307-0340 [1]** 337/15 3249 [1] 338/19 **333 [1]** 338/18 335-2793 [1] 338/11 **35 [1]** 391/16 **354-3249 [1]** 338/19 **36 [1]** 430/19 **37 [2]** 439/2 439/3 **4-0 [1]** 346/21 **40 [1]** 346/20 **40 percent [1]** 391/17 400 percent [1] 342/8 **43 [1]** 402/1 **434-5000 [1]** 338/14 **45 [1]** 346/2 **45 percent [3]** 430/19 438/16 438/24 **49 [1]** 471/9 5 percent [7] 355/1 355/6 356/3 402/22 433/22 433/25 453/3 **5-0 [1]** 401/10 **50 [3]** 401/10 477/12 478/4 **50 percent [4]** 385/6 385/12 390/9 434/3 **5000 [1]** 338/14 **508-6000 [1]** 338/6 **51 [1]** 401/14 **518182 [1]** 409/21 **52 [1]** 400/18 **54 [1]** 354/23 **55 [1]** 478/7 **56 [1]** 357/9 **57 [1]** 398/7

584 [1] 361/21

435/20 acknowledge [1] 6000 [1] 338/6 377/11 **6710 [1]** 338/10 acknowledged [1] **680 [1]** 338/13 455/20 **698 [1]** 462/20 acquire [3] 388/12 436/18 452/25 acquired [1] 466/24 **7002A [1]** 398/18 acquiring [1] 466/17 **720 [1]** 338/6 acquisition [2] 371/25 **74 [2]** 411/2 412/25 435/12 **75 [3]** 413/2 478/5 across [7] 349/20 478/16 350/3 424/18 444/10 **76 [1]** 413/17 458/15 465/21 467/9 7th [1] 338/5 Act [3] 343/2 414/20 473/20 acting [2] 399/11 **80203 [1]** 338/6 477/22 81 [1] 472/9 action [2] 339/7 342/15 **83 [1]** 434/19 actual [9] 343/13 345/7 **835 [1]** 432/11 355/18 355/18 378/23 **8386 [1]** 403/5 430/6 432/8 446/5 **85 [2]** 391/13 462/14 451/1 actually [58] 347/18 348/5 348/17 356/20 90 percent [1] 391/13 364/17 377/22 381/13 **92 [1]** 455/3 387/19 387/21 387/25 **95 [1]** 460/13 390/4 394/6 396/10 **97 [1]** 428/15 399/5 404/7 404/8 9:00 [1] 337/6 410/2 411/7 415/8 419/2 420/12 423/11 423/23 424/9 428/14 **a.m [3]** 337/6 410/18 428/22 433/23 436/21 410/18 439/10 447/6 450/4 abandoned [1] 470/16 450/5 453/19 454/8 aberration [1] 355/21 454/14 456/12 456/18 ability [7] 342/20 457/1 458/14 458/25 343/10 365/20 386/9 458/25 460/1 460/3 424/13 425/3 477/22 460/11 460/15 460/22 able [21] 364/21 464/24 465/4 465/6 374/13 385/5 388/13 465/19 467/20 468/15 388/16 388/18 390/9 468/17 469/16 471/2 391/10 391/16 391/25 471/17 479/6 480/14 435/1 445/22 447/4 ad [126] 341/8 342/5 452/20 452/24 453/18 349/16 350/19 352/3 454/22 463/5 467/20 356/14 357/19 358/3 476/9 479/6 359/9 359/10 359/11 about [156] 359/11 359/13 359/15 above [2] 472/20 482/4 359/20 359/25 359/25 above-titled [1] 482/4 360/4 360/19 363/7 absent [2] 397/16 367/22 368/25 369/8 449/14 370/23 371/12 374/5 absolutely [12] 349/19 375/17 377/18 377/20 359/22 376/8 377/5 386/16 387/2 389/18 383/16 392/1 395/1 394/4 394/13 394/15 395/3 395/9 446/19 396/14 396/15 396/16 453/5 469/11 397/19 400/11 400/12 absolve [1] 359/6 404/24 405/22 406/25 academic [4] 373/21 407/14 408/10 409/6 431/24 432/1 455/23 411/16 413/12 413/13 accelerate [1] 342/17 413/14 414/7 414/9 access [1] 466/12 415/14 418/2 418/6 according [2] 342/21 418/10 418/13 420/11 447/15 420/12 420/15 422/6 account [2] 384/21 423/14 424/13 425/13 393/22 425/13 425/14 426/11 accountant [1] 362/22 426/16 427/9 428/3 accuracy [1] 350/11 429/12 429/18 431/1 achieve [2] 435/12

ad... [52] 434/4 436/4 438/20 441/10 441/15 441/15 441/24 443/15 447/14 449/22 449/24 450/8 454/23 456/11 456/23 458/20 459/24 461/20 461/22 462/11 462/12 462/13 465/6 466/1 466/2 467/13 472/16 472/20 474/10 475/22 475/23 476/1 476/1 476/2 476/4 476/8 476/10 476/16 476/17 476/20 476/20 476/24 477/4 477/5 477/19 479/10 479/10 479/12 479/16 479/19 479/21 480/1 ad-related [1] 467/13 Adam [2] 341/5 424/25 add [6] 407/16 417/12 417/16 452/14 459/3 470/2 add-on [1] 452/14 added [3] 355/5 417/13 458/5 addition [1] 447/2 additional [13] 342/17 355/11 391/9 403/3 408/23 422/9 424/14 429/13 432/7 433/12 434/6 452/8 452/15 address [3] 427/18 467/12 470/5 addressed [1] 470/5 adjust [1] 473/11 adjusted [8] 356/15 356/20 356/22 357/1 357/21 405/4 476/14 478/20 adjusting [1] 388/8 adjustment [1] 384/21 adjustments [3] 388/21 389/1 390/1 admits [1] 449/4 admittedly [1] 369/13 ads [205] ads' [1] 464/21 adults [1] 377/2 advance [1] 391/3 advantage [1] 345/13 advertise [12] 340/6 348/4 369/22 369/25 372/25 373/1 382/25 441/13 442/2 442/11 460/3 463/22 advertisement [1] 395/8 advertisements [3] 363/24 368/2 368/3 advertiser [28] 342/1 344/3 353/22 355/2 357/19 365/20 368/17 386/9 400/7 401/9 407/23 410/9 411/1 416/7 416/10 419/22

419/25 424/12 425/4

```
429/12 456/7 456/10
458/23 459/4 459/19
473/17 476/9 480/14
advertiser's [1] 392/20
advertisers [124]
340/6 340/8 340/11
340/21 340/23 341/22
341/23 342/18 343/14
344/4 344/6 344/18
344/21 345/3 349/9
349/19 349/25 350/7
350/17 352/11 355/14
356/1 360/24 365/13
365/22 368/1 368/12
369/7 369/22 370/7
371/3 371/23 372/23
374/14 375/3 375/4
375/6 376/12 378/17
380/17 380/18 381/23
382/24 384/3 384/8
385/3 385/12 387/20
388/1 388/3 389/10
389/11 389/13 389/13
390/4 390/7 390/16
391/9 391/14 392/17
392/22 393/8 393/20
394/7 394/10 394/21
396/18 401/15 401/20
401/21 403/25 406/13
408/6 408/8 416/22
417/14 418/3 418/6
418/9 418/13 421/4
421/5 422/4 424/8
424/11 426/24 427/7
427/25 428/12 428/13
428/17 428/22 430/5
431/25 436/1 436/7
436/9 437/15 453/11
454/16 456/5 456/19
456/20 458/3 459/11
460/3 462/4 462/11
462/25 462/25 463/6
465/21 467/14 467/17
467/25 468/18 468/23
469/5 469/10 469/10
473/11 476/3 476/3
480/16
advertisers' [2] 349/5
349/15
advertising [57] 340/1
340/2 340/13 340/20
341/11 341/24 342/9
343/3 348/3 348/6
348/6 348/7 351/8
352/3 353/25 356/15
360/2 360/6 361/17
363/25 364/10 364/11
365/4 365/8 365/9
365/18 366/5 366/5
367/17 369/11 370/11
371/24 375/6 375/16
375/25 376/4 376/17
377/4 378/25 382/19
383/21 383/25 400/15
402/6 402/8 414/11
435/8 437/19 441/3
442/2 445/9 457/2
464/1 465/15 466/9
```

```
468/20 479/11
affected [1] 432/21
affects [2] 420/11
420/12
affiliate [1] 444/12
after [8] 372/23 385/6
387/21 409/16 449/15
470/25 470/25 479/8
afternoon [5] 345/5
345/9 357/3 427/19
445/10
again [50] 345/23
367/5 370/1 370/21
376/14 380/17 381/13
381/15 384/5 390/8
390/15 391/1 397/6
408/15 409/2 410/20
419/7 420/4 420/5
421/15 423/7 423/16
429/15 438/17 441/5
442/10 444/17 445/3
445/11 446/12 447/8
449/6 450/7 450/14
450/25 451/16 452/6
452/21 453/25 460/21
460/24 461/5 461/16
462/15 462/23 463/8
464/24 465/1 467/3
467/4
against [4] 373/2
420/24 423/21 476/4
agencies [1] 448/5
agency [5] 351/8 448/3
448/11 448/12 448/14
aggregate [1] 457/19
aggressively [1]
436/17
ago [3] 345/24 369/7
437/10
agree [18] 343/18
                        447/8
347/20 356/12 384/6
395/1 400/23 408/1
                        445/8
424/11 429/16 430/22
431/19 432/5 433/2
433/8 433/11 445/17
448/19 475/24
agreed [5] 351/4 392/8
403/8 415/9 416/15
                        467/25
agreements [6] 373/20
429/20 445/5 445/5
447/11 447/11
ahead [3] 419/18
424/22 457/14
aided [1] 338/21
aimed [1] 457/17
Airbnb [3] 383/19
435/10 435/15
Airline [1] 366/5
al [2] 337/3 339/8
aligned [1] 433/14
all [131] 339/2 339/16
339/23 340/9 342/15
342/24 343/18 344/3
347/24 347/24 348/3
348/4 348/5 348/7
348/12 348/14 349/9
352/2 353/1 353/25
                        478/10
356/4 356/9 356/16
```

360/12 363/21 364/2 365/1 365/5 367/4 373/12 373/21 374/10 375/6 376/10 377/13 379/1 380/21 383/9 383/19 384/6 385/23 387/13 387/17 389/8 390/10 392/22 392/25 394/10 395/13 395/16 397/20 398/22 399/4 399/19 400/6 401/8 402/12 403/3 404/1 405/3 408/13 410/1 410/3 410/6 410/11 410/12 410/16 410/19 413/3 421/9 422/16 427/2 429/7 429/8 431/1 431/2 431/24 434/12 435/23 435/24 437/15 437/24 440/7 441/2 442/2 442/2 442/3 442/8 444/10 444/14 445/2 445/9 446/8 446/18 449/11 449/12 451/4 453/25 453/25 455/12 459/9 459/13 459/21 461/18 463/19 463/22 463/23 464/1 464/5 464/7 464/22 465/11 466/20 466/24 467/5 467/9 468/16 468/24 468/24 469/25 471/19 471/22 472/18 473/4 474/2 475/12 477/2 479/19 480/16 480/22 481/4 all right [3] 474/2 479/19 480/22 allegations [2] 365/5 alleged [2] 382/19 allocate [1] 349/12 allow [2] 373/6 397/5 allowed [1] 461/9 **allows [5]** 376/11 407/17 458/19 458/22 almost [3] 466/16 466/21 466/22 alone [1] 415/21 along [4] 381/17 418/22 418/25 432/21 already [4] 358/10 398/8 436/19 456/14 also [26] 341/21 342/1 343/13 343/13 347/12 347/14 352/6 356/13 367/12 369/20 380/13 393/22 409/21 430/10 432/20 437/3 458/22 459/23 461/21 461/21 461/25 462/5 462/6 465/17 466/5 470/19 alternative [5] 432/24 436/18 437/14 476/9 alternatives [3] 340/10

474/8 339/7 339/3 352/4 367/5 402/14 420/5 422/23 435/21 460/6 461/13 462/9 477/20 answer [27] 351/15 353/7 355/4 355/13 357/11 363/13 364/7 364/15 366/5 372/17 388/5 402/19 403/11 404/11 408/4 408/25 415/11 416/9 429/3 429/13 430/3 431/16 433/3 435/6 447/22

436/14 472/3 although [2] 377/21 473/17 always [10] 340/12 340/16 383/15 387/2 413/14 413/15 426/21 456/20 456/25 461/19 always-on [2] 340/12 340/16 am [6] 352/19 409/5 453/21 453/22 458/7 **Amaldoss [1]** 367/6 Amazon [19] 359/10 366/13 367/1 367/2 370/14 373/1 374/7 376/2 376/2 376/10 395/4 400/13 423/21 427/9 431/2 437/5 437/18 437/18 467/5 ambitious [1] 346/2 **AMERICA [2]** 337/3 American [1] 411/9 **Americas [1]** 338/9 **AMIT [2]** 337/10 339/3 Amit P. Mehta [1] amount [4] 354/15 357/16 465/1 466/5 amounts [1] 378/11 analogous [1] 348/21 analyses [2] 382/18 449/11 analysis [29] 341/8 345/10 347/3 350/15 352/21 354/14 355/16 371/21 384/1 384/17 384/23 402/10 403/14 403/15 403/21 404/4 404/5 404/5 404/12 404/13 405/5 411/4 433/10 433/15 434/5 449/23 449/23 450/5 475/13 analytical [1] 343/11 analyze [1] 407/8 analyzed [1] 449/3 **Android [2]** 445/5 447/11 anecdotal [1] 384/3 **Angi [1]** 342/1 Ann [3] 340/14 350/23 351/11 another [11] 348/15

answer... [2] 450/12 471/22 answered [1] 357/11 answers [3] 389/3 409/13 409/19 anti [13] 343/14 344/12 416/17 429/18 429/24 430/6 432/17 445/23 445/25 446/20 447/8 474/17 474/17 anti-competitive [12] 343/14 344/12 429/18 429/24 430/6 432/17 445/23 445/25 446/20 447/8 474/17 474/17 antitrust [2] 338/3 344/1 any [33] 341/7 346/7 347/2 350/10 368/23 386/8 388/7 390/1 391/19 397/23 401/21 405/9 407/7 416/19 429/1 441/10 445/9 446/4 449/16 449/23 449/23 449/24 450/9 451/8 451/9 451/19 452/10 453/12 453/16 462/21 467/21 470/23 480/2 anybody [4] 358/12 381/3 393/6 407/19 anymore [1] 468/10 anyone [1] 341/7 anything [10] 339/17 358/20 359/17 388/14 391/21 406/8 418/24 431/14 444/3 470/1 anywhere [2] 346/17 381/17 **apologize [2]** 340/18 443/11 appear [1] 346/17 **APPEARANCES [2]** 337/12 337/16 appeared [1] 405/21 appearing [1] 371/14 **Apple [1]** 361/1 applications [1] 436/21 applied [1] 461/5 applying [1] 448/25 appreciate [1] 346/6 approach [2] 347/3 347/4 appropriate [2] 370/5 approximate [1] 479/6 approximately [1] 400/25 apps [1] 441/20 **architects** [1] 341/5 are [189] aren't [11] 356/1 361/9 389/14 394/11 405/24 408/6 408/9 451/1 451/1 475/2 475/3 420/20 421/23 422/6 argue [2] 343/13

```
422/16
argued [1] 348/11
argument [7] 337/9
358/22 362/15 380/3
389/22 400/9 465/19
argumentative [1]
361/12
arguments [1] 364/8
around [6] 394/16
412/15 440/21 455/11
455/23 464/1
artificial [1] 352/11
artificially [5] 425/12
426/6 426/10 426/14
426/14
as [166]
ascribing [1] 387/2
aside [1] 362/5
ask [24] 343/8 358/9
365/25 367/21 377/16
382/10 393/12 402/17
414/5 416/14 427/5
429/14 441/7 442/19
449/5 453/1 467/12
468/6 471/8 471/18
473/1 473/9 477/4
477/7
asked [29] 341/5
342/13 350/4 350/23
351/9 351/12 353/11
354/24 356/16 357/9
363/13 369/2 372/2
375/14 402/15 402/16
404/3 404/10 404/25
409/11 411/4 415/5
424/10 424/25 429/1
431/12 449/1 449/2
471/19
asking [5] 350/5 367/9
406/7 417/7 444/23
assess [2] 387/1
387/19
assessing [1] 386/5
assessment [1] 384/2
assessments [1] 397/6
assistance [1] 343/4
associated [1] 452/19
assume [4] 414/7
414/8 429/16 477/15
attempt [2] 350/9
405/8
attempted [1] 450/9
attempting [1] 406/9
attempts [2] 474/23
474/24
attention [1] 357/14
attributable [1] 434/21
attributed [2] 435/18
462/13
attributes [1] 410/9
auction [50] 341/6
341/12 342/6 385/19
385/21 386/10 386/11
386/12 386/14 389/8
390/17 411/15 411/16
413/12 413/13 413/14
415/14 418/2 420/11
```

```
422/22 423/6 423/10
                       basket [1] 405/5
424/19 425/2 425/25
                       be [115] 339/4 344/20
427/2 429/12 451/19
                        344/22 345/20 346/2
453/17 454/9 454/9
                        346/4 346/9 347/13
455/14 455/18 456/3
                        347/14 347/21 347/23
456/6 456/12 459/9
                        348/2 349/1 349/4
459/12 467/21 472/23
                        349/13 352/25 354/8
475/23 475/23 476/1
                        356/10 357/12 357/22
476/1 476/2 476/8
                        357/25 359/20 360/16
                        360/19 361/12 362/4
476/10
auctions [12] 387/23
                        363/12 365/3 366/9
394/8 423/21 426/21
                        366/13 370/21 372/9
427/11 427/14 451/20
                        372/9 372/19 375/12
456/21 461/25 467/23
                        378/10 378/10 381/17
468/3 468/3
                        383/2 384/13 387/13
audience [5] 375/25
                        388/13 388/18 389/25
                        391/10 391/16 393/5
376/1 393/2 393/3
                        393/23 393/24 395/13
404/8
audiences [3] 392/9
                        395/18 397/15 397/18
393/5 393/10
                        397/20 399/23 400/12
                        402/12 402/16 405/9
automatically [1]
                        405/10 405/23 407/9
352/7
                        407/12 409/18 410/20
available [4] 368/13
368/13 378/16 415/10
                        410/21 411/6 413/19
                        414/17 414/18 414/19
Avenue [3] 338/9
                        414/23 415/18 415/24
338/13 338/18
average [4] 358/5
                        416/21 417/2 417/3
420/16 421/16 427/2
                        417/9 417/18 417/20
avoid [1] 436/11
                        418/24 424/18 435/1
                        435/9 437/9 438/10
avoiding [1] 464/22
                        441/18 444/4 445/22
awareness [4] 352/18
                        447/4 447/15 447/16
378/19 381/12 442/6
away [6] 359/18 359/19
                        447/17 453/10 453/18
367/1 381/24 471/20
                        458/25 459/1 459/1
471/20
                        459/2 461/11 463/12
axes [1] 405/20
                        467/21 467/21 472/11
axis [2] 405/24 451/9
                        473/13 473/21 473/22
                        473/23 475/6 476/9
                        477/19 477/25 479/1
back [25] 345/14
                        480/2 480/4
345/15 351/25 352/1
                       bear [2] 353/6 408/5
354/7 367/8 370/11
                       bearing [1] 436/9
375/2 392/16 395/18
                       because [111] 340/9
396/4 412/23 421/9
                        340/19 340/23 348/13
427/3 435/24 436/16
                        348/13 350/21 350/25
439/17 443/25 444/22
                        352/23 359/2 359/3
446/16 454/14 469/18
                        360/16 362/11 362/16
470/2 471/18 473/19
                        364/23 365/12 365/19
background [1] 463/5
                        366/6 366/12 366/18
backwards [1] 411/18
                        367/17 369/6 370/13
bad [1] 474/25
                        370/21 372/10 372/18
Baker [1] 371/21
                        373/21 375/4 375/6
balancing [1] 474/9
                        375/24 377/10 378/21
bang [1] 458/12
                        379/3 379/11 380/5
Banks [1] 365/24
                        382/5 383/7 383/14
Barrett [1] 338/18
                        385/23 387/2 388/2
baseball [1] 360/5
                        391/18 392/3 394/7
based [11] 352/6
                        394/17 395/7 396/23
353/18 359/14 385/9
                        398/7 399/10 400/20
386/7 396/5 431/6
                        402/13 403/1 405/10
444/18 465/21 465/24
                        405/11 407/12 408/1
466/2
                        408/4 409/5 409/18
baseline [1] 404/16
                        410/8 412/11 414/23
basically [4] 458/7
                        415/22 419/14 420/4
460/11 465/23 468/8
                        422/8 424/17 426/13
basing [1] 379/8
                        430/14 435/9 435/13
basis [2] 450/20
                        436/14 437/11 438/11
450/24
                        439/5 439/9 439/20
```

440/25 444/9 444/23 445/20 446/9 446/21 449/1 450/25 454/2 456/10 456/12 456/19 456/22 457/9 459/1 459/7 460/25 461/22 462/4 465/6 465/20 466/9 469/17 470/20 475/22 476/15 476/16 476/21 477/10 477/22 477/25 478/6 478/16 480/12 480/14 been [33] 343/14 344/7 345/4 349/6 364/21 367/18 380/9 386/10 394/5 396/17 396/19 399/9 399/9 416/20 416/22 417/4 417/5 417/5 417/10 419/5 422/17 429/16 434/13 434/20 435/10 443/25 455/18 455/19 457/9 464/13 470/21 479/5 480/8 before [4] 337/10 429/23 448/3 460/18 **beforehand** [1] 468/1 began [2] 401/24 412/16 begin [2] 345/11 354/10 beginning [2] 405/15 411/3 behalf [2] 339/12 339/25 **behavior [3]** 392/17 468/7 476/15 behind [3] 425/4 463/20 464/7 **beholden [1]** 440/3 beholder [1] 407/23 being [17] 342/2 344/18 355/7 355/12 359/7 360/2 361/18 380/19 390/6 390/13 390/16 396/7 397/17 399/5 405/11 432/3 443/16 believe [22] 343/2 343/21 343/25 343/25 360/15 362/17 365/4 377/12 380/21 401/6 411/11 427/15 454/2 458/3 460/2 462/21 463/10 463/13 466/13 468/12 468/13 468/21 believed [1] 357/12 believes [6] 347/24 400/14 454/8 459/17 480/16 480/17 **BELKNAP [1]** 338/8 below [4] 355/11 357/18 458/24 461/24 **BENCH [1]** 337/9 benefit [1] 473/13 **benefited** [1] 469/13 best [17] 349/6 351/6 351/11 351/17 378/21

best... [12] 378/21 394/3 396/20 396/22 396/23 410/7 411/18 414/21 416/3 459/18 466/25 472/5 better [25] 349/13 387/8 389/13 390/16 391/6 394/6 394/9 407/20 424/12 424/16 424/20 429/4 435/25 437/8 448/18 458/5 464/21 472/17 472/19 472/22 476/16 477/15 477/16 479/16 480/1 between [26] 349/1 350/20 350/24 352/12 357/19 367/5 367/23 368/9 368/24 369/17 370/19 371/1 373/17 386/13 392/16 397/18 400/11 406/10 409/24 426/15 432/11 456/2 461/2 471/15 476/3 480/5 beyond [1] 447/5 bid [7] 387/3 426/8 426/24 427/1 427/14 456/11 472/17 bidder [7] 386/13 387/1 420/24 423/15 426/21 427/8 458/10 bidder's [2] 426/13 460/16 bidders [6] 423/6 423/7 423/9 425/21 458/9 468/3 bidding [2] 461/25 476/3 bids [4] 388/4 426/12 427/9 428/2 big [6] 343/8 372/9 375/22 379/5 384/17 384/17 big-picture [1] 343/8 bigger [5] 375/22 391/6 399/10 399/11 399/15 biggest [2] 372/23 billboard [1] 348/6 billion [4] 342/7 374/18 376/3 440/5 billion-dollar [1] 440/5 billions [10] 340/4 340/6 360/20 360/22 360/24 360/25 378/18 415/20 416/6 424/15 binder [1] 439/23 binders [2] 340/19 340/19 **binding [1]** 470/12 **Bing [37]** 341/8 351/13 351/15 358/11 372/19

375/18 375/22 388/23

392/9 392/19 392/24

394/9 394/10 394/16

393/4 393/11 394/6

395/5 395/17 396/10 broadly [1] 348/3 **Broadway [1]** 338/5 396/10 400/11 418/22 419/4 419/6 419/10 brought [2] 422/8 419/13 419/16 419/19 420/1 438/11 439/6 439/9 444/15 464/2 471/20 471/21 Bing's [2] 393/4 418/13 bit [18] 346/2 356/8 357/8 366/20 430/14 444/21 447/7 449/19 450/11 451/14 453/14 454/5 457/7 457/14 461/10 466/4 475/16 477/11 bite [1] 399/12 black [1] 418/3 bleed [1] 346/7 **bleeds [1]** 475/12 blink [1] 459/14 Block [3] 362/17 362/20 399/22 blocks [1] 346/5 blown [1] 376/18 blue [8] 353/19 367/17 371/19 371/23 404/17 404/18 405/19 455/22 board [3] 376/23 376/23 458/15 boast [1] 340/25 **Booking [1]** 372/1 Booking.com [2] 442/4 443/9 books [1] 423/2 **Booth [6]** 350/18 351/24 351/25 369/16 401/14 409/21 borne [3] 349/21 377/14 416/11 both [12] 365/22 366/14 369/5 369/7 371/10 371/11 371/12 392/22 409/15 434/6 461/22 471/6 **bottom [3]** 357/13 380/21 415/18 bought [1] 355/15 bound [1] 432/14 boundary [2] 344/11 414/24 bounded [1] 414/18 box [3] 377/17 418/3 449/7 boxed [1] 439/19 brand [2] 400/24 442/6 brand-new [1] 400/24 break [2] 410/12 481/2 **breaking [2]** 357/15 357/18 bridge [1] 446/12 **briefing [1]** 347/7 **bring [3]** 448/6 448/7 472/22 broad [3] 348/7 420/5 467/18 broader [2] 346/15 468/25

465/16 Brown [6] 347/2 347/8 382/4 382/14 403/9 403/10 browser [4] 440/11 443/1 445/4 447/11 **Bruce [1]** 338/2 brunt [1] 436/10 buck [1] 458/12 budgets [2] 466/1 466/2 build [1] 397/4 bullet [1] 428/19 burden [8] 403/23 408/6 408/14 408/16 431/17 433/5 433/6 477/6 business [7] 347/15 377/13 400/10 435/1 435/4 437/13 466/6 butter [1] 364/4 **buy [6]** 364/1 380/8 469/16 478/8 478/9 478/15 buyer's [2] 380/1 380/1 **buyers [1]** 401/1 buying [2] 357/19 372/3 buys [1] 478/6 calculate [3] 349/10 472/17 479/5 calculating [1] 353/19 calculation [1] 420/16 call [8] 342/15 381/13 381/14 381/14 401/15 401/19 413/25 472/20 called [11] 341/15 353/12 374/23 400/22 401/16 401/16 415/15 422/24 422/25 425/24 462/18 came [8] 355/24 381/23 382/20 383/14 383/17 403/15 428/17 440/2 campaign [2] 443/15 479/19 campaigns [2] 340/20 389/15 can [133] 341/11 341/19 342/23 343/7 345/8 345/14 346/17 346/20 347/16 348/22 348/25 349/5 349/23 350/8 350/15 350/16 352/7 353/6 354/23 355/22 356/1 357/3 358/7 359/19 363/25 364/16 364/20 365/24 366/15 366/21 366/22 367/21 370/7 370/17 371/17 377/16 378/18 378/20 381/13 381/14

381/17 384/15 386/11 386/11 386/12 386/18 386/22 387/16 388/13 388/18 389/5 390/18 391/8 391/13 392/7 393/12 394/3 395/13 398/7 398/14 399/2 399/12 400/12 401/7 402/16 407/16 408/24 409/6 410/13 411/10 411/19 413/2 413/17 414/2 414/25 415/18 419/10 419/21 420/3 422/15 425/16 427/6 428/25 429/14 430/11 432/6 433/12 434/5 441/7 442/11 442/11 448/10 448/11 449/3 450/7 450/12 450/25 453/3 453/4 453/13 454/3 455/13 456/12 456/17 456/25 457/7 458/11 461/15 461/22 464/2 464/3 464/4 464/17 464/19 467/9 467/12 468/6 468/8 468/10 468/12 469/22 473/1 475/9 477/4 477/7 477/19 477/24 477/25 478/19 478/22 478/23 480/5 480/11 can't [19] 349/10 360/19 367/1 368/12 368/16 369/22 369/25 371/6 372/25 381/24 407/9 419/21 424/23 436/11 436/13 440/3 446/9 479/4 479/5 candidly [1] 403/24 cannot [2] 340/4 406/16 capability [1] 378/7 capable [1] 452/12 capture [9] 388/17 390/19 390/24 391/8 391/8 391/10 391/13 391/16 452/20 captures [1] 452/7 capturing [1] 381/25 car [15] 452/13 452/13 452/16 477/12 477/12 477/13 477/15 477/16 478/6 478/7 478/10 478/13 478/14 478/15 479/18 card [8] 348/20 360/5 361/14 361/14 369/24 382/1 382/25 383/1 cards [4] 348/12 348/12 348/19 382/20 care [2] 406/13 463/25 careful [1] 354/8 Carr [1] 338/4 case [64] 343/9 345/16 347/21 348/11 359/17 374/4 376/3 380/16 380/24 382/16 382/19 382/22 383/8 383/24

385/18 391/22 392/5 392/25 395/20 395/22 396/3 396/17 398/6 401/25 401/25 402/1 402/4 402/11 403/13 405/4 410/8 418/5 423/1 429/25 437/19 443/20 444/22 445/8 445/23 447/19 447/20 447/23 447/24 448/6 448/7 449/6 449/6 449/9 449/13 449/14 449/18 462/24 464/17 465/1 465/3 465/4 465/11 465/12 465/16 466/5 466/8 466/13 467/10 469/5 cases [9] 385/2 387/20 448/18 462/15 465/11 470/13 470/14 470/15 477/25 cash [2] 348/11 361/15 categories [2] 401/6 467/19 causation [3] 406/10 446/13 480/5 caused [3] 344/15 344/18 479/21 Cavanaugh [14] 338/8 339/10 364/14 364/16 365/2 365/25 367/21 373/10 409/8 410/11 437/24 439/16 470/3 480/22 Cavanaugh's [1] 440/1 cede [2] 364/14 434/16 cellophane [9] 358/17 358/18 358/21 358/22 359/1 359/16 360/14 360/16 362/5 Center [1] 338/4 certain [6] 365/14 365/15 365/20 374/25 386/11 407/14 certainly [34] 343/23 350/14 353/5 357/1 361/13 362/21 363/2 363/11 368/25 375/2 377/24 378/13 379/1 381/16 381/16 388/25 389/11 393/21 396/8 397/11 403/13 418/17 424/2 425/23 430/2 430/16 431/19 431/24 442/3 445/1 455/6 455/11 463/12 471/4 certainty [1] 349/11 **Certified [1]** 338/17 certify [1] 482/2 cetera [2] 360/13 473/6 **CH [1]** 338/18 **chain [1]** 427/15 **challenged** [1] 432/20 challenges [1] 375/2 challenging [1] 457/8

chances [1] 452/13

399/6 417/19 417/22

change [6] 386/11

change... [2] 460/11 463/5 changed [2] 383/12 412/8 changes [3] 353/16 353/17 386/10 changing [2] 399/16 463/2 channel [20] 340/16 340/16 350/3 350/3 350/8 350/12 350/12 350/13 350/14 351/5 351/9 351/10 351/21 352/5 352/8 395/18 401/4 410/7 428/8 440/13 channels [12] 349/12 349/21 353/25 363/22 363/24 364/10 374/25 375/10 380/10 432/24 465/21 465/25 character [1] 472/12 **charge [3]** 347/14 421/8 452/14 **charged [1]** 341/3 **charges** [1] 423/15 charging [2] 431/25 478/12 chart [9] 356/17 383/7 396/5 400/1 400/24 405/16 405/25 437/10 442/20 **cheaper [1]** 372/19 check [1] 361/15 checks [2] 348/11 348/19 Chicago [2] 360/5 405/14 choice [2] 340/23 372/6 choices [1] 467/13 **choose [2]** 424/13 459/11 chooses [1] 341/12 Christine [1] 443/19 circle [1] 345/14 circling [1] 363/4 Circuit's [2] 432/10 433/8 cite [3] 355/11 411/9 468/13 cites [2] 430/12 432/25 citing [1] 437/2 Civil [1] 339/7 claim [4] 373/22 429/7 446/9 476/1 claims [1] 404/13 **clarity [1]** 366/1 clear [13] 344/20 365/3 371/4 371/7 375/21 378/10 394/20 413/18 415/22 419/5 421/6 458/2 458/14 clearer [1] 422/11 clearly [1] 364/20 ClicData [2] 396/6 451/5

click [11] 396/14 396/15 405/23 405/23 406/1 406/17 406/24 407/10 407/17 450/18 451/24 clicked [1] 396/7 clicking [3] 371/22 396/18 479/16 clicks [7] 396/24 397/14 397/19 404/24 406/10 406/14 440/25 clickthrough [5] 407/2 407/10 408/12 456/6 462/5 clickthroughs [1] 459/20 cliff [1] 383/6 close [1] 456/14 closer [4] 366/19 366/22 426/7 456/7 **CLOSING** [1] 337/9 CO [1] 338/6 coag.gov [1] 338/7 Coca [1] 389/4 Coca-Cola [1] 389/4 Code [1] 342/15 Code Yellow [1] 342/15 cognizable [1] 365/4 coined [1] 351/3 Cola [1] 389/4 collectively [1] 436/8 **COLORADO [3]** 338/2 338/4 445/7 **COLUMBIA** [1] 337/1 combinations [1] 468/17 combined [1] 405/3 combo [1] 448/20 come [28] 340/20 345/14 349/9 358/25 363/16 382/24 383/20 384/2 387/7 387/9 410/20 414/22 421/9 428/5 435/10 436/2 436/21 440/3 442/10 442/12 444/22 445/18 452/11 452/11 465/14 473/7 475/20 478/15 comes [7] 341/9 358/15 375/10 381/9 430/6 440/9 446/15 coming [7] 360/24 377/22 383/3 399/25 440/5 441/20 458/10 comm [1] 417/19 commensurate [2] 414/11 476/25 comment [1] 357/13 commercial [1] 380/2 commercials [2] 442/4 442/5 communicated [1] 417/14 communication [1] 417/19 companies [11] 367/16 369/24 376/10 398/23

399/4 399/9 400/20 437/8 440/5 466/11 468/19 comparable [4] 378/15 378/17 393/25 450/24 compared [1] 449/9 comparing [1] 400/11 **compelling [1]** 385/16 compete [6] 373/2 400/22 401/1 441/2 467/10 469/17 competing [8] 375/17 378/12 378/13 383/20 399/5 401/20 440/20 469/18 competition [51] 341/10 344/11 344/14 344/17 347/11 354/20 357/22 357/22 358/1 358/11 358/13 362/12 377/12 383/18 388/11 390/22 395/10 398/9 408/2 408/3 408/25 414/18 414/21 414/24 417/5 417/11 421/11 430/7 432/19 435/9 440/17 441/3 441/4 441/21 442/16 442/17 452/23 462/14 463/3 468/5 473/21 473/23 474/18 474/19 476/7 476/8 477/23 478/3 478/5 479/1 480/13 competitive [35] 343/14 343/15 344/9 344/12 344/13 344/21 374/14 383/10 387/13 387/14 388/19 389/21 391/11 409/3 416/20 416/21 419/1 419/17 429/18 429/24 430/6 432/17 435/17 435/21 445/20 445/23 445/25 446/20 447/8 453/22 453/23 474/9 474/17 474/17 478/25 competitor [4] 358/8 377/5 421/12 478/6 competitor's [1] 388/25 competitors [8] 341/4 342/25 383/19 388/8 391/16 400/15 453/10 459/10 complained [1] 383/17 complaining [5] 440/16 440/16 440/17 469/8 469/9 complaint [2] 365/6 365/6 complement [1] 364/2 complementary [1] 363/22 complete [1] 366/21 completely [3] 432/5 442/13 449/14 complex [3] 420/8 423/7 465/3

complexity [2] 413/12 413/13 complicated [10] 385/21 386/15 387/4 388/2 391/2 453/17 459/6 459/7 459/24 469/19 **component [3]** 413/20 429/1 480/11 components [3] 411/17 424/14 472/18 compress [1] 456/2 compresses [1] 456/2 comprised [4] 365/18 365/19 369/12 369/13 computer [1] 338/21 computer-aided [1] 338/21 concept [5] 368/7 420/7 420/9 423/8 451/7 conceptions [1] 381/10 **concern [5]** 360/16 376/22 390/1 455/12 455/13 concession [1] 382/8 conclusion [1] 420/23 conditions [1] 418/21 conduct [20] 373/23 429/18 432/19 432/20 434/22 445/3 445/4 445/6 445/7 445/16 445/18 445/25 446/1 446/3 446/4 446/5 446/10 447/9 447/10 474/17 confident [1] 358/6 confidential [5] 399/1 439/20 443/23 443/23 443/25 confronted [1] 465/18 confused [1] 406/5 confusing [1] 468/17 confusion [1] 405/25 Congress [2] 414/20 473/20 connect [5] 445/24 446/1 446/4 446/4 447/3 connection [2] 454/7 461/6 **CONNOLLY [1]** 338/13 consequences [3] 453/9 454/15 475/4 consider [7] 341/3 370/5 401/11 429/23 432/14 449/5 459/23 consideration [2] 349/16 394/21 consistent [6] 347/15 390/11 392/6 433/14 460/4 477/19 consistently [4] 342/23 381/24 390/8 398/24 constant [10] 340/21 353/19 353/20 353/24

399/2 399/3 399/21 399/24 471/13 472/5 **constantly [2]** 383/9 388/3 **constitutes** [1] 438/14 Constitution [1] 338/18 constrain [1] 354/20 constrained [4] 392/24 393/1 393/4 395/8 constraint [4] 399/6 399/11 417/6 419/17 **constraints** [3] 394/24 394/25 395/2 construct [2] 362/24 434/13 constructing [1] 379/9 consumer [4] 338/3 364/1 376/13 405/6 **consumers** [1] 348/5 content [2] 379/7 379/9 **contention** [1] 344/20 context [2] 369/9 432/13 continually [2] 461/25 462/4 **continue** [1] 340/21 continued [3] 338/1 454/17 454/18 **continuing [1]** 392/1 contracts [10] 344/15 344/15 429/19 430/7 430/8 474/15 474/16 474/19 474/21 475/4 contrary [1] 439/25 contributes [1] 418/1 **control [2]** 368/16 368/20 controls [2] 386/17 386/19 conversation [1] 431/10 conversations [1] 384/7 **conversion** [3] 375/7 407/3 408/11 conversions [6] 352/14 374/15 396/25 396/25 397/15 406/14 convert [1] 374/13 convince [1] 353/21 **convincing** [1] 363/9 **cool** [1] 452/12 copied [1] 458/19 **copy [4]** 457/21 464/3 464/3 464/4 correct [12] 362/14 363/10 366/8 377/23 399/14 416/9 426/18 431/4 438/25 446/19 475/8 482/3 correlation [6] 397/18 406/9 406/16 441/18 461/2 480/4 correspond [2] 363/7 450/20 corresponds [2]

407/8 417/16 417/17

421/8 427/7 428/12

441/5 447/25 455/24

corresponds... [2] 367/14 394/14 cost [3] 435/18 457/18 457/18 costs [7] 367/17 367/19 371/25 393/23 393/23 477/12 478/4 could [36] 348/22 385/23 395/6 401/16 401/16 403/16 405/9 405/10 405/13 405/23 406/2 407/12 414/5 415/24 416/22 417/2 417/8 417/10 423/20 424/8 438/10 438/18 438/23 442/19 447/15 447/16 447/16 453/7 459/2 467/17 471/8 471/19 471/20 472/2 475/11 479/11 couldn't [5] 350/10 361/22 403/15 424/17 472/3 counsel [1] 444/23 counts [1] 375/7 couple [13] 343/17 346/24 349/14 386/24 411/17 424/22 445/12 447/21 455/16 456/3 461/7 461/18 470/9 course [4] 347/13 352/6 353/7 427/2 court [23] 337/1 338/16 338/17 339/2 340/15 342/13 342/22 343/4 348/13 348/15 350/5 404/1 410/17 410/19 411/16 448/7 448/10 448/13 471/10 474/5 478/19 480/3 481/4 court's [2] 344/2 433/2 **courts [2]** 347/6 432/14 cover [3] 345/1 364/20 429/12 coverage [1] 431/5 CPC [3] 384/19 391/24 476/22 **CPCs [3]** 449/25 455/24 476/22 **CPI [1]** 405/6 create [9] 340/19 365/21 368/19 380/5 406/9 419/2 421/3 421/4 426/15 created [5] 344/15 421/7 422/16 448/1 478/11 creates [3] 368/19 405/7 476/2 creating [3] 352/17 380/11 476/2 creative [1] 385/1

credit [10] 348/12

348/20 361/14 369/24

382/1 382/20 382/25

```
383/1 464/6 464/8
critical [2] 364/24
467/8
criticizing [1] 363/20
cross [4] 350/8 352/5
352/8 436/17
cross-channel [3]
350/8 352/5 352/8
cross-examined [1]
436/17
CRR [2] 482/2 482/8
Cubs [2] 360/5 405/14
cumbersome [1]
468/11
curious [1] 409/5
current [2] 383/4 478/3
customer [6] 357/25
371/25 373/5 389/2
397/12 435/12
customers [26] 370/15
372/10 372/11 373/3
374/15 386/20 390/2
397/5 397/7 403/25
417/14 417/17 417/17
417/23 435/14 436/18
436/19 437/3 437/4
437/6 437/12 437/12
440/3 440/5 453/20
                        347/5
478/14
cut [2] 367/22 369/20
cuts [2] 395/24 396/3
CV [1] 337/4
D.C [4] 337/5 337/14
338/14 338/19
D.C. [1] 433/8
D.C. Circuit's [1] 433/8
Dahlquist [16] 339/17
339/25 343/7 367/9
374/21 375/13 384/22
398/2 400/8 410/23
414/5 443/14 444/17
452/18 470/3 473/1
Dahlquist's [1] 457/13
dark [1] 341/23
data [14] 378/3 383/25
392/21 392/22 404/18
439/20 442/13 459/1
465/1 465/3 466/14
466/17 470/19 470/20
Date [1] 482/7
                        371/7
David [1] 339/25
David Dahlquist [1]
339/25
day [10] 337/7 339/16
340/17 352/23 365/1
381/9 381/10 381/22
386/17 406/4
days [1] 449/7
deal [3] 373/7 454/10
455/9
dealer [3] 452/13
452/16 478/13
dealers [1] 479/20
dealing [3] 432/13
432/13 453/16
deals [1] 432/23
```

```
debit [3] 348/11 348/19 DEPARTMENT [2]
361/14
                        337/13 338/2
deceived [1] 397/17
                       dependent [1] 462/6
decide [4] 414/23
                       depending [2] 384/8
452/24 473/22 479/4
                        461/16
decided [2] 367/18
                       depends [2] 362/24
424/16
                        448/5
deciding [3] 414/19
                       deposed [1] 443/20
480/15 480/16
                       Depot [4] 350/19
                        351/23 371/9 409/22
decision [1] 475/6
decisions [1] 349/5
                       describe [1] 424/5
deck [5] 342/15 376/23
                       described [3] 361/21
411/22 471/9 472/10
                        368/24 429/19
declared [2] 378/20
                       describing [1] 433/21
378/23
                       descriptions [1]
decrease [3] 386/12
                        457/16
457/1 457/4
                       deserve [1] 421/13
decreases [1] 457/5
                       designated [3] 361/20
default [1] 431/3
                        406/15 443/24
defaults [1] 445/4
                       designed [2] 423/3
defeats [1] 479/24
                        468/22
                       desirable [1] 407/15
defend [1] 381/4
Defendant [2] 337/7
                       desires [3] 342/21
338/12
                        411/11 411/13
                       desktop [3] 404/19
defendants [1] 348/11
defense [1] 352/9
                        405/3 405/12
define [3] 343/21 344/1
                       desperation [1] 361/10
                       despite [1] 480/9
defined [3] 386/14
                       detail [1] 408/20
                       detailed [6] 376/11
404/23 405/24
                        425/9 430/11 430/12
defining [2] 343/24
                        449/13 466/22
369/19
definitely [1] 414/15
                       details [1] 423/7
definition [11] 342/21
                       determination [2]
345/19 346/2 347/11
                        422/5 451/11
347/20 354/7 354/17
                       determinations [1]
354/18 411/10 429/17
                        394/22
465/13
                       determine [8] 352/20
definitively [1] 409/1
                        353/4 403/11 408/2
degraded [2] 383/13
                        427/10 478/3 478/6
408/10
                        478/25
degree [9] 352/3
                       determined [2] 357/22
365/23 368/20 369/10
                        385/20
370/6 370/8 396/25
                       determining [5] 349/16 difficult [4] 350/9
432/22 453/13
                        389/1 428/4 432/19
delay [2] 339/14 398/8
                        480/13
delayed [1] 360/10
                       developments [2]
                        374/10 378/2
deliberate [2] 365/12
                        deviate [1] 478/9
delineated [1] 380/25
                       did [36] 355/3 355/9
delineation [2] 371/5
                        355/12 356/4 361/2
                        371/21 383/6 383/13
                        383/15 402/21 403/8
delivering [1] 391/5
delta [1] 426/15
                        404/7 416/2 416/5
demand [3] 342/24
                        417/9 421/7 422/12
                        431/6 433/20 438/13
409/19 409/19
demands [1] 380/11
                        440/12 448/21 448/25
                        450/12 450/18 450/22
demonstrate [3]
393/17 434/7 447/4
                        450/23 451/5 451/9
                        465/12 468/1 468/6
demonstrated [4]
343/1 385/3 436/8
                        468/22 471/17 474/2
447/10
                        474/6
demonstrates [2]
                       did you [1] 383/15
440/7 450/5
                       didn't [23] 358/25
                        360/22 383/21 395/15
demonstration [2]
                        401/19 401/19 402/17
460/1 460/2
demoted [1] 367/18
                        402/19 403/1 404/4
                        404/5 404/6 405/22
Denver [1] 338/6
```

465/15 differ [2] 375/7 375/8 difference [7] 357/18 367/5 367/23 368/9 379/22 432/11 471/14 differences [2] 368/9 368/24 different [80] 352/15 352/16 354/4 354/4 360/7 360/7 361/4 361/13 361/14 361/15 361/16 361/24 362/1 362/2 362/10 362/10 363/24 363/24 364/10 368/2 368/3 368/4 368/25 375/3 375/4 376/12 376/24 379/1 380/18 381/9 382/15 382/17 382/18 383/1 386/25 393/22 393/23 393/23 397/7 400/5 400/17 401/4 401/4 401/5 401/6 401/8 407/18 410/4 410/8 410/8 410/9 415/14 420/20 423/14 423/16 430/14 430/15 433/3 441/2 442/9 443/17 444/25 449/22 450/8 450/8 450/23 458/24 459/10 461/7 461/19 464/18 464/23 467/2 467/3 467/11 467/19 468/16 472/3 473/6 474/10 differentiation [1] 377/19 differently [5] 368/5 375/4 393/24 397/7 397/8 386/25 453/18 463/18 digital [13] 340/13 346/18 347/24 347/25 348/3 350/24 353/17 354/3 364/11 374/5 399/19 479/11 479/15 Dijk [5] 372/13 372/17 434/20 434/24 436/12 **Dintzer [5]** 337/13 339/9 346/23 364/3 431/10 direct [27] 343/12 343/18 345/4 351/12 360/3 391/15 398/10 400/18 403/24 409/11 409/17 411/12 422/17 422/18 424/25 429/7 430/22 432/20 433/12 441/20 442/21 443/6 471/2 471/7 474/20 475/10 475/10 direct evidence [9] 343/12 343/18 403/24 432/20 471/2 471/7

direct evidence... [3] 474/20 475/10 475/10 direct-evidence [1] 345/4 directed [1] 440/11 directly [7] 344/1 378/20 379/23 400/22 402/7 429/3 441/9 directs [1] 443/3 disagree [11] 348/2 354/14 356/21 356/24 359/22 390/3 407/21 414/8 431/24 453/5 474/7 disagreement [1] 347/23 Dischler [5] 342/12 354/24 389/11 402/22 discovery [5] 382/17 400/22 442/13 456/17 464/21 discuss [2] 405/19 422/20 discussed [1] 455/19 **discussing [3]** 345/3 375/2 429/16 discussion [4] 354/7 401/24 425/8 428/15 discussions [2] 427/3 428/23 disincentivize [1] 456/25 display [21] 347/25 350/14 350/20 350/24 351/19 352/12 352/17 353/17 360/12 361/24 370/10 370/12 378/14 378/15 381/19 401/5 401/12 402/12 410/1 410/2 426/11 disproportionate [1] 458/4 disprove [1] 477/5 dispute [13] 349/1 349/15 349/18 349/20 353/21 368/23 371/18 386/7 386/18 395/14 407/19 408/18 447/16 distance [1] 386/13 distinct [5] 350/21 350/25 354/4 368/1 368/2 distinction [1] 351/5 distinctions [1] 352/12 distinctly [1] 401/8 distinguish [2] 366/18 370/9 distinguishing [1] 382/13 distribution [3] 373/20 432/24 445/5 **DISTRICT [4]** 337/1 337/1 337/10 402/4 divine [1] 378/22 divorce [1] 477/24

divvy [1] 373/17

```
do [134] 340/19 342/25
345/19 345/24 349/11
349/15 349/18 350/7
350/10 350/15 350/19
350/23 352/5 352/5
352/7 352/7 352/13
353/16 356/21 356/24
357/2 357/3 357/10
358/8 358/11 358/12
358/12 359/17 362/20
362/22 363/14 365/24
366/15 367/19 367/19
373/6 375/4 375/17
377/18 379/21 386/22
387/12 388/18 388/18
390/18 390/18 391/25
393/11 396/20 397/7
399/7 400/6 400/8
402/17 403/1 403/6
403/14 403/15 404/4
404/5 405/8 408/14
408/18 408/20 409/5
411/11 411/13 413/11
413/12 414/2 414/20
418/3 418/11 418/12
418/12 418/13 419/4
419/13 419/21 419/21
421/12 422/8 424/13
428/16 430/16 431/14
431/14 431/15 433/1
437/8 438/18 442/2
443/12 445/22 448/11
448/12 448/13 448/18
448/22 450/14 451/16
451/23 453/4 453/8
453/10 453/20 454/3
454/18 454/20 455/11
456/1 457/8 457/20
459/12 459/23 462/3
463/25 464/5 464/5
464/8 464/8 464/15
464/18 466/10 466/11
467/25 468/10 471/21
471/23 472/2 472/2
472/13 473/9 474/15
do we [1] 357/10
do you [6] 349/15
350/19 350/23 356/21
375/17 433/1
do you have [1]
431/14
do-it-yourself [1]
362/20
doc [1] 417/19
doctors [3] 466/10
466/18 466/19
document [20] 349/22
350/4 350/5 358/2
358/9 363/19 374/23
375/1 375/1 375/9
375/12 384/4 384/19
401/3 412/8 413/23
444/18 464/20 471/8
472/13
documentary [1]
381/16
documentation [2]
386/21 386/23
```

```
documents [23]
340/25 347/13 375/14
376/20 377/7 377/11
380/16 380/18 380/22
386/4 400/10 403/18
413/4 413/18 415/7
422/1 455/7 455/8
455/11 461/16 464/16
464/17 468/21
does [43] 341/3 348/8
348/9 353/16 354/19
360/18 364/8 366/3
366/4 368/5 376/5
376/6 382/3 391/11
392/14 393/12 395/21
395/22 396/11 403/6
404/22 405/1 411/7
411/12 418/5 419/6
419/10 423/13 423/23
429/3 429/4 429/5
429/21 441/25 451/8
451/9 454/18 455/14
456/1 463/24 463/24
472/22 474/5
doesn't [55] 341/4
348/17 348/18 359/2
359/4 359/6 361/5
362/8 362/9 362/12
366/6 369/20 373/7
377/8 377/11 378/25
382/12 383/5 383/12
384/13 384/20 384/20
388/21 388/21 389/17
389/25 390/21 390/25
391/7 394/9 401/22
403/12 403/23 405/8
406/22 408/17 415/5
418/23 418/23 419/1
419/8 423/10 426/11
429/9 433/4 452/23
460/11 460/14 465/7
465/25 470/16 477/6
479/5 479/9 479/23
doing [28] 341/7
354/17 364/18 365/15
365/24 383/9 387/8
389/14 404/13 413/16
419/20 421/2 427/7
428/7 438/24 438/25
440/14 440/15 448/5
451/22 452/22 452/23
456/3 463/23 464/7
468/19 474/4 476/14
DOJ [6] 337/13 339/9
339/19 346/12 448/7
448/18
DOJ's [2] 365/6 445/8
doll [2] 415/17 472/12
dollar [4] 376/17 377/4
378/11 440/5
dollars [16] 340/6
341/24 349/16 359/20
360/20 360/24 360/25
378/18 400/12 401/2
416/23 424/15 435/8
441/15 441/16 451/2
dollars' [1] 360/22
dominant [1] 398/8
```

456/22 don't [99] 345/7 345/16 346/4 346/23 352/11 353/21 354/15 358/7 358/24 359/16 361/3 362/6 368/19 368/23 370/12 372/6 372/15 373/1 374/12 374/12 374/17 380/5 381/3 383/3 384/18 384/23 384/24 384/24 385/3 386/18 388/10 388/14 388/16 389/7 390/21 391/12 392/13 392/15 393/6 395/13 396/24 397/2 397/23 397/25 399/18 401/6 401/11 404/8 405/12 406/8 407/19 408/5 410/13 418/6 418/9 419/12 419/14 419/24 421/25 426/25 426/25 428/19 431/13 431/14 433/25 434/5 436/14 436/21 437/11 437/13 441/20 443/4 444/2 444/3 448/22 449/16 449/17 454/21 455/4 457/21 459/25 460/7 462/1 462/15 463/10 464/6 467/7 467/20 468/23 471/1 476/9 477/3 477/17 477/21 478/16 479/12 479/20 480/5 480/6 done [16] 355/7 382/6 390/6 403/2 403/16 432/7 447/6 449/13 449/23 450/4 459/22 462/10 463/2 473/5 473/8 479/14 door [1] 433/5 dotted [2] 412/11 412/13 doubt [1] 435/16 down [16] 356/20 356/23 363/4 371/20 380/19 380/25 387/7 387/9 388/1 439/1 439/5 450/4 463/10 476/24 477/3 478/7 **Dr. [30]** 341/5 355/23 356/19 356/22 356/24 357/14 371/21 380/12 381/6 391/23 396/5 398/20 399/19 402/10 402/17 403/4 403/7 404/3 404/4 404/7 404/12 404/25 405/8 406/1 407/7 424/25 447/24 447/25 450/12 475/20 **Dr. Adam [2]** 341/5 424/25 Dr. Baker [1] 371/21 **Dr. Israel [16]** 356/19 356/22 356/24 391/23

399/19 402/10 403/4 dominating [2] 456/21 403/7 404/4 404/25 405/8 406/1 407/7 447/24 447/25 450/12 **Dr. Israel's [3]** 396/5 404/3 404/12 Dr. Jerath [2] 380/12 381/6 **Dr. Juda [2]** 357/14 475/20 **Dr. Murphy [1]** 404/7 Dr. Raghavan [1] 398/20 Dr. Whinston [2] 355/23 402/17 drain [1] 363/4 dramatic [1] 377/21 dramatically [1] 398/25 draw [3] 357/13 406/16 411/5 drive [3] 363/25 374/15 479/13 driver [2] 412/7 412/15 drives [1] 340/1 driving [8] 349/5 387/22 412/21 412/21 413/7 442/6 465/20 476/4 drop [3] 353/24 354/1 354/3 drug [1] 466/11 **DSPs [1]** 466/15 due [1] 463/17 durably [1] 356/5 duration [1] 432/23 **during [1]** 374/2 **DX29.129 [1]** 404/10 **DX412 [1]** 471/16 dynamic [2] 392/23 462/3 dynamics [2] 444/13 455/15 Ε each [8] 347/9 348/16 354/19 362/18 473/7 474/9 474/11 476/4 earlier [3] 359/24 424/10 437/3 early [2] 411/25 449/7 earnings [1] 342/18 easier [1] 469/16 easily [2] 389/5 405/13 easy [2] 375/5 389/17 eating [1] 398/23 econometric [2] 404/5 466/4 economic [3] 391/15 449/8 465/3 **economists** [1] 391/7 **ecosystem [1]** 344/16 effect [18] 343/14 344/13 371/13 384/18 384/20 420/19 423/16 423/17 425/15 430/6 434/20 445/25 446/5

446/10 446/24 447/8

ensure [1] 423/20 exclusion [1] 432/22 every [9] 340/17 extra-evidentiary-recor 340/17 340/17 360/6 enter [7] 353/22 360/2 exclusionary [9] **d** [1] 378/9 effect... [2] 461/11 361/21 425/1 444/25 392/15 393/6 395/22 373/21 373/23 434/21 **extract [2]** 342/17 474/18 449/1 467/23 420/20 424/18 445/2 445/16 445/18 413/6 effective [5] 359/20 everybody [8] 390/25 446/10 447/9 447/12 entering [2] 360/1 **extremely [2]** 350/9 375/25 380/9 383/2 412/6 394/15 399/12 424/11 exclusive [4] 429/20 435/11 460/14 entire [3] 344/6 358/2 424/12 427/22 468/16 432/13 432/13 432/23 **eye [2]** 407/22 459/14 effectively [2] 399/2 358/9 **excuse [3]** 416/17 eyeballs [1] 395/2 399/3 entirely [3] 346/14 everyone [8] 339/5 425/21 476/22 effects [9] 344/12 393/13 480/12 339/13 410/15 410/21 **exercise** [1] 345/17 344/12 424/3 429/24 Facebook [31] 358/12 410/22 437/15 459/21 entirety [1] 358/10 **exercises** [1] 453/8 436/11 445/23 446/20 359/14 361/9 361/19 **exercising [3]** 355/19 environment [3] 449/12 456/4 everything [6] 364/9 434/9 440/14 361/21 374/6 374/19 344/16 344/21 435/17 efficiency [1] 422/12 375/12 376/9 378/18 equalize [1] 410/3 395/17 430/4 442/5 exhibit [3] 374/22 **effort [3]** 371/11 equally [1] 385/16 442/13 449/12 398/18 471/15 379/5 384/9 384/10 422/18 472/7 388/22 389/18 392/24 **escape [1]** 376/16 evidence [79] 343/1 exist [4] 401/23 403/23 efforts [3] 350/9 411/7 408/17 477/6 395/4 398/12 398/22 escaping [1] 430/17 343/11 343/12 343/18 436/18 399/4 399/24 400/2 **essence** [1] 372/21 existence [1] 432/23 343/25 344/3 344/10 either [7] 386/12 400/13 400/21 401/16 essential [2] 367/11 345/4 345/20 351/17 exists [1] 342/9 405/24 408/13 418/7 410/1 464/3 467/4 370/13 352/2 352/10 352/10 expect [7] 385/10 418/10 454/7 463/2 468/18 469/18 469/21 367/25 370/25 371/4 essentiality [2] 370/11 397/13 397/14 397/16 Electric's [1] 432/14 Facebook's [2] 360/19 372/1 374/1 376/3 397/18 410/3 452/14 372/8 elevating [2] 423/24 377/14 380/15 381/17 377/20 essentially [8] 356/18 expected [2] 403/20 458/9 faced [1] 435/17 394/14 394/14 438/21 383/8 385/16 386/8 415/20 Eleventh [1] 432/10 451/12 460/17 462/12 faces [1] 377/12 388/7 388/20 388/24 **Expedia [6]** 372/1 Eleventh Circuit's [1] 392/25 394/5 400/14 440/1 440/8 440/11 facie [1] 444/22 468/7 432/10 fact [47] 340/24 340/25 establish [6] 373/20 401/22 403/24 403/24 442/4 442/25 else [19] 349/13 352/5 352/21 356/22 393/14 408/6 431/12 406/1 406/18 407/6 Expedia.com [2] 351/16 351/20 357/20 362/7 372/23 382/4 445/22 465/25 408/13 411/12 416/19 440/11 443/1 358/12 358/20 388/24 383/4 383/10 383/18 established [4] 341/2 416/25 418/11 419/13 expedited [1] 448/20 423/3 426/22 435/19 384/12 384/13 385/19 395/20 431/17 474/20 423/18 423/22 423/23 **expense** [1] 399/25 442/5 442/13 449/12 387/15 388/6 388/20 429/23 429/25 430/5 establishes [1] 380/24 **expensive** [1] 444/9 453/7 467/9 470/1 390/22 390/23 391/15 431/22 432/2 432/7 estimate [1] 479/25 **experience** [5] 422/3 472/22 473/14 476/11 391/24 391/25 408/10 **estimation [3]** 416/21 432/20 432/22 433/6 448/19 454/15 459/19 **elsewhere [3]** 356/1 411/12 415/10 416/5 436/23 451/13 433/6 433/12 434/6 459/20 441/1 476/11 445/2 445/24 447/19 418/3 418/12 423/22 et [4] 337/3 339/8 experiment [3] 358/4 email [6] 337/15 338/7 360/13 473/6 447/19 449/8 449/8 453/20 454/1 423/24 423/25 433/11 338/11 338/15 342/2 434/19 438/6 440/17 et al [1] 339/8 452/16 463/4 464/23 experiments [10] 342/14 441/18 449/25 453/21 et cetera [1] 360/13 465/20 466/4 466/6 358/3 384/25 385/1 **emergence** [2] 398/9 455/14 462/20 463/6 **evaluate [2]** 459/7 466/14 468/13 471/1 385/5 385/10 385/14 398/12 465/24 471/6 476/20 459/9 471/2 471/7 474/20 390/5 390/10 403/3 emphasis [1] 346/24 476/24 479/24 479/25 475/10 475/10 476/23 evaluating [2] 388/3 **empirical [2]** 449/23 expert [6] 382/6 382/18 factor [2] 349/19 459/8 evidentiary [1] 378/9 402/10 403/6 403/21 452/23 evaluation [1] 459/12 exact [4] 404/25 **employees [1]** 417/24 even [55] 341/3 342/17 467/17 467/18 467/22 449/13 factors [7] 347/8 347/9 enables [1] 464/20 382/4 384/9 403/10 348/16 354/10 355/12 exactly [10] 349/25 expert's [1] 384/23 end [14] 343/4 352/23 359/4 359/5 360/9 386/21 398/5 399/22 403/10 432/18 **expertise** [1] 468/24 381/9 381/10 381/22 367/16 372/19 379/3 400/2 425/10 433/13 factual [2] 347/3 347/4 experts [1] 381/6 386/17 406/4 406/14 379/5 385/6 387/14 443/7 451/15 469/12 explain [5] 364/9 fail [2] 373/19 373/22 420/23 431/13 433/5 391/23 392/7 392/7 examine [2] 425/9 428/13 428/16 455/13 failed [1] 361/22 434/5 434/6 449/16 394/9 395/1 395/23 432/18 474/24 fair [8] 406/19 406/25 enforced [1] 473/21 397/2 398/9 399/21 examined [1] 436/17 407/1 466/5 474/22 **explained** [3] 344/5 engages [1] 420/10 475/20 476/2 479/25 403/4 403/7 404/6 **example [25]** 341/14 421/19 425/7 engender [2] 416/4 fairly [1] 400/14 406/10 406/15 408/22 347/17 348/10 353/15 explains [1] 374/9 420/4 417/21 422/11 423/10 377/20 397/1 407/20 fall [1] 366/6 explanation [5] 399/8 engine [17] 344/6 426/11 427/1 429/23 423/20 431/2 436/17 423/19 425/10 426/19 fallacy [6] 358/18 346/17 368/19 373/5 358/21 358/23 359/1 433/25 434/7 441/11 441/10 441/19 454/13 473/16 376/22 379/24 434/3 441/13 443/4 443/4 454/13 458/16 460/22 359/17 360/14 explanations [3] 435/22 437/21 442/21 falls [3] 343/11 343/16 443/4 445/13 445/20 461/1 462/9 464/15 428/17 473/9 474/14 445/4 477/13 477/14 449/17 450/9 450/23 467/24 472/4 472/5 exploded [1] 342/7 355/16 478/4 478/5 478/11 453/9 454/1 454/3 473/10 478/3 478/12 exploits [1] 379/14 fantasy [1] 377/15 478/16 far [6] 356/1 372/19 454/18 454/23 462/25 exceeding [1] 451/15 exploration [1] 429/4 engines [4] 346/19 418/17 419/7 419/8 464/6 479/3 exceeds [1] 452/2 **expressed [3]** 352/16 365/14 367/3 437/22 except [1] 364/8 434/23 event [1] 462/22 370/16 409/16 **enormous [3]** 374/5 events [1] 427/15 excerpt [1] 471/10 extensively [1] 347/8 faster [1] 477/15 374/7 374/8 fat [1] 395/15 ever [3] 341/7 363/2 exchange [2] 341/18 extent [5] 366/9 423/18 enough [7] 370/19 favor [1] 369/18 388/24 436/8 442/1 442/15 422/13 421/8 436/24 448/1 favorably [1] 452/2 Evergreen [1] 340/16 exclude [1] 374/10 extra [1] 378/9

474/22 480/19 480/19

feature [1] 382/13 featured [2] 415/2 415/15 federal [1] 448/13 feed [1] 459/1 feedback [3] 340/3 436/5 469/18 feeding [1] 379/7 feeds [2] 379/8 444/14 feel [1] 346/4 fell [1] 383/6 few [3] 398/3 434/17 480/22 fewer [2] 355/12 394/7 figure [12] 350/7 387/10 390/18 408/1 417/9 428/1 428/6 453/18 453/21 458/11 475/19 480/8 figured [2] 361/1 363/16 figuring [1] 419/20 file [5] 361/21 415/3 430/11 430/12 430/22 final [3] 422/20 475/15 478/20 finally [1] 345/5 financial [1] 398/19 find [7] 354/15 354/16 383/2 392/7 393/8 404/1 424/23 finding [3] 355/20 363/4 390/11 findings [4] 434/19 462/20 463/11 469/22 fine [3] 361/25 478/22 480/11 finely [1] 367/23 firm [7] 411/10 414/22 452/6 456/13 468/8 473/21 480/15 firms [6] 365/24 374/12 453/12 453/16 453/18 466/11 first [15] 343/18 345/14 346/13 353/9 371/22 377/17 386/13 399/17 415/9 420/18 425/20 425/21 426/16 427/8 477/2 fit [2] 345/9 459/18 fits [3] 364/9 364/10 411/4 five [1] 410/13 flagged [1] 383/8 flat [1] 443/16 flawed [1] 480/12 flee [1] 394/10 fleeing [1] 385/9 flip [4] 345/13 426/17 456/15 472/20 flipped [1] 426/25 flips [1] 425/20 floor [4] 338/5 339/18 339/23 470/2

fluctuates [2] 353/16

353/17

focus [7] 398/16 410/25 411/17 413/21 415/8 420/21 478/20 focused [10] 346/19 374/4 395/11 411/6 421/2 429/6 430/15 444/24 463/9 466/25 folks [6] 370/23 436/21 440/2 440/8 466/21 469/14 follow [2] 352/4 419/11 following [6] 367/22 394/1 418/22 432/9 460/23 468/14 food [1] 358/19 fooled [2] 396/17 397/17 foot [1] 479/20 force [2] 413/7 465/20 forced [1] 371/24 forecasts [1] 342/19 foreclosure [30] 429/22 429/22 430/1 430/9 430/13 430/16 430/20 431/5 431/11 431/13 431/17 432/6 432/15 432/18 433/2 433/4 433/9 433/15 433/17 433/20 433/22 434/2 438/2 438/3 446/16 446/19 446/21 446/24 446/25 447/5 foreclosure,' [1] 432/15 foregoing [1] 482/3 forgot [1] 340/18 form [3] 360/6 414/21 473/18 format [32] 391/5 407/14 407/20 414/4 415/3 415/4 415/5 415/9 415/13 415/20 416/3 417/15 419/16 424/7 424/8 424/11 424/13 424/15 424/21 457/25 458/1 458/3 458/5 458/8 458/10 458/14 458/17 459/6 459/10 459/11 459/17 459/24 formats [4] 457/18 458/4 459/13 459/13 Gen [1] 376/21 general [38] 343/8 forms [2] 348/14 368/2 344/6 346/17 346/19 formula [1] 387/4 365/9 365/11 365/14 formulate [1] 433/9 365/17 366/3 367/3 formulistic [1] 347/4 367/8 367/10 367/15 forth [7] 346/12 392/16 402/11 404/6 430/9 367/23 367/24 368/18 369/8 369/8 369/11 446/13 449/18 forward [3] 345/7 370/4 370/10 370/11 371/12 372/8 373/4 430/4 473/7 373/6 376/19 409/12 found [8] 402/5 402/9 434/3 434/6 435/21 424/20 433/21 441/1 437/11 437/21 437/21 447/25 465/4 468/15 438/4 438/7 438/14 fourth [1] 458/9 438/19 fraction [2] 449/17 general-overview [1] 451/20

429/15 framing [1] 433/2 frankly [3] 385/23 453/16 468/23 free [3] 340/8 418/25 440/25 free-riding [1] 418/25 freestanding [1] 436/20 frequently [1] 350/19 front [5] 350/18 455/4 460/8 462/16 475/17 FTC [3] 402/2 448/9 449/17 fuel [1] 342/6 full [3] 403/6 406/22 474/6 function [3] 364/6 423/11 432/17 functionality [1] 468/9 fund [1] 342/10 fundamental [1] 367/5 funds [1] 344/5 fungible [1] 351/1 funnel [22] 362/25 363/1 363/3 363/5 363/6 363/8 363/18 363/20 363/21 363/21 363/22 363/23 364/6 380/17 380/19 380/22 380/23 380/24 381/9 381/14 384/15 444/10 further [6] 398/8 434/1 434/8 463/4 479/3 480/24 future [1] 470/24 gain [2] 388/9 395/9 gains [2] 412/20 457/25 game [2] 372/12 446/21 **Gamma [3]** 358/3 358/4 415/23 Gamma Yellow [1] 358/4 gather [1] 468/1 gathering [1] 393/9 gave [4] 372/17 439/17 443/19 443/21

343/8

framework [2] 343/11

451/23 451/24 generally [1] 457/17 generates [1] 460/12 get [42] 345/16 349/5 356/7 360/4 360/6 370/15 370/17 372/10 372/11 375/3 376/5 378/20 379/25 383/7 387/24 393/7 401/1 405/18 408/19 426/7 426/22 426/25 426/25 430/11 434/13 434/25 435/13 435/14 440/3 441/5 442/13 448/13 456/17 458/3 458/11 466/12 468/12 468/24 469/22 475/16 476/10 478/23 gets [6] 379/23 386/14 425/14 437/11 456/23 459/1 getting [22] 358/6 361/18 364/1 383/11 387/19 389/13 393/25 399/10 399/15 408/6 408/9 440/24 441/9 441/11 441/16 442/6 442/7 442/7 464/9 464/12 468/3 469/18 give [10] 357/4 357/5 366/23 366/24 368/16 368/18 374/13 376/12 462/9 480/22 given [7] 347/6 361/6 370/3 370/8 438/6 451/22 472/1 giving [2] 391/9 479/4 gloss [1] 433/1 **go [71]** 340/20 344/2 346/20 347/16 348/10 349/23 350/16 351/16 351/20 354/1 354/6 355/22 357/7 357/20 363/15 365/13 367/19 367/20 370/11 370/17 370/23 371/17 373/3 373/4 374/17 387/25 388/1 389/12 392/15 392/16 393/7 398/14 400/18 401/10 402/1 402/16 402/23 406/12 411/19 413/2 413/17 414/25 417/3 420/3 424/24 427/3 428/11 428/25 431/2 434/1 439/10 439/17 441/1 448/10 449/3 450/3 450/4 457/14 463/21 464/3 471/18 472/4 472/25 473/19 476/10 476/11 477/16 478/2 478/9 478/17 479/21 go ahead [1] 457/14 goal [8] 347/2 347/14 364/1 364/4 364/5 366/16 421/3 421/6 goals [3] 375/7 412/19

generalized [3] 422/21

424/3 goes [10] 344/3 344/13 345/25 367/8 367/12 419/22 435/24 437/1 440/10 463/20 going [66] 343/13 345/13 345/13 352/1 356/1 357/2 361/9 366/13 373/15 380/23 380/23 381/3 382/2 383/7 387/7 387/9 387/14 389/7 389/9 391/3 392/16 394/4 394/10 397/10 404/19 405/9 405/15 408/19 408/19 409/15 410/25 411/6 411/17 422/20 433/24 435/14 440/22 441/16 442/14 442/24 445/1 447/4 447/14 448/10 451/10 452/13 452/14 452/25 453/2 453/10 454/6 457/18 459/20 461/3 461/8 461/11 463/10 463/24 466/17 468/9 470/24 475/5 476/10 478/21 479/13 479/15 golf [4] 379/24 379/25 380/6 380/6 golfers [1] 380/7 golfing [1] 379/13 gone [17] 356/20 356/23 371/20 371/25 376/16 407/3 407/4 408/11 408/12 409/6 417/6 462/13 466/24 476/23 476/24 477/4 477/5 good [22] 339/4 339/6 339/13 339/24 359/11 359/13 373/12 373/14 375/24 383/11 383/15 393/25 397/12 397/18 407/13 408/4 436/14 464/9 479/10 479/10 479/12 480/19 Good morning [4] 339/4 339/24 373/12 373/14 goods [2] 405/5 405/7 **GOOGLE [249]** Google LLC [1] 339/8 Google's [50] 340/2 340/3 340/22 341/17 341/25 342/9 342/12 343/4 343/10 352/9

356/9 357/23 358/22

376/1 381/18 383/14

399/16 399/20 400/9

401/7 404/16 405/5

363/19 372/12 375/14

384/25 391/25 398/23

405/10 408/14 411/14

412/7 412/12 413/18

415/8 418/19 419/6

429/7 435/6 452/20

419/25 420/15 422/1

G Google's... [7] 457/6 463/19 463/19 463/21 467/13 472/12 475/6 **got [23]** 353/23 366/11 369/3 369/3 374/19 375/24 378/7 384/12 384/25 392/4 394/3 403/18 407/16 431/23 433/4 438/2 444/9 445/6 455/6 459/12 461/7 469/23 476/21 grab [1] 457/20 grabbed [1] 382/23 grand [5] 477/13 478/4 478/5 478/7 478/16 grant [1] 448/2 graph [1] 412/11 graph's [1] 412/10 grappling [1] 478/19 gray [1] 400/1 great [6] 384/4 410/24 419/25 435/8 444/5 462/8 greater [4] 351/13 368/16 418/13 435/12 green [3] 400/24 404/18 405/20 grocery [2] 389/4 389/23 groups [2] 373/18 376/13 grow [1] 435/1 growing [9] 359/13 372/14 377/13 398/23 399/19 408/12 412/1 412/1 412/2 grown [2] 376/2 376/22 growth [14] 342/6 374/5 374/7 374/8 399/24 412/1 412/4 412/6 412/12 412/14 412/21 412/22 413/6 413/7 **GSE [3]** 418/16 430/10 430/16 guess [17] 349/14 352/19 356/21 358/24 365/25 369/1 379/21 403/17 416/19 427/10 438/10 458/13 470/10 475/15 478/2 479/8 479/22 guidance [3] 345/12 346/10 347/7 guy [1] 456/23 guys [1] 389/14 **GY [1]** 358/3 had [36] 345/3 345/11 349/9 354/25 381/8 383/20 384/7 385/21 395/17 401/15 401/18

415/10 416/22 417/5

425/8 427/11 428/15

417/5 422/2 424/12

428/18 428/23 431/9 435/2 435/12 437/8 437/10 437/16 443/25 448/1 448/4 462/13 466/4 466/15 466/21 470/21 hand [3] 340/18 407/13 443/18 handed [1] 471/10 handful [1] 384/3 hands [1] 342/15 happen [5] 348/19 389/7 450/3 453/11 470/25 happened [8] 344/13 419/10 423/23 448/15 448/17 450/6 470/17 471/2 happening [11] 358/20 362/5 362/7 378/14 385/11 423/25 425/4 440/18 440/23 450/8 454/7 happens [5] 387/17 387/18 425/10 448/18 461/24 happy [10] 363/13 364/14 364/15 364/25 371/23 383/11 395/15 429/13 447/22 454/10 harbor [1] 433/25 hard [12] 376/16 383/20 386/5 407/25 453/16 457/21 460/25 462/2 471/18 475/18 477/17 477/23 harder [1] 468/11 harm [11] 344/4 344/18 411/1 429/12 430/5 432/3 432/8 432/17 434/18 436/8 474/20 harmed [5] 344/7 345/4 416/22 432/19 473/17 Harry [1] 423/1 has [86] 342/4 342/6 343/23 344/13 345/6 353/13 356/18 356/19 356/20 356/22 359/17 360/1 361/17 367/14 369/15 371/24 373/25 374/6 376/2 376/7 376/16 376/22 386/4 386/9 386/17 391/8 394/5 394/13 395/20 395/22 395/23 396/17 396/23 398/5 400/15 406/13 407/2 408/10 408/22 409/1 409/6 414/7 414/9 414/23 419/4 419/9 420/17 429/17 432/21 434/8 434/20 434/23 435/10 444/17 449/21 452/16 455/18 455/19 456/3 456/22 456/24 459/5 459/9 459/12 460/5 461/9 467/6 469/21

473/5 473/7 474/3 475/5 476/20 476/21 476/21 476/22 476/24 476/24 477/4 477/5 477/13 477/14 479/5 479/14 480/6 480/7 hasn't [1] 408/11 have [221] haven't [12] 396/18 408/11 408/13 423/1 429/5 447/6 447/6 449/20 449/23 450/4 450/9 465/14 having [8] 339/14 348/8 368/6 396/10 441/2 448/3 453/9 459/22 he [47] 341/6 341/7 342/14 342/14 351/8 351/9 355/5 357/14 360/22 374/22 374/23 375/9 396/5 396/14 402/19 402/24 404/5 404/5 404/6 404/12 404/13 404/22 404/22 415/10 443/15 443/15 443/16 447/25 447/25 448/2 448/25 449/1 449/2 449/3 449/4 450/14 450/18 450/18 450/22 450/23 451/5 451/5 451/6 451/11 452/19 465/23 466/4 he didn't [2] 360/22 447/25 he said [1] 357/14 he's [7] 404/13 406/3 406/9 451/16 451/22 452/1 470/13 headspace [3] 388/9 388/12 388/17 healthcare [6] 402/8 405/6 465/5 465/8 466/10 466/15 healthcare-related [1] 465/8 hear [4] 341/16 341/17 364/16 389/10 heard [16] 340/5 341/15 351/7 360/11 363/1 374/1 377/10 384/8 386/24 391/4 394/15 397/6 411/16 440/12 440/13 467/16 heart [2] 345/25 349/1 heavily [1] 436/24 heck [1] 435/3 help [9] 356/16 357/7 425/18 462/4 463/23 468/22 473/25 476/19 478/3 helpful [4] 347/6 420/3 441/7 475/2 helps [4] 343/21 344/1 364/8 376/6 her [3] 351/18 444/7 471/22 here [85] 340/14 341/7

342/13 343/22 345/17 345/23 346/25 347/14 348/21 350/8 350/18 353/14 354/8 354/24 358/3 362/23 363/20 364/4 364/5 364/5 373/15 373/16 373/18 375/22 378/15 380/25 381/1 382/5 385/21 389/14 394/5 395/17 397/21 402/10 402/20 403/16 403/21 408/6 408/25 413/9 414/4 414/21 415/24 416/3 418/18 418/20 421/1 421/8 421/13 422/15 424/16 424/24 426/5 426/24 427/23 429/18 430/15 434/2 434/3 440/8 442/10 444/4 445/1 445/11 445/18 447/7 449/10 449/20 450/7 450/15 452/4 454/6 454/6 465/14 467/4 471/1 471/6 471/7 471/12 471/16 475/19 478/11 478/12 479/1 480/18 here's [3] 357/6 427/23 427/23 hermetically [1] 346/5 hey [3] 389/13 456/10 456/18 hidden [1] 415/18 hide [1] 417/23 high [10] 358/18 360/1 372/5 372/11 373/3 385/22 417/2 437/12 451/17 451/18 high-intent [4] 372/5 372/11 373/3 437/12 higher [13] 355/15 415/24 421/21 423/6 426/24 427/1 446/25 449/25 452/5 459/20 468/4 468/5 475/21 highest [4] 420/24 426/21 456/8 476/5 highlights [1] 380/6 highly [1] 345/18 him [6] 342/13 354/24 382/10 415/10 425/8 431/12 himself [3] 401/11 403/4 475/20 hiring [1] 362/21 his [13] 341/8 342/16 369/17 379/15 396/6 399/17 420/23 431/16 431/23 435/8 451/10 451/11 451/13 history [1] 411/25 hit [6] 357/3 412/13 412/14 412/18 422/10 469/25 Holden [1] 440/19 **Home [4]** 350/19 351/23 371/9 409/22

Home Depot [1] 351/23 HomeAdvisor.com [1] 342/1 honest [1] 418/24 Honor [144] 339/6 339/20 339/21 339/22 339/24 340/1 340/15 340/18 341/15 343/1 343/6 343/16 344/9 344/23 344/25 345/12 345/16 346/6 346/11 346/12 347/12 348/21 350/18 351/17 353/5 353/11 354/22 355/6 358/14 359/21 359/24 361/12 361/20 362/14 363/11 363/17 365/1 365/3 365/17 366/8 366/20 367/9 368/8 369/6 369/15 370/3 371/15 372/18 372/21 373/9 373/13 373/25 374/6 374/16 377/9 379/17 383/23 387/11 391/18 395/20 396/4 397/24 398/3 398/5 398/11 398/15 399/2 399/15 399/18 400/19 401/19 401/24 402/15 403/22 404/3 404/10 404/25 406/7 407/5 407/23 408/15 409/9 409/10 409/11 409/21 409/25 410/5 410/10 410/24 410/25 411/3 413/4 414/13 415/5 415/16 416/24 418/8 418/15 419/14 420/2 422/21 424/2 424/10 425/7 425/24 426/18 427/17 429/10 429/11 430/2 430/23 431/25 433/7 433/19 434/15 434/17 435/23 437/6 437/22 437/23 438/5 439/15 439/19 443/12 443/18 444/1 444/23 448/4 451/15 453/6 457/14 459/18 464/11 470/4 470/8 471/5 471/16 472/23 473/15 475/8 475/15 477/2 480/20 480/24 Honor's [9] 354/6 354/13 354/14 404/11 409/13 411/5 426/19 428/11 450/13 **HONORABLE** [3] 337/10 339/3 410/19 hope [2] 460/2 463/24 host [1] 348/1 hotel [1] 366/4 hours [1] 459/2 housekeeping [1] 443/12 how [101] 341/23 341/24 344/5 349/2

Н how... [97] 350/7 352/19 355/23 356/1 357/14 357/24 357/24 359/16 360/18 361/1 361/3 361/21 362/24 363/6 363/8 363/23 364/7 365/13 371/22 373/17 378/8 379/9 379/22 386/13 390/6 390/18 390/18 391/3 395/21 395/22 395/24 396/3 405/22 406/1 406/22 412/25 417/2 417/3 418/3 418/6 418/10 418/12 418/12 418/13 418/21 419/4 419/6 419/10 419/13 420/13 420/15 421/14 423/22 425/2 425/10 425/10 425/22 427/6 427/8 428/3 428/9 428/13 428/13 428/16 428/22 429/15 433/9 441/16 441/20 444/16 449/3 450/24 451/8 453/2 453/3 453/7 453/19 453/20 454/20 455/13 456/18 457/17 458/2 458/11 458/14 459/23 465/2 466/10 466/11 469/11 472/17 475/19 477/18 479/4 479/9 479/10 479/12 however [8] 344/2 350/12 365/8 414/17 416/16 434/5 457/24 474/3 huge [2] 378/11 383/24

Hurst [9] 367/10 370/14 370/14 372/13 434/20 435/2 436/16 437/14 440/15 Hurst's [3] 435/7 435/19 437/2 hurt [1] 469/4 hypothetical [8] 354/18 355/17 403/7 416/12 471/15 471/19 472/1 472/2

П

l am [2] 409/5 453/21 l apologize [1] 443/11 l believe [8] 343/21 343/25 411/11 462/21 463/13 466/13 468/12 468/21 l can [14] 353/6 357/3 366/21 366/22 387/16 389/5 430/11 442/11 454/3 456/12 456/25 468/12 469/22 478/19 l can't [1] 367/1 l didn't [1] 441/5 l don't [29] 346/23 359/16 362/6 368/23

372/15 381/3 383/3

386/18 388/10 388/14 391/12 392/13 393/6 395/13 397/25 399/18 401/11 407/19 419/12 419/24 441/20 444/2 444/3 459/25 463/10 477/17 477/21 480/5 480/6

I don't have [2] 455/4 457/21

I guess [15] 349/14 352/19 356/21 365/25 369/1 379/21 403/17 416/19 427/10 458/13 470/10 475/15 478/2 479/8 479/22

I have [7] 357/2 365/10 366/1 367/25 378/9 403/20 405/17

I just [10] 344/5 361/3 398/16 406/20 433/4 439/15 442/19 443/18 446/6 447/21

I know [10] 343/11 363/3 374/1 389/18 392/3 403/18 414/8 419/4 460/7 462/15 I mean [47] 345/23 359/9 360/19 360/22 362/11 377/8 377/19 380/15 381/3 381/18 383/23 386/10 391/20 392/13 395/22 400/13 403/12 403/12 403/17 403/20 406/20 407/12 418/12 419/5 423/19 427/9 435/23 436/4 446/17 451/8 451/16

452/10 453/4 455/18 455/22 460/21 460/25 462/23 463/4 463/9 463/18 464/15 464/16 466/10 473/25 476/12

480/1 I recall [1] 369/16 I say [2] 404/4 474/8 I should [4] 345/21 369/1 375/5 393/18 I submit [1] 344/10 I think [129] 343/16 344/12 344/14 346/24 347/8 349/9 349/21 351/3 351/6 353/6 353/13 354/7 354/11 354/23 356/10 356/11 361/18 368/8 368/21 369/6 369/17 369/18 373/25 376/14 376/18 377/7 377/9 377/17 377/25 378/6 379/4 379/15 380/12 380/13 380/15 380/22 380/24

381/2 381/5 381/8

381/22 384/22 385/21

385/22 386/3 386/23

387/10 389/3 389/23

391/10 391/18 392/6

392/7 392/21 393/19

394/4 394/15 394/23 396/5 396/7 396/14 397/6 397/11 400/18 401/25 403/22 407/22 409/12 419/15 419/19 419/19 420/2 428/5 428/24 431/16 431/21 431/23 433/7 433/15 433/16 433/20 433/21 434/5 434/14 437/2 438/18 438/24 439/1 439/22 440/4 440/12 440/19 441/25 444/17 444/19 445/17 446/13 453/25 455/10 455/22 455/23 457/8 457/13 457/16 458/18 458/18 458/25 460/4 461/4 461/15 463/8 463/18 464/8 464/11 467/3 467/19 469/7 469/22 470/4 471/14 473/7 473/19 474/16 475/9 475/12 477/2 480/1 480/3 480/9

I thought [2] 351/23 356/7

l understand [9] 349/1 349/4 356/9 359/1 377/20 418/9 434/14 454/17 460/10

I want [14] 346/9 363/12 379/24 397/20 402/3 402/15 424/13 439/16 442/18 443/11 443/12 444/21 444/23 454/5

I wanted [1] 363/18
I was [2] 339/14 406/5
I went [1] 436/16
I will [1] 444/10
I wouldn't [1] 371/3
I'd [7] 399/22 409/21
433/20 449/5 471/24
473/19 474/11
I'll [17] 339/18 344/10

l'II [17] 339/18 344/10 349/25 360/4 360/5 365/25 402/17 407/5 434/16 462/9 470/2 472/20 474/13 477/7 479/3 480/22 l'm [53] 343/7 348/24 351/4 357/2 360/4

472/20 474/13 474/13 477/7 479/3 480/22 I'm [53] 343/7 348/24 351/4 357/2 360/4 360/5 363/3 363/13 364/14 364/25 365/1 366/1 366/21 367/1 368/6 369/25 373/15 382/24 382/25 383/3 383/7 387/14 389/13 396/3 398/6 408/4 408/14 418/8 419/4 424/23 425/16 427/5 438/17 438/24 438/25 439/24 442/19 445/1 446/4 447/21 454/3 454/10 454/12 454/25

455/2 457/11 458/13

460/7 462/17 472/13

476/10 477/8 477/13
I'm going [5] 357/2
373/15 383/7 387/14
476/10
I'm just [3] 454/12
460/7 472/13
I'm not [5] 366/21
383/3 396/3 454/3
458/13

l'm not sure [2] 408/14 454/25 l'm obsessed [1] 351/4 l'm sorry [15] 343/7 348/24 366/1 408/4 418/8 419/4 424/23 425/16 427/5 438/17 442/19 446/4 455/2 462/17 477/13 l'm sure [1] 365/1 l've [10] 363/1 363/17 387/11 392/8 424/1 434/13 454/2 455/6

463/2 470/14 idea [7] 371/12 377/8 418/1 418/2 423/24 452/6 459/22

identified [4] 421/22 426/23 429/24 467/22 identify [1] 414/4 identifying [2] 386/16 412/9

illegal [1] 414/15 image [1] 365/10 immediate [1] 344/2 immediately [4] 341/9 360/3 366/6 392/15 immersive [2] 366/9 440/21

impact [7] 371/21 399/23 417/19 420/23 422/3 454/15 455/14 impacts [2] 389/1

449/14 impeach [1] 471/11 implement [1] 477/5 implementation [1] 449/24

implementations [2] 421/20 450/6 implemented [2]

424/18 471/3 implementing [1] 452/15

implication [1] 420/8 important [12] 344/4 347/10 350/3 351/18 352/5 382/7 394/2 394/19 428/24 446/11 470/12 471/14

imposed [1] 450/19 imposing [1] 408/16 impossible [2] 397/9 435/20

impression [1] 352/1 impressive [2] 396/15 396/16

improve [12] 391/21 413/24 422/4 454/9

454/9 454/16 456/11 456/11 462/4 463/23 463/25 469/16 improved [9] 406/25 414/8 414/9 454/23 456/22 459/19 459/19 476/20 476/25 improvement [5] 387/21 391/20 396/16

improvements [8] 390/12 390/16 390/17 390/23 414/11 461/3 463/17 464/2 improves [2] 388/13

429/8 452/21

improves [2] 388/13 452/7 improving [9] 341/13

375/16 383/9 383/9 395/12 458/15 460/15 462/6 462/7

incentive [4] 395/23 408/22 457/1 461/20 incentives [3] 422/4 454/16 473/11

incentivizes [1] 426/24 incidental [2] 408/20 413/25

include [2] 366/4 366/4 included [2] 347/23 366/10

including [5] 340/12 360/15 360/16 431/1 441/3

incorporated [1] 365/5 incorporates [1] 472/17

increase [45] 342/7 354/21 354/25 355/3 355/6 355/9 356/11 356/19 386/19 387/16 387/25 396/9 398/8 402/22 402/25 411/8 411/13 412/18 414/3 414/10 415/6 415/21 416/8 417/8 420/5 420/17 420/21 422/17 422/18 422/18 424/6 425/6 425/14 427/14 433/13 445/15 445/19 450/21 452/21 455/24 458/12 459/23 463/1 474/7 476/18

increased [15] 354/25 356/13 356/14 358/4 370/23 390/25 404/20 406/24 407/2 407/9 407/10 419/9 435/18 474/2 476/22 increases [34] 340/9

increases [34] 340/9 342/4 354/9 354/25 385/1 385/11 404/1 411/14 414/14 414/17 414/19 416/4 416/15 416/17 417/23 419/15 419/18 420/17 423/11 425/22 426/8 426/10 426/12 434/10 445/21 445/24 454/24 471/3

396/2 413/16 innovation [7] 375/19 increases... [6] 472/23 395/18 396/1 398/7 472/24 473/16 474/15 458/18 460/2 464/7 474/25 477/1 innovations [6] 390/17 increasing [17] 355/19 390/24 395/12 429/8 355/25 385/6 398/24 463/19 463/19 413/14 413/15 413/19 input [1] 420/11 419/5 421/1 427/9 inquiries [1] 412/6 452/4 459/21 461/13 inside [1] 387/18 463/13 463/16 463/17 insight [2] 389/8 475/25 418/13 incredible [1] 465/1 Instagram [12] 374/7 incremental [1] 435/3 374/19 376/9 378/19 index [9] 384/20379/4 380/7 398/22 404/17 405/7 450/15 399/25 400/3 400/13 450/16 451/1 451/2 400/21 401/17 451/19 451/21 instance [2] 397/1 indicate [1] 430/18 473/7 indicative [1] 468/7 instances [4] 380/4 indicator [1] 397/12 426/16 456/15 458/25 indicia [1] 452/4 instead [1] 369/2 indirect [2] 378/22 insult [1] 417/12 432/21 intend [2] 343/19 individual [4] 450/2 346/23 451/18 451/19 460/25 intended [2] 345/11 industries [1] 454/1 472/14 industry [3] 369/25 intent [25] 352/17 383/19 466/22 359/24 360/1 360/8 inefficiency [1] 421/21 360/9 360/10 360/10 inefficient [1] 421/23 360/12 365/16 370/16 infer [1] 480/5 372/5 372/11 373/3 **inference [1]** 407/1 374/12 374/20 378/20 inferior [7] 359/4 378/22 378/23 380/1 359/18 359/22 360/17 380/2 380/5 381/12 360/20 361/4 361/12 409/16 437/12 475/11 inferred [1] 360/9 intentional [7] 414/2 inflate [1] 426/22 414/22 420/5 422/23 inflated [2] 426/14 424/5 424/5 429/6 426/15 intentionally [2] inflates [3] 425/13 341/12 414/3 426/6 426/6 interaction [1] 397/13 **inform [1]** 345/18 interchangeable [2] information [33] 348/9 402/14 341/22 366/23 366/24 interest [1] 381/12 368/18 374/12 374/13 interested [2] 376/13 376/5 376/7 376/11 393/20 377/1 379/11 379/19 **interesting [1]** 465/10 379/22 379/23 393/9 Interestingly [1] 465/4 397/3 397/5 407/17 interests [2] 379/12 418/22 419/8 451/10 380/10 458/24 459/14 459/16 interior [1] 359/6 459/17 466/17 467/6 internal [8] 357/23 467/7 467/9 475/9 376/20 377/7 380/16 479/21 479/23 479/24 380/22 384/19 386/4 informed [1] 423/2 464/16 inherently [3] 452/22 internally [1] 377/12 475/24 475/25 Internet [5] 393/7 initial [1] 429/23 399/13 412/5 442/3 injunction [5] 447/23 452/12 448/2 449/2 449/3 Internet-capable [1] 470/11 452/12 injury [1] 417/12 interrupt [1] 477/8 innovate [5] 392/1 interviewed [1] 462/11 395/24 396/2 408/23 interviews [2] 462/10 462/2 462/19 innovated [2] 459/5 introduced [4] 387/24

459/23

innovating [3] 375/15

422/23 422/25 449/21

introduction [1] 422/12 invented [1] 455/22 inventory [1] 366/25 invest [2] 398/10 436/3 investigation [2] 350/6 470/21 investment [7] 349/6 349/7 349/8 384/5 384/6 384/8 435/8 **IPG [1]** 351/8 IQVIA [7] 402/1 402/2 447/20 465/2 470/10 470/17 471/4 **Iron [2]** 460/6 461/2 irrelevant [2] 412/10 447/15 is [636] is there [14] 352/24 367/25 369/4 370/25 391/14 393/13 394/24 416/19 423/18 423/21 429/1 431/15 438/3 451/8 isn't [29] 349/18 355/21 359/2 359/5 359/8 377/9 382/12 385/15 385/19 388/7 388/20 389/22 391/24 394/4 400/13 406/19 406/24 407/1 410/7 437/18 455/21 458/8 458/8 460/21 460/23 463/4 468/6 476/17 477/18 isolate [1] 450/9 isolated [1] 356/5 Israel [18] 356/19 356/22 356/24 391/23 399/19 402/10 403/4 403/4 403/7 404/4 404/25 405/8 406/1 407/7 426/23 447/24 447/25 450/12 Israel's [3] 396/5 404/3 404/12 issue [14] 339/15 345/25 349/2 352/16 364/23 367/12 392/11 424/8 434/18 445/4 448/2 454/10 467/13 480/2 issues [2] 455/9 470/5 it [307] it would be [2] 391/10 391/16 it's [164] its [35] 341/3 342/6 342/10 342/10 343/3 344/6 352/9 358/10 359/14 373/8 377/12 385/6 391/9 395/18 405/7 411/25 412/1 412/1 412/2 412/4 412/18 412/18 414/11 419/5 419/9 419/20 419/20 420/23 426/7 427/9 452/7 463/22

432/16 442/25 445/15 459/25 466/23 479/4 jack [1] 391/21 **Jain [1]** 406/15 James [3] 370/13 370/14 437/5 Japanese [4] 415/17 457/12 472/11 472/12 jelly [1] 364/4 Jerath [4] 360/11 380/12 381/6 425/7 **Jerry [2]** 342/12 402/22 473/18 Jerry Dischler [1] 402/22 job [1] 387/8 John [2] 338/12 339/12 John Schmidtlein [1] 339/12 joining [1] 412/5 jon.sallet [1] 338/7 Jonathan [2] 338/2 339/10 JPMorgan [2] 340/14 351/2 Jr [1] 338/8 jschmidtlein [1] 338/15 Juda [4] 341/5 357/14 424/25 475/20 judge [8] 337/10 402/4 402/13 447/24 447/24 448/25 449/9 465/17 Judge Ramos [1] 448/25 Judicial [1] 338/4 jump [7] 345/13 353/23 373/15 412/23 424/22 447/7 447/18 iust [104] 343/7 344/5 344/20 345/3 345/16 345/21 355/17 355/21 356/5 358/13 359/1 359/3 361/3 361/6 362/11 362/16 365/3 366/1 368/24 371/15 377/9 377/14 377/15 378/8 378/10 380/5 381/1 382/13 382/21 385/11 390/1 390/20 391/21 392/2 395/17 395/18 395/19 398/16 399/10 399/11 401/25 403/23 404/23 405/13 406/3 406/20 407/15 411/17 412/11 414/8 415/21 416/12 416/14 417/23 421/12 421/25 425/8 425/16 428/3 429/15 429/19 430/4 430/10 430/18 431/9 432/9 433/4 433/5 434/12 434/17 436/5 439/15 439/16 439/23

463/22 472/7 477/22

406/13 407/8 416/16

440/3 442/7 442/19 443/18 443/22 444/3 itself [11] 350/2 366/16 444/23 445/3 445/11 446/6 447/21 448/6 451/11 453/7 454/12 455/16 455/22 457/8 458/16 458/19 459/7 459/8 460/4 460/7 462/9 467/20 472/13 473/25 479/10 479/18 **JUSTICE [1]** 337/13 justification [1] 475/6 justifications [5] 345/6 345/8 474/12 474/14 475/3justify [2] 473/17

keep [7] 340/8 353/24 372/3 415/25 418/4 446/11 462/3 keeping [3] 379/10 446/8 447/9 keeps [2] 341/22 417/12 Kenneth [2] 337/13 339/9 kenneth.dintzer2 [1] 337/16 kept [2] 356/18 356/18 key [1] 384/6 keys [1] 411/14 keyword [1] 467/22 keywords [4] 467/15 468/10 468/25 469/11 kid [1] 376/9 kids [1] 423/2 kind [11] 372/18 385/22 403/20 433/25 450/15 450/19 455/22 463/6 466/9 466/15 466/25 knew [4] 415/24 420/20 428/12 469/17 **knob [8]** 415/10 416/3 420/6 422/24 424/5 424/6 424/17 424/21 knobs [6] 342/5 388/9 413/10 414/2 415/1 473/6 knock [1] 477/3 **know [111]** 343/11 346/3 346/16 349/6 352/6 352/11 359/10 363/3 364/17 370/13 371/6 372/13 373/17 373/19 374/1 374/14 374/16 374/17 374/21 375/17 379/7 380/5 380/20 381/3 381/15

382/9 382/16 384/15

389/7 389/14 389/15

391/12 392/3 392/13

392/18 393/8 397/10

397/10 403/18 404/2

389/18 391/1 391/3

385/15 385/19 388/22

K know... [65] 404/20 405/12 407/15 414/8 415/4 416/2 417/22 418/3 418/6 418/10 419/4 419/6 419/10 419/12 427/7 428/12 436/11 436/13 436/20 437/9 437/16 439/23 441/8 441/19 441/20 444/2 444/3 445/20 446/25 447/5 448/4 448/17 449/21 450/3 452/6 452/12 453/22 454/12 454/13 454/14 454/17 454/22 455/21 456/10 456/19 457/15 459/3 460/7 460/24 462/15 463/24 464/5 464/16 464/20 465/21 466/11 467/5 468/8 469/11 476/14 477/11 477/21 479/5 479/12 479/18 knowledge [1] 388/25 **known [2]** 342/1 361/18 knows [6] 340/24 346/12 347/12 377/9 456/25 470/13 Kodak [3] 354/8 358/15 358/17 Kohl's [6] 353/14 443/15 444/19 471/11 471/17 472/4 **Kumamon [1]** 454/14 lack [8] 341/25 434/21 441/4 442/16 447/19 454/21 476/8 476/8 laid [1] 347/7

language [2] 374/23 375/10 large [10] 364/11 364/13 369/21 391/14 392/22 416/4 437/7 441/19 456/20 466/2 largely [2] 365/18 369/13 larger [6] 362/18 395/1 435/25 466/1 469/9 469/10 largest [2] 364/11 436/7 laser [2] 444/24 466/25 laser-focused [1] 444/24 last [4] 364/17 428/19 431/23 439/22 later [5] 345/5 356/8 385/13 425/9 445/10 launch [17] 417/24 421/2 421/9 422/2 422/20 422/25 424/7 425/1 429/2 429/2 429/6 443/14 449/24 457/11 457/16 460/22

461/14 launched [5] 341/14 400/21 400/25 415/13 416/13 launches [18] 342/17 391/1 408/18 408/20 413/24 415/14 417/15 421/1 421/3 421/7 429/8 449/22 450/8 452/19 457/9 460/25 461/6 474/10 launching [1] 419/16 law [6] 338/2 347/21 365/24 388/11 396/3 401/25 layers [2] 404/22 446/18 lead [3] 429/4 459/20 460/3 learn [1] 351/12 learned [1] 363/17 least [21] 345/1 345/19 348/25 356/16 379/25 380/3 382/5 385/12 388/10 394/5 406/23 411/5 418/11 420/9 428/2 448/1 452/3 456/24 457/8 465/18 479/14 leave [2] 362/5 453/11 leaves [2] 419/22 419/25 leaving [3] 357/19 357/20 460/17 left [3] 398/4 450/14 451/2 legal [3] 347/4 414/6 434/12 lends [1] 366/16 length [1] 436/6 less [15] 342/8 344/22 355/14 357/15 360/13 394/7 430/14 434/25 435/13 470/12 470/12 472/3 472/20 472/20 477/11 let [17] 345/21 347/17 351/25 356/7 357/3 371/15 392/2 416/14 432/9 439/23 447/18 450/12 455/12 457/8 468/10 473/9 477/8 let's [29] 349/24 353/9 362/5 363/15 364/19 376/9 379/4 389/6 389/21 398/4 400/18 401/10 404/15 406/12 410/12 411/21 412/23 415/4 415/7 421/13 424/22 429/16 447/7 449/19 453/8 470/10 472/7 472/25 477/10 let's see [1] 389/6 level [11] 354/15 357/25 360/8 365/14 365/15 385/22 386/20 445/11 451/17 451/18 452/5

454/16 455/14 456/2 levels [1] 363/23 levers [2] 342/5 415/1 longer [4] 413/7 Levy [2] 361/20 384/7 life [4] 355/8 358/21 358/22 385/15 lifeblood [1] 437/13 light [1] 403/25 lights [1] 342/3 like [31] 340/16 342/2 359/8 365/7 374/15 380/20 383/21 384/16 389/4 391/5 392/15 397/7 405/5 407/16 419/8 423/3 423/6 435/14 445/23 449/7 458/14 459/2 459/3 466/6 466/16 466/21 469/21 470/1 470/12 470/24 471/24 likely [5] 352/13 393/5 419/19 436/1 469/4 likes [1] 425/4 Lim [3] 340/14 350/23 351/11 limited [4] 366/23 366/25 368/22 479/11 line [18] 353/19 361/5 404/17 404/18 404/23 404/23 405/13 405/15 405/20 405/23 407/15 412/12 412/13 446/11 451/23 451/24 458/22 459/8 linear [2] 381/11 381/11 lines [3] 405/24 406/3 452/3 link [1] 371/23 links [2] 367/17 371/19 list [1] 417/19 listen [1] 422/15 listing [1] 438/11 literally [1] 442/23 literature [2] 455/19 455/23 litigate [1] 448/3 little [26] 346/2 356/8 357/8 382/21 395/24 427/18 430/14 438/10 444/21 446/3 447/7 449/19 450/2 450/11 451/14 453/14 454/5 456/23 457/7 457/13 460/24 461/10 464/25 466/4 475/16 477/11 live [3] 380/23 384/25 384/25 **LLC [2]** 337/6 339/8 **LLP [2]** 338/9 338/13 local [1] 452/16 locations [1] 363/8 locked [2] 395/17 444/19 long [9] 365/1 379/10 422/3 453/3 454/8 454/16 455/14 456/2 478/24 long-term [4] 422/3

look [57] 347/7 349/4 349/19 350/7 352/11 353/3 353/9 354/11 356/10 361/6 365/13 375/6 375/14 375/17 375/18 376/14 381/24 382/1 384/15 388/21 393/21 397/7 399/20 400/6 400/7 401/3 401/8 409/22 418/16 423/3 423/6 429/21 432/20 444/10 444/16 447/1 447/1 447/1 449/7 450/25 451/12 451/16 451/24 453/8 453/9 454/12 458/8 460/11 461/17 463/7 468/8 470/24 471/14 472/2 472/3 480/10 480/11 looked [5] 382/17 382/18 403/9 436/16 451/5 looking [23] 348/13 348/18 354/9 360/4 360/5 366/17 374/24 380/6 382/1 382/25 388/8 400/12 414/2 421/18 427/10 435/21 451/18 451/18 454/25 457/11 460/7 461/17 480/15 looks [3] 388/24 400/9 451/20 loop [2] 340/3 436/5 lose [3] 390/6 425/14 453/2 losers [1] 391/2 losing [7] 386/20 390/1 390/4 391/14 427/10 427/14 428/2 loss [1] 430/7 lost [4] 392/8 421/3 421/9 427/23 lot [29] 351/2 357/2 360/11 363/3 382/17 382/18 383/18 387/23 387/23 388/1 397/4 398/11 398/15 400/10 411/16 418/11 419/12 428/23 433/22 433/23 435/3 440/24 444/15 446/2 459/5 459/6 464/16 464/17 471/24 379/11 379/18 397/5 449/21 449/21 450/7 450/8 464/22 low [5] 387/14 417/3 446/21 446/24 453/23 **Lowcock [3]** 351/7 401/11 437/16 lowdown [2] 460/8 460/8 lower [15] 360/8

432/16 467/25 468/9 M lots [10] 376/12 376/12 manipulate [3] 341/11 455/19 455/19 457/10

417/11 420/15 423/6 423/14 426/11 434/4 438/10 444/10 456/5 456/10 457/17 461/20 461/22 462/1 lowering [1] 461/21 loyalty [1] 436/19 **LTV [5]** 420/16 426/7 472/16 472/17 472/18 **lucrative [2]** 377/21 378/11 lunch [2] 398/24 481/1

machine [1] 342/9 macro [1] 350/6 made [22] 355/16 362/3 367/6 373/25 374/21 387/21 390/1 390/13 396/9 407/14 416/6 421/15 421/23 424/15 434/23 437/1 437/5 437/7 437/14 439/16 447/20 468/17 magazine [1] 348/6 magic [2] 423/2 463/21 Maine [1] 338/13 maintain [1] 390/9 maintaining [1] 343/3 Major [1] 372/24 majority [4] 398/19 412/21 440/9 457/24 make [35] 341/19 341/19 348/5 348/8 348/9 350/9 361/23 362/12 366/22 371/15 373/8 376/7 378/25 382/3 382/14 392/2 400/8 400/17 402/3 415/19 416/5 422/6 422/6 422/7 422/19 423/3 423/6 444/24 446/6 452/15 463/20 469/16 471/24 472/19 472/22

makes [5] 379/21 388/21 430/15 462/7 475/6

making [16] 355/25 360/20 379/6 390/22 390/23 391/19 394/21 395/12 400/3 400/4 422/5 428/9 428/9 440/20 452/18 464/2 manage [1] 468/11 mandatory [2] 340/12 401/13

342/5 472/21 manipulates [3] 341/21 420/10 423/5 manner [1] 476/25 manufacturer [2] 478/14 479/18 many [12] 342/4 363/14 373/5 377/19 390/6 394/12 440/25

476/15

M many... [2] 480/18 480/18 map [1] 406/2 maple [1] 457/13 **Maps [1]** 441/9 margin [1] 452/24 margins [2] 399/2 399/3 market [111] 341/1 344/5 345/18 346/1 346/11 346/14 346/15 346/19 346/22 347/3 347/5 347/10 347/20 348/12 348/18 348/20 354/7 354/17 355/19 357/18 357/20 360/7 361/22 362/2 362/18 362/23 363/3 365/5 365/8 365/9 365/18 366/3 366/3 367/22 367/24 367/24 369/2 369/4 369/4 369/4 369/19 369/21 369/22 370/1 370/20 370/24 370/24 372/22 373/23 378/13 382/19 382/20 382/21 383/4 383/25 385/9 386/6 387/15 388/19 389/21 391/11 394/14 394/17 395/25 396/1 398/8 400/15 402/9 402/13 403/11 404/6 404/9 408/9 409/14 409/18 410/2 414/18 416/18 418/19 418/20 418/21 419/9 419/20 429/17 429/22 429/25 430/20 432/8 435/4 435/10 436/4 438/20 441/10 441/22 442/15 452/11 453/13 453/13 453/15 453/23 465/6 465/13 465/15 466/17 467/8 469/19 471/6 473/17 473/23 474/20 478/5 marketing [6] 362/25 363/1 363/4 363/6 363/8 382/14 marketplace [3] 409/3 419/2 419/2 markets [29] 339/16 343/21 343/25 344/1 345/2 345/14 346/13 347/1 347/9 362/10 363/9 368/1 368/4 368/4 368/6 370/2 373/16 387/11 387/13 387/17 429/18 429/22 430/11 430/14 431/6 441/24 445/9 445/21 475/11 marketwide [3] 384/2 397/3 397/9 massive [3] 342/6

377/13 385/8

match [6] 380/10

```
450/22 450/22 467/18
467/18 467/18
matches [1] 467/1
matching [3] 387/9
467/18 467/20
math [3] 438/13 438/19
438/24
mathematical [1]
349/11
mathematically [2]
372/15 435/20
matter [4] 386/3 393/7
418/5 482/4
matters [3] 356/14
375/11 466/1
maxes [1] 351/15
may [35] 337/5 340/20
346/2 348/3 348/16
349/13 354/1 355/14
357/24 361/12 362/4
368/1 375/7 375/8
376/18 376/20 378/10
379/13 393/23 393/24
397/7 420/14 421/7
425/13 426/9 437/3
441/18 454/22 456/9
463/12 475/16 478/11
479/22 480/4 482/7
maybe [22] 348/25
349/10 351/22 353/22
353/23 357/7 358/10
361/3 361/17 391/11
392/13 406/3 406/4
407/14 411/18 426/22
433/1 454/18 460/19
477/21 479/20 480/3
McWane [6] 432/10
432/25 433/10 433/11
433/21 434/9
McWane's [2] 433/2
433/17
me [54] 345/21 347/17
351/25 353/3 353/6
356/7 356/16 357/4
357/5 361/5 363/9
366/23 366/24 371/15
381/23 392/2 394/20
395/24 409/13 411/5
414/7 416/14 416/17
419/5 423/2 425/18
425/21 429/21 430/17
432/9 438/25 439/23
441/21 442/11 442/12
447/18 450/12 451/23
452/14 454/11 455/5
455/12 457/8 457/22
463/7 473/9 473/25
476/13 476/19 476/22
477/17 477/24 479/9
479/23
mean [63] 345/23
348/17 348/18 359/2
359/4 359/9 360/19
360/22 362/8 362/9
362/11 377/8 377/19
380/15 381/3 381/18
383/5 383/12 383/23
386/10 389/10 390/21
```

```
391/20 392/13 393/16
394/10 395/22 397/4
400/13 403/12 403/12
403/17 403/20 406/20
407/10 407/12 418/12
419/5 423/19 427/9
435/23 436/4 445/20
446/17 451/8 451/16
452/10 453/4 455/18
455/22 460/21 460/25
462/23 463/4 463/9
463/18 464/15 464/16
466/10 468/20 473/25
476/12 480/1
meaning [1] 451/9
meaningful [3] 341/10
344/17 368/9
meaningless [1]
407/11
means [1] 351/8
meant [1] 382/10
measure [5] 360/18
391/24 428/7 461/12
479/15
measurement [2]
478/25 479/1
measures [1] 349/3
measuring [3] 420/16
450/23 451/1
mechanical [1] 338/20
mechanism [3] 423/14
425/11 461/9
mechanisms [4] 389/8
413/9 418/14 453/17
media [7] 340/16
370/10 376/25 379/6
381/1 393/6 468/19
medium [3] 468/23
469/5 469/13
medium-sized [1]
469/5
meet [2] 342/9 342/18
MEHTA [2] 337/10
339/3
memo [1] 428/16
memos [1] 452/19
mention [4] 358/10
358/11 421/11 421/12
mentioned [3] 355/6
359/24 440/4
merely [1] 347/11
merger [1] 470/25
Merit [1] 338/16
merits [3] 448/3 448/20
449/16
message [1] 365/21
messages [1] 415/18
messaging [1] 368/17
Meta [3] 374/6 374/7
374/18
method [1] 427/25
metric [3] 393/21 427/9
479/9
metrics [2] 393/14
397/8
Microsoft [12] 345/9
388/7 398/6 398/10
408/22 429/21 432/25
```

433/1 433/8 433/9 446/14 455/20 mid [1] 412/16 mid-2015 [1] 412/16 might [23] 345/9 346/7 348/19 353/21 358/11 358/12 358/12 387/13 388/1 399/23 413/19 421/12 422/16 426/10 450/3 450/3 456/12 456/15 458/24 458/25 459/1 472/1 472/11 millions [1] 416/6 mind [4] 341/9 351/18 366/2 397/11 mindset [2] 366/17 409/16 mined [1] 473/5 minimum [3] 361/19 407/4 407/4 minor [2] 399/23 443/12 minute [2] 411/18 472/8 minutes [3] 346/2 363/13 480/23 mirror [1] 365/10 missing [1] 464/24 MMM [1] 353/12 mobile [4] 358/5 404/19 405/3 405/12 **model [3]** 353/15 477/12 477/14 model's [1] 353/18 models [2] 353/11 353/12 moment [7] 369/7 380/1 382/11 414/7 430/12 430/17 437/10 Momiji [9] 415/15 415/16 415/19 457/11 457/12 472/10 472/11 474/2 474/4 monetization [2] 371/19 412/20 monetize [2] 367/18 412/18 money [28] 340/4 341/20 349/12 352/13 353/22 353/24 355/16 355/25 359/9 361/23 373/8 394/11 400/4 400/17 410/6 415/25 421/13 421/15 428/9 435/3 436/3 444/8 444/12 444/13 444/14 444/15 452/15 471/25 monopolies [1] 342/23 monopolist [24] 341/19 354/18 355/17 355/18 356/11 358/14 359/6 359/7 391/20 395/15 395/23 396/1 403/7 408/22 414/10 418/24 421/14 445/13 445/14 445/14 453/4 454/4 477/22 480/15

monopolists [3] 396/2 398/9 417/22 monopoly [41] 340/2 340/22 342/10 342/21 343/3 343/4 343/12 343/12 343/19 344/8 345/1 345/11 345/15 345/17 345/17 345/25 354/10 355/18 359/3 364/23 367/12 367/14 371/16 372/21 386/20 390/21 409/2 411/10 429/17 431/25 434/8 434/9 440/15 447/16 447/17 452/8 452/16 454/21 460/1 460/5 475/10 month [1] 340/17 more [117] 340/19 341/12 341/16 341/16 341/18 341/19 344/21 352/17 353/22 355/15 355/16 355/25 357/8 363/1 363/2 363/14 363/17 366/4 369/1 371/24 376/1 378/15 387/16 387/22 388/19 391/11 391/15 392/24 392/24 393/1 393/5 393/10 394/2 395/3 395/7 395/7 395/9 395/10 396/10 397/14 397/15 399/13 399/13 399/14 400/17 402/1 403/5 405/10 405/11 405/12 407/13 407/13 407/14 407/17 407/24 409/4 412/5 412/5 412/6 413/5 413/6 414/2 415/20 419/3 420/4 421/13 421/15 421/16 421/23 422/7 422/9 422/13 423/16 425/18 427/11 427/14 427/18 431/15 431/15 432/7 433/22 433/23 434/24 434/25 434/25 434/25 434/25 435/13 435/17 436/1 436/2 436/2 436/3 440/24 441/2 447/1 459/6 459/6 459/24 460/3 464/12 466/4 468/3 468/4 468/5 468/11 468/17 468/19 469/4 469/20 475/16 475/20 477/11 478/12 479/13 479/16 479/19 Moreover [1] 398/7 morning [17] 337/7 339/4 339/6 339/13 339/24 364/19 373/12 373/14 410/12 411/4 437/3 437/17 438/7 439/18 441/5 443/13 453/15 monopolistic [2] 468/7 most [16] 351/18

430/18

460/5

481/2

341/9 348/20 364/8

475/25 480/24

388/11 404/12 404/12

443/23 452/22 475/24

377/11 380/15 380/20

392/9 442/10 455/21

356/8 357/3 363/3

365/22 366/14 371/14

374/19 376/21 378/21

402/15 407/15 412/20

412/23 415/13 418/23

420/7 420/19 420/25

432/18 441/18 443/11

444/21 456/10 456/12

421/18 426/9 427/3

458/18 459/7 459/8

459/12 461/20 468/3

382/23 382/23 391/14

405/9 405/14 412/15

439/10 441/9 452/10

399/7 430/10 430/13

430/16 430/20 431/5

431/5 432/6 434/4

437/9 438/2

430/25 438/3 438/6

453/12 455/8 480/7

379/4 383/3 388/18

M most... [15] 352/13 376/7 376/13 383/2 385/22 387/11 391/1 391/1 393/20 415/2 415/2 419/19 428/10 458/11 470/15 mountain [1] 449/8 mountains [2] 470/19 470/20 **move [13]** 348/25 359/9 381/24 389/6 389/19 395/6 410/7 444/12 444/12 444/14 444/15 465/21 471/25 moving [2] 389/15 420/2 Mr [3] 364/16 402/2 412/24 Mr. [98] 339/17 342/12 343/7 346/20 346/23 350/18 351/7 351/24 351/25 354/24 361/20 364/3 364/14 365/2 365/25 367/9 367/10 367/21 369/16 370/13 370/14 370/14 370/14 372/13 372/13 372/17 373/10 373/11 374/21 375/13 377/16 379/13 383/15 384/7 384/22 389/11 389/12 398/2 398/11 398/14 399/17 400/8 400/9 401/11

Mr. Dischler [3] 354/24 389/11 415/9 Mr. Holden [1] 440/19 **Mr. Hurst [9]** 367/10 370/14 370/14 372/13 434/20 435/2 436/16 437/14 440/15 Mr. Hurst's [3] 435/7 435/19 437/2 **Mr. Jain [1]** 406/15 Mr. James [3] 370/13 370/14 437/5 Mr. Jerry Dischler [1] 342/12 Mr. Levy [2] 361/20 384/7 Mr. Lowcock [3] 351/7 401/11 437/16 Mr. Parakhin [1] 435/24 Mr. Penado [7] 346/20 398/14 411/2 411/19 428/25 471/9 472/9 Mr. Raghavan [1] 389/12 Mr. Sallet [1] 438/25 Mr. Schmidtlein [17] 373/11 377/16 398/11 401/14 405/18 406/15 399/17 405/18 406/21 406/21 407/25 409/8 407/25 409/11 428/5 409/11 409/21 410/11 431/23 470/1 470/10 410/23 411/2 411/19 470/13 471/10 472/6 414/5 415/9 428/5 473/12 475/18 428/25 431/10 431/23 Mr. Schmidtlein's [1] 434/20 434/20 434/24 400/9 435/2 435/7 435/19 Mr. Sommer's [1] 435/24 436/12 436/16 379/13 437/2 437/5 437/14 Mr. Vandyke [1] 437/16 437/24 438/25 383/15 439/16 440/1 440/15 Ms. [4] 340/14 350/23 440/19 443/14 444/17 351/11 443/19 452/18 457/13 470/1 Ms. Christine [1] 470/3 470/3 470/10 443/19 470/13 471/9 471/10 Ms. Tracy-Ann [3] 472/6 472/9 473/1 340/14 350/23 351/11 473/12 475/18 480/22 much [30] 357/24 Mr. Booth [6] 350/18 357/24 360/7 360/7 351/24 351/25 369/16 360/7 362/24 363/6 401/14 409/21 363/8 364/7 366/13 Mr. Cavanaugh [11] 377/2 388/12 389/22 364/14 365/2 365/25 391/5 391/11 393/1 367/21 373/10 409/8 398/23 417/11 418/21 410/11 437/24 439/16 420/13 441/21 453/2 470/3 480/22 459/24 460/12 465/2 Mr. Cavanaugh's [1] 468/11 468/19 472/16 440/1 472/19 479/4 Mr. Dahlquist [15] multi [3] 376/17 377/4 339/17 343/7 367/9 444/24 374/21 375/13 384/22 multi-multibillion-dolla 398/2 400/8 410/23 **r [2]** 376/17 377/4 414/5 443/14 444/17 **multibillion [2]** 376/17 452/18 470/3 473/1

Mr. Dahlquist's [1]

Mr. Dijk [5] 372/13

372/17 434/20 434/24

Mr. Dintzer [3] 346/23

457/13

436/12

364/3 431/10

377/4 multiple [4] 360/10 361/22 363/23 363/24 multitude [1] 405/9 Murphy [1] 404/7 must [2] 347/13 347/14 my [34] 345/23 352/1 361/12 366/1 366/25 377/17 378/9 387/11 387/13 387/15 387/15 388/10 388/25 401/6 405/25 406/23 422/12 423/2 424/13 430/18 440/13 448/19 448/24 452/9 452/13 452/13 453/19 453/20 454/2 456/11 456/11 465/23 475/6 478/20 myself [2] 363/4 402/17 nah [1] 474/5 name [2] 353/13 423/4 named [1] 442/25 names [4] 353/13 385/1 390/10 415/16

nanosecond [1] 459/9 narrow [4] 382/20 441/14 465/5 465/13 narrower [2] 346/14 346/18 nature [1] 466/9 navigate [1] 367/1 navigating [1] 442/24 navigational [2] 367/4 443/5 nearly [1] 352/2 neatly [1] 380/25 necessarily [5] 383/12 388/11 418/10 464/6 465/25 necessary [2] 417/1 433/17 need [31] 341/4 346/4 354/7 354/16 363/2 370/13 384/24 384/24 398/16 399/18 401/6 401/8 403/1 413/5 413/9 417/22 419/14 427/1 427/14 431/15 433/5 433/22 434/1 437/4 437/5 444/4 471/1 472/19 472/19 472/21 477/3 needed [3] 412/17 413/7 422/9 needing [1] 441/13 needs [4] 346/3 370/21 404/1 473/13 negative [7] 422/2 422/3 454/15 454/15 467/14 468/10 469/11 Neither [2] 404/7 407/7 nested [5] 346/14 365/8 365/9 368/4 368/5 never [4] 445/18 448/9

456/23 462/1 new [16] 338/10 360/4 nothing [12] 339/19 370/15 372/10 400/21 400/23 400/24 402/5 436/18 437/3 437/4 437/6 437/12 452/11 459/24 475/21 noticing [1] 462/25 New York [1] 402/5 **notion [8]** 359/1 newly [1] 359/15 newspaper [3] 358/19 359/9 359/11 now [39] 345/24 352/6 newspapers [1] 360/23 next [22] 346/3 346/8 347/16 350/22 351/6 355/22 357/7 402/23 406/12 408/19 409/5 410/25 411/5 413/17 413/22 414/25 415/12 420/3 428/24 474/13 475/16 477/14 night [1] 364/17 no [72] 337/4 339/21 339/22 340/9 340/23 341/1 341/10 344/11 344/17 347/4 350/21 nowhere [4] 351/16 350/25 351/15 351/15 351/20 435/19 476/11 351/20 352/20 353/1 **nub** [1] 476/13 358/10 358/11 366/6 **number [16]** 380/18 371/18 378/11 378/17 380/25 382/5 388/24 391/18 392/4 392/4 393/2 393/7 395/18 395/25 396/17 407/6 409/1 411/24 413/7 numbers [12] 368/12 414/15 414/23 416/24 416/24 417/18 417/19 421/11 421/11 424/12 425/3 431/16 432/15 435/3 435/16 437/17 **nurses [1]** 466/10 437/18 437/19 439/9 **NW [2]** 337/14 338/18 NY [1] 338/10 441/23 442/3 442/23 446/24 458/2 467/25 468/9 469/7 470/4 474/8 476/7 476/24 477/18 478/6 478/8 479/9

nobody [2] 467/9

non-formats [1]

non [3] 339/15 459/13

non-monopolistic [1]

nonetheless [3] 346/8

note [2] 347/10 409/21

noted [2] 373/19 388/6

noncompetitive [2]

408/9 416/17

365/22 447/3

not [182]

normal [1] 403/6

notes [2] 430/18

479/5

476/15

459/13

339/15

476/15

463/6

objectives [1] 410/9 **obligation [1]** 477/18 observation [2] 388/6 396/6 observe [2] 389/5 389/17 observed [2] 374/6 396/14 **observing** [1] 389/5 non-Google-related [1] obsessed [2] 351/4 351/4 obvious [1] 389/24 **obviously [13]** 347/6 371/7 371/23 373/16 373/21 391/5 393/19 405/18 433/10 446/10 none [3] 383/14 447/10 447/22 448/17 459/5 occur [1] 423/11

> occurrence [2] 408/21 414/1 occurring [6] 354/12 358/21 390/17 432/3

occurred [2] 378/3

427/16

occurring... [2] 432/8 461/13 occurs [1] 470/14 odd [1] 470/18 off [5] 342/3 383/6 398/4 407/16 457/14 offering [2] 467/14 468/16 Official [1] 338/17 often [3] 389/1 413/13 420/25 oftentimes [5] 448/5 448/18 454/6 455/10 461/13 oh [4] 351/19 389/18 437/25 442/11 okay [32] 339/13 344/19 344/24 361/3 362/4 363/21 373/11 382/21 397/22 414/16 430/24 431/8 431/20 434/11 434/11 438/9 439/4 439/8 439/13 439/24 443/8 444/5 444/6 451/22 457/23 464/14 469/24 475/14 478/22 479/7 480/21 480/25 once [4] 431/16 432/6 435/24 467/16 one [79] 341/5 341/14 341/25 345/1 346/7 346/8 346/8 347/4 348/15 349/3 349/15 352/3 352/4 356/10 356/17 358/3 362/3 364/24 368/11 369/2 370/5 371/15 372/8 373/2 375/24 382/6 385/10 386/25 389/3 392/2 399/17 400/9 401/12 401/25 403/15 403/16 405/3 410/2 411/14 412/11 415/15 415/15 417/18 420/11 420/12 421/1 423/13 424/3 424/3 425/18 426/20 428/2 428/3 432/18 437/25 440/19 441/14 443/12 455/4 456/8 457/9 457/15 457/15 460/6 461/1 462/17 463/18 467/12 467/22 468/2 472/12 476/7 476/12 477/20 478/6 478/8 478/13 478/13 479/15 ones [5] 461/17 469/3 469/10 475/22 478/14 only [33] 341/18 342/23 346/19 352/4 355/5 356/18 366/22 366/24 368/13 372/12 373/2 374/24 378/19 385/3 391/16 399/1 417/22 418/16 433/24

434/8 442/11 442/11

442/12 445/7 453/4 466/14 466/25 467/7 470/11 470/14 474/6 478/13 478/14 open [1] 459/2 operate [1] 362/19 opine [1] 404/8 opined [1] 404/7 opinion [5] 402/13 432/10 434/14 466/5 474/1 **opportunity** [3] 401/15 405/18 415/19 opposed [5] 370/1 378/23 409/3 414/21 458/15 opt [5] 424/9 424/17 425/3 467/17 469/6 optimization [2] 351/9 442/22 option [1] 478/8 options [4] 376/12 468/20 478/17 480/15 orange [1] 404/23 order [31] 342/5 342/6 342/16 342/16 347/5 349/20 400/6 400/25 401/1 403/10 410/20 411/7 412/17 412/18 414/3 417/9 421/24 422/7 422/18 423/6 424/6 428/1 432/2 433/23 434/7 435/11 460/17 471/11 472/21 473/10 478/25 ordinary [1] 347/13 ordinary-course [1] 347/13 organic [1] 440/25 originating [1] 442/8 other [87] 340/20 342/5 346/18 348/1 348/16 353/12 353/25 354/6 354/19 360/6 362/9 362/12 363/14 369/20 370/22 373/1 373/4 374/11 377/13 378/21 379/2 384/9 387/8 390/22 392/2 392/10 393/1 393/2 393/5 393/10 393/14 393/14 395/2 395/5 395/10 395/16 396/6 397/17 397/23 398/12 398/23 399/4 399/9 400/2 400/12 400/20 401/21 402/6 402/12 407/1 407/13 412/17 413/8 418/6 418/10 418/16 421/6 421/20 423/23 428/3 432/21 433/6 436/24 438/21 440/2 440/10 440/23 443/17 445/14 450/1 452/24 453/19 455/6 456/5 458/23 461/6 461/24 464/3 465/25 466/16 467/5 467/12

468/18 469/4 474/3 476/4 480/15 others [12] 360/11 370/12 371/9 388/2 399/25 417/16 418/25 440/16 450/4 458/18 466/19 479/13 otherwise [3] 411/6 435/14 470/2 our [55] 345/18 346/10 346/15 346/25 347/7 347/9 347/14 347/14 349/12 351/15 361/21 362/14 364/8 364/18 365/6 365/12 365/17 370/15 372/10 384/15 387/19 389/15 389/19 394/15 395/5 397/11 410/12 414/3 415/2 416/3 421/4 421/4 427/3 427/14 428/16 430/11 430/14 430/18 431/5 435/1 438/14 438/19 444/10 444/13 458/12 467/4 467/10 469/21 469/23 471/8 471/9 471/12 475/10 479/20 481/1 ourselves [2] 376/9 445/3 out [48] 347/7 349/21 350/7 351/15 353/18 355/20 361/1 361/10 361/18 367/11 369/15 374/23 377/14 377/17 387/10 390/18 392/14 394/3 394/16 402/3 408/1 416/11 417/9 418/22 419/20 424/9 424/17 425/3 428/1 428/7 449/7 450/1 452/11 452/12 453/18 453/21 455/22 457/5 458/11 463/21 466/17 466/24 467/17 469/6 475/19 477/10 478/4 480/9 outcome [1] 457/16 output [1] 432/21 **outrunning [1]** 391/23 outset [1] 345/22 over [55] 339/18 341/12 342/7 342/7 342/24 343/5 346/8 355/24 356/5 370/23 371/13 374/3 374/18 378/15 387/6 388/22 388/23 388/23 389/14 394/8 394/11 395/6 395/13 395/17 396/8 396/13 398/25 398/25 398/25 400/12 404/20 404/20 410/3 411/21 412/12 412/14 415/13 424/18 435/14 440/13 440/18 442/2 442/3 446/21 449/22 450/8 450/18 450/25 455/24

464/13 468/15 470/2 overall [3] 371/13 396/9 479/2 overlap [2] 392/11 393/2 overlapping [1] 395/3 overlaps [1] 376/1 overlay [1] 405/16 overview [1] 343/8 overwhelming [2] 371/4 440/9 own [16] 340/25 341/17 342/10 353/13 357/23 358/13 366/14 371/11 371/14 373/5 397/6 405/5 405/7 416/1 417/24 419/20 P file [1] 415/3 **P.** [1] 339/3 p.m [2] 481/6 481/6 pace [2] 356/18 356/19 page [6] 398/7 405/10 432/11 457/6 459/8 471/9 page 49 [1] 471/9 page 835 [1] 432/11 pages [1] 458/24 paid [3] 340/6 421/16 423/12 paper [1] 358/19 par [1] 375/12 paragraph [1] 462/20 **Parakhin [1]** 435/24 paraphrase [1] 464/11 part [16] 346/3 348/18 352/15 353/7 365/12 375/1 394/6 400/1 400/2 427/17 441/10 445/8 461/9 467/21 467/21 475/12 participants [2] 456/3 468/4 particular [5] 406/6 436/9 449/24 456/19 456/21 particularly [4] 361/6 444/4 461/12 468/17 parties [3] 347/20 349/2 448/19 partners [1] 342/11 party [2] 439/20 470/16 party's [1] 470/16 past [1] 427/11 path [1] 381/17 **PATTERSON** [1] 338/8 pay [9] 340/4 340/22 426/9 434/23 434/25 464/12 478/16 480/14 480/14 paying [9] 340/9 343/15 344/7 344/8 344/22 387/2 387/3 408/7 408/10 payment [1] 348/15 payments [1] 342/10

456/22 461/15 464/5

pays [1] 420/13 pbwt.com [1] 338/11 **PCTRs [2]** 456/5 456/7 peanut [1] 364/4 peculiar [2] 466/9 466/14 Penado [8] 346/20 398/14 411/2 411/19 412/24 428/25 471/9 472/9 pend [1] 384/9 pending [2] 448/2 448/14 penny [3] 357/15 357/18 389/7 **people [48]** 358/18 361/9 375/19 376/21 376/24 382/2 383/10 387/12 387/15 390/6 390/22 392/13 392/19 392/20 392/25 393/2 393/21 395/3 395/16 396/18 397/17 399/13 399/14 399/14 412/5 412/5 412/6 417/21 435/4 435/25 440/22 440/24 440/25 442/6 442/12 442/23 442/25 450/2 454/1 461/24 464/4 466/20 467/1 467/5 469/8 469/9 479/16 480/8 Pepsi [1] 389/6 **per [1]** 388/15 **perceiving [1]** 463/10 percent [45] 342/8 355/1 355/6 356/3 357/12 358/5 367/4 384/13 385/2 385/6 385/11 385/12 390/9 391/13 391/17 394/16 396/14 396/15 402/22 402/24 404/20 407/2 407/3 407/16 415/20 417/8 430/19 430/19 433/22 433/25 434/3 438/7 438/15 438/16 438/19 438/24 439/2 439/3 448/10 453/1 453/3 460/13 462/14 468/1 468/8 percentage [12] 369/14 373/7 376/24 377/22 385/7 396/7 412/13 438/14 438/15 450/19 450/20 476/22 percentages [3] 430/25 441/20 451/25 perception [6] 357/24 358/13 375/11 428/20 462/10 462/18 perfect [7] 397/3 419/8

419/8 451/20 479/9

perfectly [1] 418/24

perform [4] 391/3

performance [1]

397/5 407/8 456/19

479/21 479/24

performance... [1] 464/21 **performed** [1] 407/7 **performing [3]** 383/5 384/25 444/9 perhaps [12] 341/16 347/19 351/6 351/11 354/6 398/4 406/10 408/21 408/21 419/1 419/22 424/3 period [8] 356/6 374/3 395/13 396/8 396/13 404/21 413/3 414/1 periods [1] 450/9 permanent [1] 449/2 permit [1] 453/24 permits [3] 345/5 345/15 409/17 permitted [1] 414/10 person [4] 387/6 456/18 456/25 461/19 perspective [1] 392/21 **Ph.D.s** [1] 480/7 pharmaceutical [1] 466/11 philosophy [1] 458/13 **phone [1]** 378/10 phones [1] 399/14 phrase [1] 467/18 PI [9] 448/14 448/20 449/6 449/18 465/2 470/15 470/22 470/23 470/23 picture [1] 343/8 pie [4] 399/10 399/11 399/15 399/19 piece [8] 344/4 345/4 382/22 398/16 399/20 443/12 467/8 469/23 pieces [2] 345/20 450/2 PLA [3] 366/16 368/19 370/23 place [7] 373/2 374/14 375/18 425/20 425/21 426/6 458/9 **places [7]** 343/17 383/1 395/5 400/12 407/18 442/9 475/21 plaintiff [4] 338/2 339/11 365/4 373/18 plaintiffs [16] 337/4 337/13 339/19 346/12 373/19 374/3 403/23 408/5 408/16 436/8 445/7 445/17 448/1 449/22 464/18 477/4 **plaintiffs' [1]** 470/6 plan [2] 344/25 410/13 planning [1] 357/3 PLAs [17] 365/24 366/4 367/24 368/10 368/12 368/16 368/18 369/4 369/25 370/8 370/19 371/7 371/22 409/13 438/21 439/5

439/9

```
platform [13] 340/13
359/12 359/13 359/15
360/19 360/25 376/4
376/17 377/4 377/21
379/5 418/14 462/8
platforms [16] 346/18
362/9 362/12 374/18
376/15 376/25 377/14
377/18 378/21 379/2
379/10 380/3 389/9
398/13 418/6 418/10
play [2] 354/10 358/15
please [29] 339/4
346/21 347/16 348/23
349/23 350/16 350/22
351/7 353/10 354/23
355/22 398/14 402/23
406/12 410/21 411/2
411/19 411/20 413/2
413/17 413/22 414/25
415/12 425/17 427/4
428/25 471/9 472/9
473/3
plenty [2] 393/8 401/18
plus [3] 345/24 398/19
446/19
Plus' [1] 398/20
point [41] 345/3 356/17
357/15 357/18 362/3
363/17 366/19 366/22
367/6 367/7 368/15
380/7 383/24 392/2
392/6 399/22 402/7
403/19 409/15 409/25
410/5 412/7 428/19
428/24 429/15 435/19
437/1 437/5 437/7
437/14 439/16 443/9
445/11 448/24 449/5
452/3 452/17 468/14
471/24 475/15 480/9
pointed [2] 367/11
403/19
points [8] 346/24
371/15 398/3 412/11
428/18 429/11 434/17
470/9
Polyjuice [2] 423/1
423/2
poor [1] 354/10
poorly [1] 383/6
portion [1] 399/1
position [10] 395/6
414/14 457/19 458/1
458/2 460/16 463/21
467/10 476/17 476/19
positions [2] 457/17
464/21
possible [4] 364/12
372/15 443/22 476/5
posting [1] 359/14
Pot [2] 460/6 461/2
potential [2] 456/24
457/25
potion [1] 423/3
Potter [1] 423/1
power [32] 340/2 343/3
343/5 343/12 343/12
```

```
343/19 345/1 345/11
345/15 345/17 345/17
346/1 355/19 359/3
364/23 367/12 367/14
371/16 372/21 390/21
429/17 434/8 434/9
440/15 452/9 452/16
453/13 454/21 460/1
460/5 475/5 475/10
powerful [2] 374/20
379/19
pragmatic [1] 347/3
precedent [1] 471/5
precious [1] 446/3
precise [2] 369/1
420/19
precision [1] 350/10
predicate [2] 347/18
403/3
predict [2] 470/24
471/2
predicted [2] 456/6
462/5
prefer [3] 392/19
392/20 436/1
preferring [1] 441/1
preliminarily [1]
339/18
preliminary [4] 447/23
448/2 449/2 470/11
preparation [1] 362/21
present [8] 385/22
386/1 403/13 430/16
432/2 433/6 433/12
434/6
presented [3] 376/23
408/13 465/3
President [1] 342/12
presiding [1] 339/3
pressure [4] 341/1
419/21 472/23 476/3
presumption [1]
446/23
pretext [1] 474/6
pretextual [2] 473/16
474/8
pretty [8] 359/11
359/13 367/22 396/15
396/16 397/18 399/20
399/24
Prettyman [1] 338/18
prevalence [2] 370/3
376/21
prevent [2] 426/20
456/9
preview [5] 357/4
357/5 357/6 474/13
479/3
previewed [3] 411/3
415/16 422/11
previous [1] 475/21
price [128] 340/9 342/4
342/20 342/23 343/10
344/7 354/9 354/21
354/25 355/6 356/11
356/13 356/15 357/15
357/17 358/7 358/14
384/4 384/18 385/2
```

```
385/6 385/20 385/20
386/9 386/16 386/20
387/3 387/7 387/9
387/13 387/15 387/16
387/24 388/14 388/17
389/5 389/18 389/22
391/21 395/19 396/19
404/1 404/17 404/19
405/7 411/8 411/13
411/14 414/10 414/14
414/17 414/19 416/4
416/7 416/16 416/20
416/21 417/9 417/23
418/20 419/5 419/9
419/14 419/15 419/18
420/5 420/17 420/17
420/21 420/24 421/21
422/17 422/21 423/11
424/6 425/5 425/14
425/22 425/25 426/2
426/8 426/12 426/13
427/15 432/21 433/12
434/9 434/10 445/15
445/15 445/19 445/21
445/24 450/20 451/2
452/8 452/21 453/22
454/24 459/11 459/24
460/23 461/3 461/9
461/11 461/12 461/21
463/1 463/2 466/3
468/5 471/3 472/18
472/24 473/16 474/7
474/15 474/24 475/19
475/25 476/5 476/5
476/14 476/15 476/18
476/25 477/15 477/23
priced [3] 393/24
453/22 453/23
prices [48] 340/23
341/3 343/15 344/8
344/17 354/25 355/15
355/19 355/25 356/3
357/10 358/5 370/23
387/25 388/1 389/19
404/20 408/25 409/2
409/3 409/3 411/11
413/1 413/20 415/24
417/2 417/3 417/6
417/10 419/13 422/18
427/2 429/6 431/25
445/14 451/19 454/1
454/22 458/3 462/12
463/5 463/13 463/16
468/5 473/22 474/3
475/21 476/2
pricing [91] 341/6
341/8 341/11 341/14
341/21 344/3 345/25
354/9 354/10 356/19
356/20 356/22 357/1
357/21 357/22 358/16
358/18 374/24 388/9
388/22 388/23 388/23
388/25 389/8 389/25
391/5 407/14 413/9
413/10 413/25 414/1
414/2 414/3 414/4
414/22 414/23 415/1
```

```
415/1 415/3 415/4
415/5 415/9 415/10
415/13 415/20 416/3
416/15 417/15 418/14
418/25 419/6 419/16
419/25 420/6 422/24
424/5 424/6 424/7
424/8 424/12 424/14
424/15 424/17 424/21
424/21 429/6 447/15
447/16 447/17 449/11
449/14 450/16 452/5
453/8 453/21 457/25
458/1 458/5 458/8
458/10 458/14 458/17
459/6 459/10 459/17
473/6 477/18 477/25
478/20 479/1 479/2
prima [1] 444/21
primary [8] 349/15
368/11 375/18 394/20
412/7 412/14 412/21
427/25
principle [2] 359/25
458/2
principles [1] 445/12
prior [1] 415/23
proactive [1] 417/18
probably [5] 382/17
395/4 428/5 452/13
460/13
probed [1] 355/24
problem [3] 411/24
426/23 480/19
problems [1] 428/21
proceed [1] 454/23
proceeding [1] 419/18
proceedings [3] 337/9
338/20 482/4
process [2] 388/2
419/20
procompetitive [6]
345/6 345/8 473/8
473/12 474/12 475/3
produced [6] 338/21
409/12 449/20 449/20
464/25 470/21
product [41] 341/19
345/2 346/13 354/17
359/4 359/6 359/23
360/20 361/4 361/5
361/13 361/16 361/18
361/24 362/1 362/2
364/5 364/12 366/15
383/13 386/5 387/12
387/15 387/20 387/21
```

388/13 400/5 400/5

400/22 400/23 400/24

422/6 422/19 438/11

452/7 452/8 453/19

480/2

454/2 477/16 477/23

products [10] 354/17

360/17 362/19 400/17

400/23 401/8 410/8

professionals [3]

430/15 452/10 465/8

professional [1] 465/6

professionals... [3] 402/8 466/10 466/16 Professor [14] 360/11 367/6 392/7 403/4 403/8 420/22 421/19 421/22 422/1 425/7 426/23 430/9 450/11 455/20 **Professor Amaldoss [1]** 367/6 **Professor Whinston [7]** 392/7 403/8 420/22 403/14 421/19 421/22 430/9 455/20 Professor Whinston's **[1]** 422/1 profit [1] 399/3 profitable [6] 355/20 356/4 356/5 362/1 400/21 428/10 programmatic [3] 402/7 465/6 466/15 programs [1] 436/19 **promote [2]** 378/19 473/11 proof [3] 390/21 392/1 452/8 properly [1] 343/24 proposed [1] 346/13 proposition [1] 414/6 Protection [1] 338/3 **prove [3]** 418/23 418/23 470/16 provide [6] 362/9 365/20 370/12 397/4 408/23 451/9 provided [2] 372/1 390/16 providers [1] 369/25 provides [4] 368/16 387/20 407/17 427/19 providing [2] 357/25 466/25 **proxy [9]** 396/16 396/20 396/23 404/13 406/19 406/25 432/17 476/21 479/25 PSX161 [1] 455/2 public [2] 398/16 398/16 pull [2] 353/22 380/12 pulled [1] 456/7 punch [1] 379/24 purchase [8] 363/25 364/1 366/19 366/21 366/22 366/23 367/7 382/2 purchased [1] 355/14 purchasing [2] 381/13 381/13 purportedly [1] 408/8 purpose [4] 348/4 348/7 348/8 469/15 purposes [1] 425/9 push [2] 356/1 380/12 pushed [1] 427/2 put [25] 342/16 344/20

480/17

403/7

467/6

427/24 460/13

374/22 399/17 399/18 401/5 402/3 402/11 403/23 404/6 430/4 430/9 444/3 449/17 452/20 458/23 471/8 putting [4] 405/10 409/13 433/1 457/5 qualitative [2] 403/8 qualities [1] 356/18 quality [77] 341/13 356/14 356/15 356/20 356/22 357/1 357/21 357/24 384/21 390/12 390/15 391/19 391/23 396/16 400/11 404/14 406/10 406/25 408/10 408/21 409/6 413/15 413/19 413/24 414/7 414/9 414/11 417/25 420/15 420/15 421/1 421/18 422/4 422/16 422/17 423/14 426/11 427/4 428/23 429/2 429/3 429/4 429/9 435/25 452/4 452/7 452/21 454/9 454/16 454/23 456/11 457/1 457/4 458/15 460/22 461/3 461/20 461/22 472/16 472/18 472/20 476/13 476/16 476/17 476/20 476/20 476/24 477/4 477/5 477/19 477/24 478/18 478/19 478/24 479/4 480/10 quantitative [2] 352/21 queries [9] 365/15 367/4 367/4 376/6 404/24 409/12 412/16 query [9] 360/1 360/3 411/25 412/4 412/6 412/14 413/7 427/19 question [68] 343/8 343/10 343/23 344/2 344/12 346/1 350/5 351/10 351/12 352/19 352/23 354/6 354/13 354/14 354/21 356/21 357/21 364/7 366/1 367/25 369/1 374/8 377/17 378/12 379/21 381/22 386/18 388/5 388/16 391/10 394/24 402/15 402/17 403/17 404/3 404/11 404/25 405/17 406/8 408/24 408/24 409/13 409/20 414/6 416/19 417/2

345/7 346/12 351/11

352/13 354/13 370/19

472/12 479/22

465/18 467/14 470/23 473/2 475/17 476/13 478/18 questioned [1] 420/25 questions [10] 346/9 349/14 367/9 378/11 397/24 411/5 429/13 444/25 447/22 470/6 quick [3] 366/1 392/2 442/20 quickly [2] 409/10 409/25 quintessential [1] 367/13 quite [6] 359/16 377/21 396/3 436/17 449/15 465/2 quote [5] 351/6 398/10 434/19 464/17 464/19 quotes [1] 375/9 Raghavan [2] 389/12 398/20 raise [13] 342/20 342/23 343/10 357/10 386/9 388/14 388/17 411/11 420/24 421/24 445/14 454/1 477/22 raised [3] 343/24 356/3 406/6 raising [4] 395/19 413/1 445/15 476/15 Ralph [1] 338/4 Ramos [5] 402/4 402/13 447/24 448/25 449/9 ran [3] 358/4 471/3 479/19 random [1] 425/5 randomized [2] 422/21 428/20 randomly [3] 423/9 426/25 427/1 rank [1] 425/13 ranked [2] 422/13 458/16 ranks [1] 341/17 rate [12] 396/14 396/15 406/24 407/2 407/3 407/10 407/10 408/11 408/12 462/5 473/24 476/22 rates [2] 450/18 456/6 rather [3] 368/22 432/16 475/4 ratio [5] 404/24 405/22 406/1 451/10 472/16 rationale [1] 426/20 rationales [1] 426/20 **Raymond [1]** 443/19 re [1] 360/13 re-targeting [1] 360/13

417/3 417/7 424/10 reach [1] 376/12 424/25 428/11 431/9 reacting [2] 388/3 433/3 433/16 437/25 427/13 441/14 442/20 444/22 reaction [1] 397/12 446/16 450/13 454/11 read [6] 358/9 423/1 432/9 432/25 433/15 465/2 reading [2] 398/6 458/7 reads [1] 457/17 ready [1] 410/23 real [17] 340/23 341/1 355/8 358/21 358/22 360/3 385/15 402/20 403/2 407/7 432/1 451/2 459/3 470/18 471/1 471/15 471/17 real-life [2] 358/21 358/22 real-time [1] 360/3 real-world [2] 402/20 403/2 realities [2] 347/15 382/14 reality [5] 360/18 361/5 398/15 412/10 416/11 416/12 434/24 reallocating [1] 409/24 really [44] 341/23 344/13 351/18 356/14 358/25 372/19 375/11 375/20 375/24 375/24 378/17 380/8 382/7 383/5 383/5 383/24 388/7 393/25 394/20 407/25 410/6 417/24 418/16 420/21 452/12 456/14 456/20 456/20 458/8 459/3 460/14 460/16 463/21 464/9 464/9 466/1 466/21 466/22 472/14 473/23 474/12 474/21 475/18 478/20 realm [2] 360/9 364/10 Realtime [1] 338/17 reason [21] 352/16 366/14 367/13 373/4 375/21 384/24 393/2 394/11 394/13 398/10 406/5 426/14 432/12 432/12 435/7 441/8 442/24 473/8 474/4 474/6 475/22 reasonable [6] 347/21 348/14 348/17 354/11 354/19 478/9 reasonably [2] 348/8 402/14 reasons [2] 375/23 405/9 rebuttal [2] 429/7 470/3 rebuttals [1] 474/21 recall [5] 369/16 376/20 379/13 388/7 465/17 recalled [1] 341/7 recalls [1] 425/24

recent [2] 402/1 402/4 recess [4] 410/17 410/18 481/5 481/6 recognize [4] 345/24 370/6 464/9 477/25 recognized [1] 462/12 recollection [1] 465/23 **recommend [1]** 458/5 recommendations [1] 379/7 record [16] 341/2 352/20 353/3 359/14 378/9 391/22 391/22 395/19 407/6 419/13 423/22 424/1 429/9 468/13 480/18 482/3 recorded [1] 338/20 records [2] 400/10 466/6 recover [4] 361/1 421/3 421/9 421/13 red [2] 416/3 439/19 **red-boxed [1]** 439/19 redacted [3] 369/14 redesigned [1] 359/15 reduced [1] 421/5 reduces [1] 371/22 reduction [1] 474/18 reference [5] 373/25 374/21 441/6 447/20 457/13 referenced [4] 364/3 402/2 415/23 449/9 reflect [3] 377/7 455/11 458/5 reflected [4] 372/22 372/22 437/10 438/12 reflects [1] 345/23 regard [2] 344/14 348/19 regarding [1] 445/2 regimented [1] 381/4 **Registered [1]** 338/16 regression [5] 384/1 384/23 403/14 403/21 404/4 reject [1] 447/25 rejected [3] 348/13 402/13 447/24 relate [1] 474/15 related [7] 339/15 358/2 413/4 430/7 445/8 465/8 467/13 relating [1] 410/5 relational [2] 451/4 451/6 relationship [2] 373/6 478/1 relative [6] 435/25 450/19 450/24 451/6 451/11 452/5 released [1] 478/7 relevant [12] 345/2 345/14 345/18 346/11 346/22 347/3 348/12 362/22 382/19 465/15 471/4 475/11

resulted [2] 355/5 449/25 reliance [1] 436/13 results [7] 392/15 relied [2] 411/25 412/3 435/1 435/20 436/1 relies [1] 466/5 457/6 468/2 468/4 rely [6] 349/11 364/8 resume [2] 410/13 438/5 438/8 476/23 481/2 480/11 retailers [2] 423/20 relying [2] 433/10 423/25 436/24 retain [1] 436/19 remark [1] 396/9 retargeting [2] 348/1 remarkable [1] 383/24 444/13 remember [4] 383/7 retention [1] 389/2 399/18 436/15 480/7 removed [1] 360/10 349/7 384/5 384/6 rep [1] 389/4 384/8 431/9 435/7 repeat [1] 346/24 435/13 472/7 replace [1] 424/21 returned [2] 360/2 replaced [1] 424/7 427/24 replacement [1] 372/5 returning [1] 404/24 report [2] 460/9 460/10 revenue [35] 340/1 Reporter [4] 338/16 340/2 340/5 341/12 338/16 338/17 338/17 reports [3] 427/19 342/18 355/3 355/9 427/20 454/14 represent [1] 431/1 411/15 412/2 412/7 require [2] 429/21 436/21 413/6 421/3 421/5 required [5] 347/5 403/9 403/13 403/14 422/7 422/9 422/9 422/12 422/14 431/1 requirement [2] 347/22 431/6 436/2 453/2 432/14 453/3 requires [4] 366/12 revenues [5] 359/14 414/20 473/20 473/20 361/7 385/6 407/4 reserves [1] 414/4 408/11 reset [1] 445/3 reverse [1] 419/24 resolution [1] 448/14 resonate [1] 357/8 reviewing [1] 449/6 respect [6] 346/25 rGSP [18] 415/3 346/25 363/14 429/12 473/5 479/14 423/5 423/7 423/11 respectful [2] 363/12 423/13 424/7 424/16 425/1 426/5 429/1 respectfully [4] 359/21 429/2 456/13 464/20 374/16 379/19 390/20 472/6 472/14 respond [1] 439/16 riding [1] 418/25 responded [1] 427/8 right [98] 339/16 response [14] 341/8 339/23 344/4 349/23 341/25 342/25 352/15 356/9 360/3 366/24 357/17 359/9 360/21 400/19 421/12 435/7 440/13 469/21 470/5 371/8 373/12 373/15 470/6 375/21 378/1 378/21 responsive [3] 346/9 379/20 381/2 381/20 402/16 470/9 383/22 385/25 387/3 rest [1] 393/13 387/5 388/9 388/14 restrain [1] 408/25 389/20 390/14 391/8 restricting [1] 341/21 restructured [1] 397/20 398/5 404/17 364/18 405/6 406/7 406/11 rests [1] 363/9 result [17] 352/13 410/12 418/15 426/1 355/3 355/12 358/6 426/4 427/21 430/21 371/18 391/2 396/24 431/18 432/4 434/11 396/25 408/12 417/11 420/14 423/15 435/11 438/25 439/8 439/9 454/23 455/12 456/9 439/11 439/12 440/8 474/18

```
441/10 443/2 443/3
                        443/6 446/7 446/22
                        447/13 447/18 448/8
                        448/16 448/21 449/7
                        450/16 450/17 451/3
                        451/15 453/22 456/16
                        457/3 458/21 459/15
                        463/14 463/15 465/9
                        466/7 466/19 466/20
                        469/12 469/25 474/2
                        475/1 477/21 479/8
                        479/10 479/17 479/19
                        480/22
return [10] 349/6 349/7
                       ring [1] 342/2
                        rise [7] 339/2 367/17
                        367/17 376/14 410/16
                        410/19 481/4
                        rival [1] 418/17
                        rivals' [1] 432/22
                        RMR [2] 482/2 482/8
                        road [1] 449/16
                        ROI [56] 349/11 349/12
341/18 342/10 342/17
                        349/13 349/17 349/18
                        349/19 349/20 350/3
374/18 390/10 398/24
                        350/6 350/8 350/15
                        351/2 351/4 351/5
412/18 412/19 412/22
                        351/10 351/12 351/18
                        352/4 352/6 353/21
                        374/25 375/4 375/6
421/10 421/13 421/24
                        375/10 383/7 383/9
                        383/11 383/15 389/14
                        393/13 393/19 393/25
                        394/2 394/3 394/6
                        394/9 394/19 395/7
                        397/3 397/6 397/10
                        397/19 410/7 428/6
                        462/18 463/9 463/9
review [2] 445/1 471/5
                        463/11 463/17 463/25
                        464/10 465/18 465/19
                        465/19 465/22 465/24
422/21 422/24 422/25
                        ROIs [4] 350/8 410/3
                        410/4 410/6
                        role [1] 431/11
                        rooftops [1] 417/25
                        roughly [1] 367/4
                        round [1] 340/17
                        RPM [1] 415/21
                        rule [2] 432/12 432/12
                        ruling [2] 433/8 433/9
353/14 356/11 357/16
                        run [5] 448/13 454/8
                        454/8 460/20 475/23
362/10 368/14 370/24
                        runaway [6] 426/20
                        454/10 456/9 472/7
                        472/14 472/16
                        runner [3] 420/18
                        425/13 426/3
                        runner-up [3] 420/18
                        425/13 426/3
392/11 395/24 396/12
                        running [7] 340/16
                        353/15 437/18 437/20
                        453/1 464/1 476/7
407/12 409/23 410/11
                        runs [2] 405/14 425/24
                        SA360 [3] 397/1 445/6
434/12 437/24 438/22
                        445/10
                        safe [2] 357/12 433/25
                        said [40] 345/22
```

```
348/16 349/10 349/25
350/2 350/17 350/19
351/8 352/4 355/24
357/14 363/25 381/8
381/24 382/21 382/24
383/14 384/7 395/23
406/13 408/22 413/5
417/18 421/22 424/20
431/24 435/2 435/24
437/15 437/16 444/7
445/18 446/13 447/23
465/14 465/23 470/11
473/12 474/3 476/21
sake [1] 389/22
sale [2] 348/5 407/16
sales [3] 417/20
471/20 479/21
Sallet [3] 338/2 339/10
438/25
same [50] 348/7
348/12 348/18 348/21
350/23 361/13 361/15
364/3 366/16 367/6
370/1 370/20 370/24
375/9 376/2 378/6
378/13 387/6 393/3
393/5 393/10 400/1
402/11 402/11 405/16
405/16 406/4 409/14
409/16 409/18 410/2
411/22 423/16 423/16
434/24 435/1 436/5
437/5 443/10 451/6
451/17 451/24 452/2
456/13 460/12 460/17
461/8 463/17 472/21
478/7
sample [1] 418/16
sandwich [3] 359/8
360/23 364/5
satisfied [1] 347/9
satisfy [2] 347/9 433/6
saw [10] 346/22 347/8
380/15 380/18 391/19
400/20 415/19 424/15
444/8 479/19
say [61] 345/21 351/19
357/2 361/4 363/20
368/11 371/2 371/3
375/5 375/19 379/4
379/19 380/1 384/22
385/4 386/4 389/6
389/21 390/5 391/7
391/24 393/18 394/15
394/25 397/9 401/20
401/21 404/4 416/3
416/22 419/9 427/8
428/6 428/20 433/7
433/20 434/23 437/21
438/17 438/19 439/9
442/11 445/24 447/21
453/7 463/6 464/12
465/11 467/20 468/8
470/18 470/19 474/2
474/8 474/11 474/13
476/9 476/23 478/13
479/15 479/18
saying [19] 349/4
```

351/20 352/25 353/1 357/17 383/4 406/3 407/5 414/20 416/1 427/13 435/5 451/22 454/20 458/8 469/19 471/12 474/16 475/4 says [11] 349/24 375/10 375/12 406/11 406/16 413/14 457/24 460/11 474/5 475/18 475/20 scale [4] 372/18 434/21 435/24 435/25 scenario [2] 417/10 464/22 scenes [3] 425/5 463/20 464/8 schedule [3] 345/23 392/3 410/14 Schmidtlein [20] 338/12 339/12 373/11 377/16 398/11 399/17 402/2 405/18 406/21 407/25 409/11 428/5 431/23 470/1 470/10 470/13 471/10 472/6 473/12 475/18 Schmidtlein's [1] 400/9 scored [1] 405/14 scores [1] 456/2 screen [6] 365/10 374/22 433/21 446/18 452/12 452/20 screening [2] 432/17 444/1 **se [1]** 388/15 **sealed [1]** 346/5 search [150] search-ads-wide [1] 467/8 **searching [2]** 379/4 379/6 season [1] 405/15 **seasonality [2]** 462/14 463/3 seated [3] 339/4 410/20 410/22 second [24] 343/21 345/13 346/13 365/9 366/12 368/15 386/16 409/25 410/5 420/18 422/21 425/20 425/21 425/25 426/6 426/8 426/13 426/16 447/5 449/5 456/18 458/9 460/16 471/8 second-price [2] 422/21 425/25 **secret** [1] 415/18 secrets [1] 463/22 section [6] 338/3 343/2 346/7 410/25 411/5 416/16 see [30] 350/8 361/3 365/17 374/4 374/5 378/8 387/14 387/25 389/6 390/6 391/23

shares [2] 341/22 see... [19] 399/2 399/6 she [11] 351/3 351/11 403/20 410/4 414/21 423/4 436/5 442/3 444/10 445/21 449/3 450/7 450/12 451/23 she'd [1] 351/18 455/12 461/4 461/15 **she's [1]** 351/20 464/15 481/2 **Sherman [3]** 343/2 seeing [9] 359/3 359/5 385/8 385/10 387/18 390/15 428/3 452/1 466/2 seek [1] 343/4 seem [9] 361/5 374/11 375/12 389/25 418/6 shifting [1] 465/24 419/8 465/17 479/9 shifts [6] 374/4 431/17 479/23 seemingly [1] 480/12 seems [3] 352/25 shirt [1] 379/13 476/13 480/1 **shocking [2]** 449/15 seen [6] 367/16 367/19 374/1 377/10 424/1 **Shoe [5]** 347/2 347/8 429/5 sees [1] 456/10 shoes [3] 360/4 360/5 sell [4] 360/22 364/5 381/6 382/25 shopping [1] 365/23 seller [1] 476/6 short [11] 356/25 selling [2] 360/23 360/25 send [1] 379/9 sense [9] 348/15 359/17 380/11 391/12 shortage [1] 442/4 430/15 447/25 454/11 shorts [4] 379/15 475/7 479/8 sensitive [1] 444/4 **should [29]** 345/20 separate [8] 350/14 350/21 350/25 369/3 369/3 370/2 392/9 447/9 separated [1] 477/20 series [1] 415/13 **SERP [5]** 366/7 366/15 371/11 371/14 371/14 serve [4] 459/6 459/13 459/13 459/25 serves [1] 432/16 shouldn't [4] 385/4 service [1] 369/24 services [2] 365/11 shouted [1] 417/25 454/3 **show [23]** 343/20 session [10] 337/7 339/3 408/19 409/5 410/20 415/23 431/23 474/13 475/16 478/21 set [8] 357/23 426/3 439/17 445/11 446/13 458/2 462/10 480/12 setting [9] 358/14 385/20 418/19 418/20 **showed [8]** 369/7 418/20 418/21 473/23 476/5 477/3 several [2] 432/18 440/18 showing [2] 380/10 **shape [1]** 473/18 shapes [1] 381/10 **shown [7]** 386/11 share [8] 340/5 348/16

372/22 394/14 398/8

shared [1] 417/20

399/16 399/21 399/24

394/17

443/19 443/20 443/21

444/7 471/18 471/22

472/1 472/1 472/3

414/20 473/20

414/20 473/20

350/24 384/9 394/4

399/21 444/8 444/11

462/13 465/19 466/2

382/14 403/9 403/10

402/19 404/11 416/24

423/5 423/13 430/3

454/8 460/19 460/20

379/16 379/24 379/25

345/21 347/21 347/23

348/1 357/14 357/22

357/23 364/18 369/1

375/5 388/13 393/18

402/12 409/18 414/17

414/18 414/18 414/23

417/9 417/10 426/22

473/22 473/23 479/1

390/5 403/20 417/2

344/10 349/25 351/18

400/24 405/1 415/7

415/7 419/24 420/3

420/14 432/2 432/6

433/23 433/23 433/24

450/24 451/12 452/3

474/17 474/23 474/24

385/5 403/24 422/2

390/8 394/5 419/15

shows [21] 363/22

432/7 460/12 471/16

438/7 443/14 443/15

417/3 417/3 417/6

480/14

477/18

443/16

446/19

466/3

465/2

382/4

478/24

```
363/23 392/21 396/10
                        400/16 404/11 404/12
                        404/20 406/8 411/12
                        412/8 412/11 412/15
                        412/20 423/13 431/22
                        439/25 441/8 449/23
                        472/5 480/18
                        side [6] 352/3 374/7
                        375/17 434/5 450/14
                        451/2
                        signal [3] 379/25
Sherman Act [3] 343/2
                        409/12 409/17
shift [8] 349/12 350/19
                        signals [4] 374/20
                        378/22 378/23 380/4
                        significant [11] 349/3
                        352/22 352/24 353/1
                        353/2 353/4 361/19
                        362/8 370/22 370/25
                        384/14
                        significantly [3]
                        360/13 361/16 365/19
                        signing [1] 412/6
                        similar [10] 348/4
                        348/8 402/10 413/3
                        413/4 423/14 423/15
                        430/13 434/4 435/2
                        simple [3] 420/9 423/8
                        469/20
                        simplified [3] 385/23
                        468/20 469/20
                        simply [16] 344/21
                        348/2 350/10 352/11
                        386/16 399/7 401/22
                        405/12 407/6 407/15
                        408/16 429/9 448/24
                        451/11 476/15 477/24
                        simultaneously [1]
                        371/14
                        since [5] 341/10 404/2
                        405/14 413/6 413/6
                        single [5] 384/19
                        407/15 424/18 459/8
                        473/21
                        singular [3] 375/5
                        380/25 458/20
                        sit [2] 422/15 445/1
                        site [1] 364/3
                        sites [7] 379/6 379/18
                        393/11 395/2 395/11
                        440/4 440/6
                        sitting [1] 395/18
                        situation [2] 443/10
                        466/8
                        size [1] 374/17
                        sized [2] 468/23 469/5
                        sizes [1] 381/10
                        slices [1] 464/18
                        slide [53] 346/20
                        347/16 349/23 350/2
                        350/16 350/22 351/7
                        353/9 353/14 354/23
                        355/22 357/7 357/9
                        363/15 371/17 398/14
                        399/19 400/18 401/10
                        401/14 402/1 402/16
                        402/20 402/23 402/24
                        406/12 411/2 411/19
                        412/8 412/20 413/2
```

437/16 439/17 439/18 439/22 439/22 441/6 441/7 443/14 443/18 455/3 472/9 472/25 475/17 Slide 14 [1] 472/25 Slide 16 [2] 402/16 402/20 Slide 17 [1] 402/24 Slide 19 [1] 371/17 **Slide 4 [1]** 436/12 Slide 52 [1] 400/18 Slide 56 [1] 357/9 Slide 74 [1] 411/2 **slides [4]** 376/19 399/17 424/22 439/17 slightly [3] 361/4 433/3 434/4 slot [3] 456/24 458/4 476/4 slow [1] 412/16 **small [8]** 372/19 377/21 382/23 382/23 415/17 468/23 469/5 469/13 small-to-medium-sized somehow [7] 361/1 **[1]** 468/23 smaller [5] 423/20 423/25 426/15 468/18 473/11 smart [1] 480/8 snippet [2] 444/18 450/1 snippets [1] 464/18 so [178] **So I think [3]** 385/17 417/7 452/17 So if [1] 346/3 439/22 466/21 470/18 473/23 So this evidence [1] 406/18 So this is [3] 416/1 441/11 444/7 social [17] 347/25 350/14 351/19 353/17 354/1 361/25 370/10 376/25 379/6 380/3 381/1 393/5 401/1 401/2 402/11 444/13 468/19 sold [2] 355/12 405/11 **some [104]** 344/10 346/22 352/5 356/17 359/5 362/4 362/6 362/7 362/11 362/12 362/16 362/17 363/16 365/23 368/22 369/10 370/6 370/8 370/16 370/18 371/3 374/23 375/5 376/18 376/20 378/7 379/25 380/4 380/16 380/16 382/20 384/3 385/2 386/20

413/17 413/22 414/25

415/12 420/4 424/23

425/8 428/15 436/12

387/20 387/24 387/25 389/17 390/19 390/24 391/4 391/12 392/22 395/6 397/16 399/6 399/21 399/23 401/1 401/2 401/24 403/18 403/20 404/13 405/6 405/6 406/15 408/5 408/18 408/20 408/22 408/23 412/7 412/17 413/24 415/6 421/6 421/7 424/2 425/8 426/16 428/17 429/23 435/13 437/2 438/11 441/18 444/13 447/18 450/4 451/20 452/4 452/7 452/15 453/8 453/13 455/21 456/15 458/25 460/4 461/11 461/16 462/5 465/21 465/24 468/1 470/11 473/8 473/18 474/8 477/19 479/12 479/23 479/25 somebody [8] 377/5 380/5 381/25 382/1 383/3 392/14 440/10 453/7 374/13 383/6 383/12 383/13 444/18 470/18 **someone [3]** 423/3 426/22 472/22 something [21] 359/18 359/19 364/2 368/16 380/8 383/13 391/3 397/17 427/18 440/14 440/15 452/1 453/4 454/7 455/21 458/14 463/2 467/1 469/20 471/11 473/14 so it's [6] 393/20 397/8 sometime [1] 412/15 **sometimes [6]** 413/18 413/19 413/23 448/6 448/13 461/5 somewhat [1] 393/24 **somewhere [3]** 349/13 357/20 388/24 **Sommer's [1]** 379/13 sophisticated [1] 437/8 sorry [18] 339/14 343/7 348/24 366/1 408/4 412/3 418/8 419/4 424/23 425/16 427/5 438/17 442/19 446/4 455/2 462/17 477/8 477/13 sort [79] 343/8 346/1

346/4 364/19 370/21

374/3 374/8 374/10

374/11 374/14 375/16

375/18 377/24 380/4

380/11 380/11 381/4

382/21 383/2 385/4

385/8 386/9 386/12

387/9 390/9 390/11

381/12 381/23 382/12

sort... [50] 391/14 392/17 393/22 394/16 394/17 395/7 406/2 407/10 416/22 423/24 431/13 433/16 434/12 436/17 439/20 442/21 442/24 443/16 444/25 445/3 446/4 447/3 448/19 450/22 451/6 451/17 451/17 451/23 452/19 453/22 453/23 455/13 455/14 456/21 457/5 458/23 460/8 460/10 460/12 460/16 462/13 463/4 463/20 464/4 466/14 467/17 467/19 469/25 473/5 476/12 sorts [5] 441/2 442/8 449/11 449/12 453/25 sounds [1] 430/21 sources [1] 440/9 Southern [1] 402/4 **space [3]** 415/17 440/20 440/24 **specialized [1]** 466/15 **specific [7]** 347/5 351/9 384/4 420/11 465/7 466/14 469/22 specifically [2] 421/19 421/20 spend [17] 349/16 350/19 350/24 351/15 371/24 374/5 378/18 389/16 394/4 394/13 394/15 395/6 395/7 428/3 435/12 462/12 478/21 spending [3] 377/2 396/19 437/9 spent [7] 341/24 398/11 400/13 435/2 446/2 446/3 472/6 spinning [1] 340/3 **SQR [1]** 427/20 square [3] 395/21 395/22 454/20 squashing [27] 341/15 414/4 415/3 419/16 420/2 420/3 420/7 420/10 420/14 420/19 420/22 421/15 421/20 421/21 422/2 423/14 454/13 454/18 455/10 455/11 455/16 455/17 455/18 460/9 460/11 461/5 472/21 squishing [1] 420/17 SSNIP [9] 355/7 355/7 382/5 384/17 385/15 402/18 402/20 403/1 403/2

stand [1] 341/6

465/2

standalone [1] 436/20

standard [5] 446/13

448/25 449/4 449/18

stands [2] 410/17 481/4 start [9] 349/24 358/19 372/15 398/4 404/15 407/5 442/25 461/21 470/10 started [2] 413/1 424/4 starting [2] 346/11 381/12 starts [1] 404/16 state [3] 383/4 413/9 415/24 stated [4] 347/2 398/7 403/5 404/6 statement [2] 398/19 440/1 statements [1] 424/2 **STATES [13]** 337/1 337/3 337/10 338/2 339/7 339/11 339/25 347/18 365/4 365/7 434/16 462/21 462/21 **States' [2]** 363/7 363/12 **stating [1]** 472/13 stay [3] 383/10 392/3 410/14 stenography [1] 338/20 step [4] 366/13 411/18 429/23 447/5 steps [2] 360/10 444/24 stick [1] 364/19 **sticking [1]** 385/13 sticks [1] 453/8 still [17] 341/19 355/25 367/19 367/20 381/11 385/12 385/13 386/17 390/9 418/24 429/21 436/23 436/24 444/15 454/23 472/4 477/22 stipulated [1] 398/18 stop [5] 340/3 432/6 436/13 472/7 472/14 store [3] 389/5 389/23 459/2 story [1] 421/18 straight [2] 446/9 446/11 straightforward [1] 469/20 strawman [1] 477/3 street [3] 337/14 342/18 478/7 **stretches** [1] 379/10 strong [2] 400/14 477/14 stronger [1] 379/25 structurally [1] 368/3 **structure** [1] 364/19 struggle [1] 368/6 struggling [1] 480/4 stuck [1] 358/5 studies [1] 449/13 study [5] 407/8 440/7 454/14 461/2 462/24 386/21

studying [1] 377/25

stuff [1] 378/9 subject [2] 425/1 425/5 **submarkets** [1] 369/3 submission [1] 470/6 submissions [1] 469/23 submit [15] 344/10 351/17 360/14 396/4 399/22 416/25 418/19 424/4 447/6 459/11 459/18 471/4 471/5 473/15 473/20 submitted [6] 378/3 443/20 443/25 468/13 468/21 471/7 suboptimally [2] 341/18 422/13 subs [1] 409/19 **Subsequent [1]** 378/2 substantial [1] 448/1 substitutability [14] 349/2 352/10 354/16 367/10 368/22 369/10 369/17 370/7 370/9 370/18 393/13 393/15 393/17 394/22 substitutable [5] 348/9 401/12 401/22 402/5 478/17 **substitute [9]** 347/22 349/20 362/21 378/18 419/23 437/18 437/20 446/9 478/9 **substitutes [9]** 347/21 348/14 348/17 354/10 354/19 362/13 403/19 437/17 466/1 substituting [4] 359/18 359/19 359/22 370/21 substitution [20] 352/21 352/24 353/1 353/2 353/4 359/2 359/4 359/5 362/5 362/7 362/8 362/8 362/11 362/16 362/18 370/25 384/12 384/13 384/14 409/19 subsume [1] 346/1 success [1] 376/15 successful [7] 399/9 400/5 406/23 435/11 442/1 442/6 464/13 such [8] 343/20 364/24 369/11 370/22 376/22 416/21 417/15 432/22 sufficient [5] 354/20 408/2 432/16 433/18 433/18 suggest [5] 374/11 374/17 377/8 390/20 442/1 suggested [4] 394/5 406/1 444/18 460/15 **suggesting [2]** 433/18 476/16 suggests [2] 375/13

suit [1] 419/11

Suite [2] 338/5 338/10 **summary [2]** 413/5 425/12 **sumo [1]** 342/3 super [3] 343/15 344/9 383/20 superimposed [1] 405/23 superimposing [1] 451/11 support [2] 423/24 429/9 **supported [2]** 347/13 418/2 supports [1] 471/6 suppose [1] 386/8 supposed [2] 352/20 417/21 Supreme [1] 342/22 Supreme Court [1] 342/22 sure [21] 353/8 357/5 361/8 361/11 364/22 365/1 370/1 396/3 402/3 402/7 408/14 427/12 428/8 438/1 444/15 444/24 446/6 448/10 454/25 472/2 477/9 surprising [1] 464/25 survey [1] 462/24 sustain [3] 385/5 386/19 453/3 **SVP [2]** 346/17 366/21 SVPs [13] 366/18 372/2 372/24 372/25 373/1 373/5 373/7 436/7 436/9 437/6 437/20 441/9 441/15 **SW [1]** 338/13 swap [3] 423/9 426/10 472/19 swapped [1] 473/10 swapping [2] 423/10 425/5 swaths [1] 369/21 swings [1] 380/6 switch [4] 351/14 393/25 471/19 471/20 switched [1] 427/1 switching [4] 352/6 352/8 401/21 403/25 sworn [1] 444/7 synonym [1] 467/24 Sysco [4] 347/12 362/17 399/23 448/15 tactics [1] 444/10 take [26] 346/10 347/17 348/16 373/7 384/20 384/20 387/16 394/10 399/12 401/6 401/7 405/13 410/12

439/5 454/13 477/10

477/12 478/12 479/11

tells [5] 348/19 374/19 400/7 427/22 441/21 ten [2] 342/8 401/18 term [5] 351/3 422/3 454/16 455/14 456/2 terms [18] 343/9 368/6 369/19 377/18 379/1 411/18 421/25 438/14 386/13 394/17 394/21 438/15 438/23 439/1 420/15 429/14 429/15

503 481/1 takeaway [1] 461/1 takes [6] 393/22 405/5 411/7 455/12 461/18 464/22 taking [4] 345/12 353/18 414/13 462/24 talk [21] 345/8 346/22 356/17 364/25 382/10 389/12 404/2 409/4 409/6 415/4 417/16 436/4 443/11 444/21 445/9 447/7 447/18 449/19 454/5 454/11 479/7 talked [16] 355/23 358/17 366/20 372/17 376/19 380/12 384/5 406/20 407/25 413/23 415/2 416/15 436/6 444/14 450/11 453/14 talking [20] 361/6 373/16 374/24 376/21 380/18 381/18 382/5 382/13 398/12 401/25 402/22 412/25 417/13 428/18 436/12 437/22 446/2 450/2 450/2 472/6 talks [3] 376/24 402/24 421/14 **Tampa [1]** 432/14 tangible [1] 477/11 tangibly [1] 416/22 target [3] 373/1 412/12 465/7 targeting [1] 360/13 targets [2] 342/10 422/10 tautological [1] 391/12 tax [1] 362/20 taxes [1] 362/22 team [1] 342/16 tech [1] 339/15 technique [1] 455/18 technological [1] 463/22 technologies [2] 376/15 395/13 technology [6] 375/16 375/25 456/22 462/6 463/19 468/24 television [2] 442/3 479/12 tell [4] 389/13 399/23 417/17 419/1 telling [1] 428/21

431/10 441/21 451/10

453/10 460/15 467/13

```
terms... [1] 474/9
terrible [1] 383/14
terribly [1] 362/6
terrific [1] 480/25
territory [1] 364/20
test [22] 347/5 354/18
355/7 355/7 355/17
355/18 356/4 382/5
384/18 385/16 402/18
402/20 403/1 403/2
403/7 403/8 415/23
416/1 416/2 416/11
461/10 461/12
tested [3] 355/23 409/1
416/12
testified [15] 340/11
340/15 351/2 356/19
370/15 372/13 372/14
389/12 391/23 396/5
398/21 409/22 420/22
437/19 440/2
testifying [1] 369/16
testimonial [1] 466/6
testimony [20] 361/20
367/3 377/10 381/16
386/24 391/4 392/5
396/17 400/7 401/9
402/21 406/16 434/19
436/16 437/2 443/19
444/7 444/19 467/16
468/21
tests [1] 471/3
text [40] 340/12 340/22
345/2 346/14 346/18
346/25 347/24 347/25
350/13 350/24 351/13
352/12 364/12 365/7
365/19 365/19 365/23
367/23 368/9 368/15
369/4 369/13 370/4
370/7 370/19 370/22
371/22 379/1 382/15
405/2 405/11 409/14
413/2 430/19 438/3
438/6 438/6 438/14
438/19 458/20
texts [1] 368/13
than [31] 341/16 342/8
351/13 357/15 363/2
363/2 363/18 366/4
375/22 378/15 379/1
386/15 393/2 393/11
394/6 395/5 396/10
403/6 405/11 405/12
407/15 424/21 427/11
430/15 433/3 440/10
448/18 452/5 467/3
475/21 479/13
Thank [21] 339/5 373/9
373/10 379/17 398/1
409/9 410/10 410/11
410/21 410/24 411/23
412/24 434/15 437/23
437/24 439/13 439/14
444/5 470/7 470/8
481/1
```

Thank you [15] 373/9

```
379/17 398/1 409/9
410/10 410/11 410/24
411/23 437/23 437/24
439/13 439/14 444/5
470/7 470/8
Thanks [1] 410/15
that [789]
that's [173]
their [84] 340/25
341/24 342/24 349/6
349/7 352/13 353/13
355/19 358/13 358/19
359/20 363/14 365/15
365/20 366/25 367/14
367/16 367/19 371/25
372/22 373/22 375/6
376/15 376/15 377/22
378/14 381/6 382/22
383/18 386/5 387/7
387/9 388/3 391/23
394/11 395/6 395/12
397/6 398/24 399/2
399/3 399/14 400/24
403/3 413/21 416/1
416/11 417/14 417/14
417/16 417/17 417/23
417/23 417/24 420/16
421/6 422/6 422/10
428/3 428/10 428/21
435/13 437/13 440/4
440/6 440/9 440/10
443/3 445/9 447/8
456/6 457/2 461/20
461/21 461/22 462/6
462/7 463/9 472/13
473/9 473/16 478/6
480/7 480/8
them [51] 348/8 348/9
349/10 353/15 353/18
356/4 358/6 361/2
367/5 368/2 368/3
368/13 368/13 370/17
370/19 371/12 371/24
372/2 373/2 373/3
373/6 375/8 376/11
383/14 387/22 389/13
393/4 395/9 395/11
397/5 404/7 409/15
416/1 421/8 437/11
440/8 443/3 447/15
448/3 450/22 452/19
456/15 462/6 464/3
464/3 464/4 464/9
464/19 466/12 469/16
472/22
theme [4] 349/7 352/9
471/12 479/2
themselves [5] 357/11
401/5 414/14 441/1
462/14
then [24] 345/4 346/4
346/11 349/25 370/24
373/21 377/4 394/19
395/21 412/17 427/13
431/17 445/6 447/12
456/21 456/23 459/13
464/2 470/19 472/15
474/5 474/9 478/7
```

```
481/3
theory [10] 363/7
363/7 363/9 378/14
391/15 393/12 402/11
403/16 404/8 420/9
there [127] 345/7
345/16 352/7 352/24
353/4 354/20 355/5
359/2 359/2 359/5
361/18 362/4 362/17
362/18 365/8 366/21
366/23 367/25 368/9
368/11 368/22 369/4
369/7 369/10 369/11
369/17 369/21 370/6
370/8 370/9 370/10
370/25 371/3 371/6
372/9 372/9 372/12
373/24 378/17 383/18
387/12 388/7 389/22
389/25 391/14 391/15
392/8 392/8 392/14
392/19 392/19 393/13
393/14 393/23 394/3
394/7 394/8 394/11
394/11 394/24 394/25
395/3 395/5 397/2
397/15 397/18 399/23
402/3 408/3 411/10
413/24 416/7 416/19
417/5 417/5 417/18
418/22 419/2 419/3
422/16 423/18 423/21
426/22 429/1 431/15
432/6 434/5 434/6
437/17 438/3 439/5
439/9 439/23 440/22
440/23 441/11 441/17
441/18 447/20 448/17
449/11 449/12 451/8
451/9 452/10 455/8
455/10 455/13 457/5
457/9 457/14 461/2
462/10 466/13 466/16
468/2 468/4 468/20
470/19 470/20 473/4
474/8 474/8 474/13
477/25 478/1 480/4
there's [90] 339/17
341/10 343/23 344/11
344/16 346/7 351/16
351/20 352/25 353/1
358/10 358/11 362/6
362/7 362/11 362/12
362/16 368/23 370/18
371/4 371/7 371/18
372/5 373/2 375/5
377/19 380/24 381/16
383/1 387/12 388/11
388/14 388/24 392/13
394/13 395/9 395/10
395/25 396/1 396/8
396/17 399/21 400/10
401/25 405/11 407/6
407/12 408/2 409/4
413/11 413/19 418/11
418/25 419/7 421/11
421/11 424/2 425/3
```

442/24 443/23 444/3 450/7 452/21 453/25 453/25 455/6 455/23 458/2 461/11 462/24 464/16 464/17 464/22 465/20 465/24 467/19 467/23 470/1 470/20 474/3 474/8 475/24 475/25 478/13 479/9 479/24 479/25 therefore [2] 419/10 474/21 therein [1] 425/9 these [123] 346/5 352/11 353/11 354/16 354/18 358/3 361/9 362/9 362/12 363/7 367/16 368/5 368/6 372/25 374/10 374/11 374/17 376/10 376/24 377/13 377/18 378/10 378/21 379/1 379/10 379/18 380/3 381/23 383/10 383/19 385/9 386/17 387/20 387/23 387/25 388/9 388/21 389/1 389/9 389/15 390/5 390/10 391/1 391/1 391/4 392/25 393/1 393/5 393/10 393/23 395/2 395/5 395/10 395/16 398/12 398/22 399/4 399/8 400/20 401/1 401/5 401/7 401/19 401/22 402/12 403/18 408/18 410/1 413/3 417/15 418/10 419/18 420/25 424/14 429/7 429/8 429/18 429/22 436/11 437/6 437/7 440/4 440/8 441/9 443/6 444/25 447/4 450/6 451/1 451/1 452/18 453/16 453/17 454/22 455/8 455/9 457/9 459/9 460/6 460/7 460/24 460/25 461/25 463/24 464/5 465/25 466/14 466/21 467/5 468/16 468/25 470/13 470/14 470/19 474/9 474/11 474/14 474/21 474/24 475/3 475/4 475/19 475/21 they [288] they'll [2] 353/23 353/23 they're [81] 344/7 344/9 348/4 348/5 348/17 348/18 350/21 350/25 351/4 352/15 352/16 353/12 359/18 359/19 360/20 361/24 361/25 363/20 363/20

365/15 365/24 366/17

366/18 367/11 367/13

433/25 435/16 441/19

368/25 374/13 376/13 377/5 380/11 383/11 387/2 387/3 390/18 392/16 393/9 393/24 395/7 395/12 395/12 399/10 400/4 400/11 408/7 408/9 410/8 418/20 418/20 418/21 421/9 425/5 428/6 430/17 435/21 436/20 436/24 440/2 440/11 441/15 442/7 442/8 442/15 442/16 448/10 450/23 451/17 451/18 452/14 452/25 456/14 456/20 456/21 457/5 461/25 462/25 463/9 464/11 470/24 474/23 474/24 478/14 they've [12] 363/13 367/18 370/16 375/24 378/7 384/2 390/8 445/18 446/3 449/19 450/1 465/16 thicken [1] 386/12 thicker [2] 394/7 468/4 thing [6] 350/23 393/20 407/13 421/23 440/23 461/24 things [29] 372/7 374/7 374/15 375/17 383/10 384/16 386/25 387/24 397/8 407/16 423/13 440/18 447/1 447/21 450/23 455/16 459/3 461/7 461/19 462/7 463/18 463/23 463/24 464/5 465/8 469/16 471/22 475/19 480/6 think [180] thinking [5] 343/9 345/24 377/6 463/1 473/4 thinks [3] 393/6 407/23 472/15 third [2] 439/20 458/9 third-party [1] 439/20 this [326] This is Civil [1] 339/7 those [52] 344/6 345/20 347/9 356/18 360/12 360/15 362/19 365/23 366/15 368/1 369/12 370/7 371/2 371/6 373/3 379/6 379/8 380/9 380/9 385/4 385/4 385/13 386/19 393/4 396/18 396/24 399/6 400/22 401/2 405/23 414/19 429/11 430/25 437/11 440/25 441/19 444/14

446/1 446/18 450/10

452/2 459/12 461/23

467/23 468/11 470/15

462/7 466/20 467/1

474/18 475/2 480/5

though [4] 367/16

though... [3] 450/23 454/3 477/7 thought [6] 351/23 356/7 363/2 364/17 443/15 469/13 thousand [2] 354/1 354/3 threat [1] 375/22 three [6] 345/1 345/2 353/7 415/1 429/11 467/19 through [19] 341/11 352/2 376/18 386/10 413/12 413/13 413/14 419/16 422/25 430/4 431/2 433/5 434/10 435/21 436/22 440/19 449/3 452/18 473/4 throughout [1] 349/7 **Thus [1]** 432/18 tie [1] 457/18 TikTok [21] 359/13 374/8 376/10 376/16 376/22 377/3 377/3 378/6 378/7 378/19 379/6 380/6 392/24 395/4 398/12 398/22 399/4 399/25 400/3 410/2 467/5 time [59] 345/5 345/15 346/5 355/24 356/5 356/6 360/3 360/10 363/12 363/14 364/14 374/3 375/2 377/2 377/24 378/3 379/11 380/7 386/5 387/6 387/13 387/17 392/4 392/15 393/7 396/7 396/8 396/13 398/11 401/18 404/21 409/1 409/1 410/3 411/21 412/8 413/3 414/1 423/21 423/21 425/19 434/16 440/14 440/18 446/2 446/3 450/8 450/19 450/25 455/25 456/7 456/23 461/8 461/15 463/17 464/5 467/16 468/15 469/25 Time-delayed [1] 360/10 times [4] 353/25 361/22 420/14 480/19 timing [1] 397/21 titled [1] 482/4 Tobacco [1] 411/9 today [14] 340/2 341/3 341/16 342/6 342/9 344/10 344/25 363/17 373/17 374/18 375/11 425/2 454/19 478/21 together [4] 345/20 456/14 462/7 475/12 too [10] 372/19 387/13 393/4 396/2 407/3 444/9 448/15 453/23 390/5 393/4 394/19 461/16 469/19

took [3] 450/18 461/1 465/12 tool [3] 347/11 423/16 428/2 tools [3] 352/7 397/4 412/17 top [10] 386/13 404/22 423/9 456/23 456/25 458/1 458/4 458/10 458/16 461/19 top-ranked [1] 458/16 topic [2] 356/8 357/1 topics [2] 345/1 413/4 tops [1] 394/16 total [2] 374/5 474/6 touch [1] 429/3 touching [1] 413/25 towards [1] 411/6 town [1] 372/12 tracking [2] 451/12 451/14 tracks [1] 452/1 Tracy [3] 340/14 350/23 351/11 trade [1] 463/22 traded [1] 421/21 tradeoff [2] 422/12 427/4 traditional [2] 415/17 432/12 traffic [13] 372/6 394/2 394/4 434/24 440/9 440/21 441/9 441/16 442/7 442/7 442/8 442/22 479/20 transaction [1] 470/25 **transcript [5]** 337/9 338/20 355/11 403/5 482/3 transcription [1] 338/21 translated [1] 451/6 transparency [5] 341/25 389/23 396/24 406/22 419/3 travel [2] 383/19 465/15 tree [2] 457/13 472/11 trend [6] 404/23 405/13 405/15 406/3 451/23 451/24 trial [14] 337/9 340/11 341/2 341/16 343/1 374/2 378/4 386/24 401/17 415/2 415/15 470/14 470/15 470/19 trickle [1] 346/3 tried [11] 356/3 356/4 361/21 385/22 449/17 450/1 450/14 458/19 470/13 470/14 480/6 tries [2] 404/12 456/1 **Tripadvisor** [1] 366/13 **TRO [1]** 448/13 true [12] 353/25 377/9 378/4 378/6 380/13 381/1 381/15 386/8

453/19 truth [2] 386/3 428/22 **try [17]** 376/7 387/14 410/13 448/11 448/12 450/12 450/20 453/21 456/12 457/9 461/9 462/1 462/2 464/3 464/4 471/11 475/20 trying [28] 348/4 348/5 375/3 378/22 381/6 382/25 387/10 387/19 388/9 388/12 390/18 390/24 391/21 403/22 414/22 414/22 421/9 428/6 446/3 451/16 458/11 464/4 470/24 473/16 473/18 473/22 477/5 480/9 tune [2] 416/23 454/22 tuning [3] 342/5 413/20 458/5 turn [6] 339/18 354/23 435/19 442/18 470/2 478/19 turned [2] 342/3 410/6 **TV [1]** 348/6 twice [1] 448/23 two [28] 345/2 345/20 345/24 346/12 352/5 368/7 369/2 369/12 369/18 370/1 371/1 371/13 371/15 372/7 389/7 392/16 405/24 409/24 412/11 420/11 420/12 423/9 423/13 423/15 447/4 450/24 477/19 480/5 two-plus [1] 345/24 twofold [1] 356/10 **TYLER [1]** 338/9 type [5] 353/15 389/18 404/13 407/7 442/25 types [15] 348/1 353/12 360/12 363/7 368/25 368/25 375/3 376/25 380/17 389/15 402/6 402/12 440/11 443/17 465/7 typical [5] 355/2 392/17 416/6 416/7 416/9 typically [1] 375/19 **U.S [2]** 337/13 348/10 ultimate [3] 354/21 361/17 364/1 ultimately [11] 352/19 355/15 362/9 406/23 426/9 426/9 426/12 435/23 469/4 473/13 475/5 unable [1] 480/8 unclear [1] 395/24 under [8] 347/21 382/4 382/14 396/3 403/9

411/9 420/16 472/16

undercuts [2] 442/14

444/20 underpriced [2] 387/11 454/2 understand [22] 347/11 349/1 349/4 356/9 356/16 358/24 359/1 359/16 377/20 385/24 387/1 389/11 405/22 418/9 425/18 434/14 454/17 460/10 464/6 473/25 477/17 478/18 understanding [3] 388/10 406/24 427/6 understood [6] 405/19 405/20 423/19 433/19 469/8 470/20 unhappy [2] 442/15 442/16 unified [1] 369/21 uniform [2] 387/24 393/1 uniformly [2] 385/4 455/24 unique [12] 359/25 364/6 364/12 381/25 382/3 385/17 385/18 386/15 401/14 415/16 453/15 467/2 Unit [1] 338/3 **UNITED [7]** 337/1 337/3 337/10 339/7 339/25 347/18 365/7 United States [3] 339/25 347/18 365/7 United States of [1] 339/7 universe [2] 364/11 364/13 unlawful [5] 356/11 388/11 445/13 447/17 452/22 unless [3] 339/17 394/3 397/1 unlike [2] 449/1 465/11 until [3] 411/5 412/15 419/21 unto [1] 466/23 up [62] 351/25 354/1 354/3 358/25 360/18 361/5 363/16 365/10 367/19 367/22 371/25 373/17 374/22 380/19 381/1 388/1 389/6 391/21 395/17 397/10 399/17 399/18 404/19 405/9 405/15 407/3 407/4 408/11 408/12 408/12 409/6 411/9 414/22 420/18 425/13 426/3 426/7 427/2 428/5 428/17 431/23 437/10 439/10 443/18 444/3 450/3 452/20 453/1 453/2 456/7 457/18 461/3 462/13 471/8 475/20 476/4 476/23 477/3 477/4

477/5 477/16 479/21 **update [1]** 341/15 updates [1] 415/14 **upon [8]** 359/14 362/25 386/8 405/23 438/8 462/6 466/2 467/16 **UPX1045 [1]** 455/1 **UPX16 [1]** 455/2 **UPX33 [1]** 401/3 **UPX36 [1]** 357/9 **UPX427 [1]** 363/19 **UPX456 [1]** 457/11 **UPX519 [1]** 374/23 **UPX737 [1]** 460/7 us [15] 347/6 354/8 357/19 357/20 372/20 374/19 383/8 393/8 399/23 402/21 419/1 434/23 459/25 469/19 473/20 usdoj.gov [1] 337/16 use [19] 340/21 343/19 349/20 361/17 363/21 365/22 366/14 368/12 369/7 371/6 378/7 379/22 386/19 420/4 454/18 468/10 469/11 475/9 475/11 used [9] 342/4 342/14 343/19 347/11 380/19 381/17 428/1 435/9 439/21 useful [5] 362/6 376/6 376/11 432/16 440/21 user [9] 360/1 360/2 366/17 378/24 379/23 409/16 422/3 454/15 459/19 users [4] 394/12 394/18 421/4 421/4 users' [1] 381/12 uses [1] 455/20 using [9] 371/12 376/21 376/24 380/4 399/14 434/9 441/15 441/15 476/1 usually [1] 432/15 utilization [1] 371/19 utilize [3] 370/7 371/10 371/10 478/4

V4 [3] 477/13 477/13 **V6 [5]** 477/14 478/5 478/7 478/11 478/16 vague [1] 404/8 valid [1] 391/24 validating [1] 416/1 valuable [5] 376/5 407/24 440/21 467/6 467/7 value [37] 357/24 360/12 365/20 375/7 386/5 387/1 387/15 387/19 387/22 390/16

390/25 391/6 391/9

397/8 408/1 408/2

value... [21] 408/21 408/23 413/6 413/15 413/19 415/6 417/13 417/16 421/4 421/7 435/4 453/19 456/2 458/4 458/6 458/10 459/3 459/21 461/12 461/13 480/17 value-increasing [1] 461/13 valuing [1] 453/20 Vandyke [1] 383/15 variation [1] 456/13 variety [3] 375/23 413/11 458/23 various [14] 363/22 363/23 373/17 374/11 383/1 386/10 390/10 403/10 408/20 440/1 452/18 464/21 467/18 468/16 varying [2] 374/4 374/4 vast [2] 368/11 457/24 vein [1] 435/2 version [3] 358/21 358/22 385/23 versus [9] 339/8 347/18 352/17 380/12 393/11 402/2 459/13 468/18 469/17 verticals [1] 384/4 very [76] 340/24 350/5 354/4 358/6 360/16 361/25 365/12 374/19 374/20 374/20 375/9 376/10 376/10 376/11 384/3 385/1 385/20 385/20 385/21 386/25 388/2 391/2 391/2 397/9 397/12 397/12 402/3 405/13 408/3 409/10 409/25 411/3 413/18 415/22 420/8 421/2 421/6 423/4 423/7 423/16 428/12 428/21 440/21 440/21 441/21 442/5 442/5 446/11 446/11 449/12 452/2 452/2 453/15 453/15 453/17 453/17 458/1 460/12 465/3 465/3 465/5 465/5 465/7 465/7 465/12 465/12 465/12 466/13 466/13 467/1 467/2 467/3 467/3 467/11 467/11 480/8 viable [1] 340/10 Vice [1] 342/12 Vice President [1] 342/12 videos [1] 380/7 view [15] 368/1 368/2 368/3 368/5 369/17 393/9 393/10 414/12 418/12 434/14 436/15

436/23 452/9 467/4

viewed [2] 345/20 437/20 violated [1] 343/2 violation [1] 416/16 vis [4] 395/10 395/10 453/23 453/23 vis-à-vis [2] 395/10 453/23 Visa [5] 347/18 348/10 348/15 362/17 399/22 void [1] 474/19 volume [3] 394/2 412/1 412/1 **Vrbo [2]** 371/25 383/19 **vs [1]** 337/5 wait [1] 478/22 walk [1] 433/5 walked [2] 389/23 440/19 walking [2] 389/4 452/18 Wall [1] 342/18 Walmart [1] 373/1 want [44] 341/17 346/9 357/10 363/12 363/14 366/14 373/5 379/24 380/8 381/14 392/3 397/20 402/3 402/15 403/18 404/2 413/1 424/13 426/25 426/25 428/19 439/15 439/16 442/18 443/11 443/12 443/18 444/21 444/22 444/23 446/6 447/21 454/5 457/20 460/3 462/3 467/21 467/21 467/23 469/20 474/1 476/10 478/15 480/10 wanted [7] 350/7 363/18 386/1 429/11 434/13 441/6 470/5 wanting [1] 462/4 wants [4] 360/2 382/1 400/16 418/4 warns [1] 354/8 was [137] 339/14 340/14 341/6 341/8 342/13 350/18 351/3 351/9 351/12 351/13 351/18 351/22 352/1 352/9 354/24 357/2 357/11 362/17 362/18 362/20 365/12 367/9 375/1 375/2 376/3 376/23 377/17 378/3 379/15 382/19 383/17 383/18 385/5 386/24 390/11 391/19 392/6 392/25 395/15 395/16 395/17 398/20 402/7 402/9 402/10 403/2 403/8 403/11 405/22 405/25 406/5 406/15 408/3 412/7 412/12 412/14 413/5 413/6

473/12

413/7 415/7 415/10 415/13 415/15 415/22 416/7 421/2 421/2 421/6 422/17 422/25 423/20 423/25 424/8 424/12 424/16 424/25 425/15 428/2 428/12 431/16 436/17 439/17 440/14 440/15 440/17 440/20 440/20 440/23 440/23 443/16 443/20 443/20 443/24 444/23 447/20 448/4 448/25 449/2 449/6 449/11 450/18 450/22 450/24 451/5 452/3 457/13 458/17 458/17 460/8 462/10 462/18 463/11 464/25 465/3 465/10 465/12 465/18 466/8 466/13 466/16 466/22 466/22 468/15 468/19 468/22 468/22 469/4 469/7 469/15 470/11 470/19 471/19 471/22 472/1 472/14 474/7 480/7 **Washington [4]** 337/5 337/14 338/14 338/19 wasn't [5] 362/22 416/12 448/25 461/2 470/18 **wax [1]** 358/19 way [28] 361/14 361/15 364/2 369/19 369/20 372/9 375/5 380/9 385/18 386/15 386/19 388/17 389/17 405/16 418/4 419/23 437/8 438/18 442/12 443/25 452/23 454/22 457/12 473/18 476/17 477/19 479/15 479/22 ways [11] 377/19 386/11 387/10 387/12 413/5 413/8 413/11 420/12 441/2 441/11 470/11 wc.com [1] 338/15 we [287] we believe [6] 343/2 343/25 360/15 362/17 458/3 460/2 we will [2] 349/12 481/2 we'd [2] 356/7 433/7 we'll [11] 345/8 346/10 356/17 382/10 409/5 427/18 445/9 447/7 479/7 481/1 481/2 we're [44] 345/13 354/9 355/25 355/25 356/8 360/9 361/6 373/16 373/23 380/23 380/23 381/18 382/4 382/13 389/15 390/15 401/20 401/21 408/19 408/19 410/25 411/17

413/14 413/15 413/15 413/16 414/15 421/18 422/20 427/14 430/15 433/14 437/22 444/24 446/8 458/11 464/1 464/2 464/4 466/2 468/9 471/12 474/16 479/15 we've [32] 356/13 356/13 367/22 384/5 384/24 387/21 394/15 407/16 416/14 419/15 420/25 422/16 428/23 429/16 431/16 432/7 432/7 438/2 445/6 450/11 461/7 467/22 468/13 468/21 469/22 469/23 470/4 471/7 471/16 473/10 474/20 476/21 weaker [1] 418/17 web [3] 442/21 458/23 459/8 **WEBB [1]** 338/9 website [2] 367/2 443/4 websites [1] 393/6 week [1] 340/17 weeks [5] 345/24 385/2 385/12 385/13 401/19 weighed [1] 473/13 weighs [1] 369/18 well [50] 340/24 340/24 342/4 347/12 352/15 355/24 368/8 369/23 372/5 375/13 375/19 381/5 381/8 382/16 383/5 385/3 388/22 389/3 389/6 389/14 393/16 393/19 394/23 396/2 397/2 404/6 405/19 406/3 413/14 420/8 422/16 424/2 427/13 431/12 434/12 441/12 443/24 446/15 446/15 453/1 462/2 463/1 463/8 464/19 471/6 472/11 475/11 479/7 479/15 479/19 went [6] 351/19 351/19 396/14 430/4 436/16 478/4 were [59] 345/3 348/12 348/14 350/8 352/1 364/18 370/23 377/24 381/6 383/20 391/15 396/7 399/5 401/18 412/23 414/1 417/16 417/21 417/24 422/11 427/9 427/10 428/1 428/4 428/7 428/9 428/9 428/10 428/21 429/8 429/11 431/6 439/9 440/12 440/16 440/17 440/18 440/22 440/23 440/25 449/1

449/12 450/24 460/17 462/11 463/10 463/11 463/13 465/5 467/20 468/19 469/3 469/8 469/9 469/9 469/17 469/17 469/18 474/1 weren't [3] 371/23 440/24 469/3 wfcavanaugh [1] 338/11 what [238] what's [23] 349/21 350/2 358/20 383/24 385/17 385/18 388/5 388/22 388/23 388/23 389/7 394/2 403/9 425/24 427/6 429/25 435/6 442/14 453/14 453/15 454/5 454/6 464/24 whatever [8] 353/18 360/1 361/1 373/22 381/14 391/9 444/9 447/14 when [49] 341/6 354/8 354/9 354/24 358/15 358/18 365/14 367/1 375/10 375/13 375/13 375/15 375/15 376/14 376/19 377/2 382/13 386/4 388/8 388/21 389/12 389/25 392/23 400/11 403/15 405/24 410/23 411/11 411/13 413/5 420/10 436/4 437/21 439/23 440/10 441/15 441/15 442/10 442/24 442/25 448/6 448/9 449/5 453/16 459/2 461/12 462/25 465/1 468/7 whenever [1] 342/20 where [77] 342/14 344/11 345/9 346/9 349/5 349/12 349/16 350/4 351/8 352/13 352/20 353/3 354/13 355/16 357/23 358/15 364/9 364/9 370/13 370/15 370/16 370/16 372/10 372/11 372/14 378/20 382/2 382/20 384/14 384/17 384/17 387/25 393/3 393/7 393/8 394/17 395/2 396/8 398/4 400/12 411/4 412/15 412/23 414/19 415/18 417/6 417/10 419/2 419/20 419/25 424/4 426/10 426/19 426/21 428/1 428/4 428/6 428/9 428/9 429/16 434/2 434/3 441/16 443/15 444/11 444/25 448/10 454/1 464/25 466/9 472/5 473/19 473/22 474/16 475/21 476/8

W where... [1] 478/13 Where's [4] 384/1 384/1 384/2 384/18 whereas [1] 370/9 whereby [1] 344/16 whether [18] 349/3 352/21 373/22 391/10 396/24 407/23 420/25 423/22 424/11 425/3 432/19 453/21 461/12 466/2 475/6 478/15 479/16 480/1 which [64] 341/15 342/6 342/15 346/14 351/7 352/17 355/6 356/16 358/2 358/9 362/4 362/18 363/25 365/1 365/10 367/22 371/23 379/4 385/1 391/24 394/1 395/25 396/2 398/18 398/19 400/18 402/5 402/15 404/23 404/24 405/19 405/20 415/15 420/11 420/12 421/2 421/3 423/19 433/3 433/4 433/10 434/21 435/7 436/21 440/13 441/14 451/19 454/10 454/14 454/21 456/14 458/19 460/22 461/17 462/11 462/17 462/24 467/4 467/22 468/19 469/12 470/20 471/12 472/17 while [13] 340/20 341/21 345/7 347/20 348/3 348/14 351/2 394/19 420/19 422/15 432/5 470/21 472/6 Whinston [9] 355/23 392/7 402/17 403/8 420/22 421/19 421/22 430/9 455/20 Whinston's [1] 422/1 who [22] 344/4 350/18 351/3 351/7 365/13 372/23 381/23 381/25 382/1 385/22 392/14 392/19 392/20 395/15 436/9 440/2 461/25 468/23 469/3 469/8 469/9 469/10 who's [1] 456/18 who've [1] 382/24 whole [6] 348/1 375/23 428/15 428/16 458/23 470/23 why [46] 356/16 360/6 365/5 368/21 369/2 369/4 370/1 372/4 372/7 372/16 373/4 378/25 382/3 382/12 385/15 391/20 395/11 398/24 399/8 402/17 403/17 405/12 406/24

407/1 409/2 409/5

409/17 410/12 412/25

417/16 417/17 424/17 437/6 438/11 441/7 442/24 446/17 446/18 452/25 464/13 468/6 468/6 469/12 474/24 477/7 478/18 wide [1] 467/8 will [36] 342/25 344/16 345/6 349/12 357/7 358/8 365/22 393/25 395/10 405/4 416/2 417/18 417/20 420/12 423/4 423/9 428/5 428/20 438/25 444/10 448/6 453/10 453/11 454/7 456/6 459/10 460/2 461/21 461/21 461/22 470/25 474/14 478/3 478/5 478/8 481/2 William [5] 338/8 338/16 339/10 482/2 482/8 **WILLIAMS [1]** 338/13 willing [3] 422/8 436/2 480/14 willingness [1] 347/22 win [8] 374/14 420/12 423/21 456/12 456/23 456/25 461/22 462/2 winner [15] 420/13 420/18 421/16 423/12 425/21 426/2 426/6 426/7 426/9 426/12 455/12 458/16 461/18 464/22 472/16 winner-takes-all [3] 455/12 461/18 464/22 winners [5] 391/2 454/10 456/9 472/7 472/15 winning [9] 387/1 423/15 425/13 425/14 426/21 428/1 456/20 461/19 462/1 wins [3] 387/7 387/7 387/7 wiser [1] 463/6 wished [1] 468/9 within [28] 346/14 350/3 350/12 350/12 350/13 350/13 351/5 351/10 351/21 360/15 364/9 364/10 364/13 365/8 366/24 366/25 367/14 369/8 369/8 369/11 370/4 371/12 372/12 374/25 417/21 428/8 428/8 441/21 without [9] 340/2 340/4 342/24 372/14 386/20 391/13 441/11 441/13 453/9 witness [6] 351/3 351/22 437/19 437/19 471/11 471/18 witnesses [5] 352/2 352/3 352/3 375/14

woe [1] 442/11 won [1] 427/23 word [4] 361/13 401/7 401/7 422/1 words [16] 341/17 342/14 370/22 387/8 392/10 396/6 407/1 423/23 436/24 445/14 450/1 452/24 453/19 456/5 466/16 469/4 work [9] 341/23 372/20 416/2 418/6 418/10 418/14 462/1 463/20 463/21 worked [6] 416/5 416/11 416/13 421/15 428/4 428/22 Working [1] 342/2 works [5] 378/8 418/3 425/2 425/11 428/14 world [11] 402/20 403/2 410/6 432/1 433/17 471/15 471/15 471/17 472/2 478/13 480/16 worried [2] 428/12 428/21 worry [2] 358/7 395/16 year [14] 340/17 worrying [2] 342/24 461/18 worse [4] 341/19 422/6 422/6 422/19 worth [2] 346/24 360/22 would [95] 340/3 344/22 351/13 353/3 357/20 360/16 363/16 365/13 366/9 366/13 368/11 369/18 370/23 371/2 372/19 373/22 374/16 375/19 377/8 379/19 380/1 380/20 382/16 382/18 384/22 385/10 388/18 389/2 390/6 390/20 391/10 391/16 394/25 395/18 396/4 397/13 397/14 397/15 397/16 397/18 399/6 407/3 407/4 407/19 407/20 408/3 409/22 410/3 410/3 410/7 415/25 416/20 416/21 417/25 419/2 420/20 420/23 424/11 424/18 424/21 426/16 433/22 433/23 438/5 438/8 438/19 438/24 439/1 439/10 444/3 444/8 444/11 444/12 444/12 444/14 444/16 445/17 447/5 448/2 453/24 456/18 459/18 459/23 464/12 469/5 469/12 469/13 471/21 471/23 474/1 476/23 477/15 477/15 479/18 479/23

385/21

wouldn't [4] 371/3 372/20 386/7 437/9 wrap [1] 360/23 wrapping [4] 358/19 359/8 359/10 359/11 wrench [1] 382/2 wrestler [1] 342/3 wrestling [1] 434/13 write [1] 432/11 writing [1] 474/1 wrong [9] 388/15 417/7 438/25 440/15 458/7 475/24 475/25 476/2 478/25 wrote [2] 342/1 342/14 X X percent [2] 438/15 438/19 yeah [17] 349/10 351/19 357/5 371/7 378/5 382/24 383/1 392/12 395/6 399/23 409/4 438/13 444/2 444/16 454/12 464/1 479/22 342/24 342/24 372/23 372/23 398/25 398/25 398/25 398/25 412/12 412/12 412/14 412/14 477/12 year's [1] 477/14 year-over-year [1] 412/12 year-round [1] 340/17 years [6] 342/8 449/15 449/15 449/22 455/20 464/13 Yellow [4] 342/15 358/3 358/4 415/23 **yes [38]** 344/23 351/4 352/25 355/2 355/4 355/10 355/13 356/13 357/12 363/17 378/6 384/11 384/23 386/15 389/22 391/8 399/14 400/4 400/4 401/20 401/21 401/21 402/8 403/11 415/11 416/9 421/17 425/2 427/17 430/3 431/7 431/19 439/7 460/20 466/4 467/5 473/24 475/19 yesterday [22] 340/5 345/12 346/23 355/7 358/25 362/4 364/3 366/20 372/18 373/19 376/18 376/19 377/18 402/2 404/3 431/10 431/12 436/6 437/2 437/7 440/4 445/2 vet [3] 454/17 463/4 472/19 York [2] 338/10 402/5

you [341]

you know [2] 452/12 466/11 you'd [5] 356/12 438/11 438/13 439/5 470/1 you'll [4] 341/16 387/25 388/7 405/18 you're [39] 359/3 359/5 359/10 359/11 360/15 365/1 372/2 379/3 379/5 385/8 385/10 387/18 390/9 390/22 390/23 390/24 396/1 396/2 397/1 403/13 403/14 403/22 407/12 408/16 418/15 433/18 439/23 447/4 448/9 449/6 453/16 454/20 454/22 459/7 475/4 477/21 479/8 480/13 480/15 you've [17] 368/24 369/3 369/3 374/1 377/10 377/10 384/12 391/4 392/4 394/3 403/18 416/15 429/19 429/24 451/22 460/15 473/5 young [1] 377/2 your [209] Your Honor [141] 339/6 339/20 339/21 339/22 339/24 340/1 340/15 340/18 341/15 343/1 343/6 343/16 344/9 344/23 344/25 345/12 345/16 346/6 346/11 346/12 347/12 348/21 350/18 351/17 353/5 353/11 354/22 355/6 358/14 359/21 359/24 361/12 361/20 362/14 363/11 363/17 365/1 365/3 365/17 366/8 367/9 368/8 369/6 369/15 370/3 371/15 372/18 372/21 373/9 373/13 373/25 374/6 374/16 377/9 379/17 383/23 387/11 391/18 395/20 396/4 397/24 398/3 398/5 398/11 398/15 399/2 399/15 399/18 400/19 401/19 401/24 402/15

403/22 404/3 404/10

404/25 406/7 407/5

409/9 409/10 409/11

409/21 409/25 410/5

411/3 413/4 414/13

415/5 415/16 416/24

418/8 418/15 419/14

420/2 422/21 424/2

424/10 425/7 425/24

429/11 430/2 430/23

431/25 433/7 433/19

426/18 427/17 429/10

410/10 410/24 410/25

		508
Υ		
Your Honor [30]		
434/15 434/17 435/23		
437/6 437/22 437/23		
438/5 439/15 439/19		
443/12 443/18 444/1		
444/23 448/4 451/15		
453/6 457/14 459/18		
464/11 470/4 470/8		
471/5 471/16 472/23		
473/15 475/8 475/15		
477/2 480/20 480/24		
Your Honor's [9] 354/6		
354/13 354/14 404/11		
409/13 411/5 426/19		
428/11 450/13		
yours [2] 339/23		
469/19		
yourself [1] 362/20		
I ————————————————————————————————————		
Z		
Zaremba [3] 338/16		
482/2 482/8		
zero [3] 354/2 354/3		
376/16		