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.
	)	October 6, 2023
GOOGLE LLC,	)	9:30 a.m.
	)	
Defendant.	)	Day 18
_____	)	

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

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INDEX OF EXHIBITS

- - -

PLAINTIFF'S	ADMITTED
PSX812	4683
PSX436	4693
1195	4705
UPXD102	4798

- - -

WITNESS INDEX

- - -

WITNESSES	DIRECT	CROSS	REDIRECT	RECROSS
PLAINTIFF's:				
AMIT VARIA	4683	4717	4755	
MICHAEL WHINSTON	4758			

- - -

INDEX OF EXHIBITS

- - -

DEFENDANT'S	ADMITTED
5252	4754

P R O C E E D I N G S

COURTROOM DEPUTY: All rise. The Honorable Amit P. Mehta presiding.

THE COURT: Good morning, everyone. Please be seated.

COURTROOM DEPUTY: Good morning, Your Honor. This is Civil Action 20-3010, United States of America, et al., versus Google LLC.

Kenneth Dintzer for the DOJ.

William Cavanaugh on behalf of Plaintiff States.

John Schmidtlein on behalf of Google.

THE COURT: Good morning, everyone. Good morning.

MR. CAVANAUGH: Good morning, Your Honor.

THE COURT: Mr. Cavanaugh.

All right. So I understand we're going to begin with Mr. Varia this morning.

MR. CAVANAUGH: Yes.

THE COURT: Let's bring him in and proceed.

MS. BELLSHAW: Your Honor, just a brief housekeeping. My colleague inadvertently didn't move in PSX812 yesterday during the exam of Mr. Chang, and we'd just like to move it in now.

THE COURT: All right. We'll accept that subject to the standing objections from both sides.

MS. BELLSHAW: Thank you, Your Honor.

(Plaintiffs' Exhibit PSX812 received into evidence.)

MR. CAVANAUGH: Your Honor, Plaintiff States call Amit Varia.

COURTROOM DEPUTY: Before you have a seat, could you please raise your right hand.

(Witness is placed under oath.)

COURTROOM DEPUTY: Thank you.

THE COURT: All right. Mr. Varia, welcome.

Mr. Cavanaugh.

MR. CAVANAUGH: May I approach?

THE COURT: You may.

MR. CAVANAUGH: I come bearing a binder and water.

THE WITNESS: Thank you.

- - -

AMIT VARIA, WITNESS FOR THE PLAINTIFFS, SWORN

DIRECT EXAMINATION

BY MR. CAVANAUGH:

Q Good morning, Mr. Varia.

You're employed by Google?

A Yes.

Q And you've been employed there since 2011?

A Yeah.

Q Your current position, you're a group product manager, director of product management?

A Director of product management, yes.
Q Okay.
You started at Google as a technical account manager responsible for managing what was then DoubleClick Search customer relations?
A Yes, I did.
Q In 2013, you became a product manager?
A Yes, I did.
Q Was that also for DoubleClick Search?
A Yes, it was.
Q And your responsibilities as a project manager, you were part of a team responsible for defining product requirements and strategy for a portion of DoubleClick Search?
A Yes, I was.
Q And DoubleClick Search was ultimately renamed SA360?
A Yes, it was.
Q Around July of 2018, you were promoted to senior product manager for the SA360 product?
A Yes.
I'm sorry, I was just remembering if it was senior or group product manager. I think it was senior, yes.
Q Okay.
And in that new position, you were responsible for

managing the SA360 product managers and overseeing the SA360 product, correct?

A Yes.

Q Okay.

Around October 2020, you were promoted to group product manager for SA360?

A Yes, I was.

Q And your jobs didn't differ much from when you were the senior product manager in terms of your responsibilities?

A Correct.

Q And then in October 2021, you were promoted to group product manager responsible for the Android Privacy Sandbox?

A It wasn't a promotion, it was just -- I was transferring roles.

Q Kind of a lateral move?

A Yes.

Q And at that point, did your responsibilities for SA360 end?

A Yes, it did.

Q Let me ask you to turn in your binder to PSX436.

A Okay.

Q And this is a promotional -- I'm showing -- a promotional packet that you put together in August of 2020?

A Just give me one moment to peruse it.
Q Sure.
A Yes, it was.
Q And I'm going to be referring to particular pages, and I'll use the Bates number in the bottom right-hand corner.
A Okay.
Q Do you see that?
A Yes, sir.
Q So let's start with the first page, page 266. You refer to your role as product lead for SA360?
A I do.
Q And as the product lead, you state you're "responsible for our strategy, (vision, roadmap) with contributions from product managers on my team and 15 plus product managers across the BP organization."
What's BP?
A At that time, BP was -- it stood for buy-side platforms, which was the name of the group that I worked with.
Q And SA360 was within that buy-side group?
A Yes, it was.
Q If you turn to the next page, 267.
A Yep.
Q At the top, you identify conversions. "Reporting

and optimizing on conversions," to quote you -- "is the largest value proposition for your product"?

A Yes, that's what it says.

Q And the product you're referring to there is SA360?

A I -- yes, I believe I was, yeah.

Q Okay.

And under that, you note, "Solved how to meet SA360's more restricted contractual requirements regarding conversions by partnering closely with the conversions team," correct?

A Yes.

Q What was that contractual restriction?

A It's been a while since I've been on SA360, so I don't -- I think at that time there -- I think in this document, I was referring to the terms of use that we have for SA360 and data within it, compared to other products within BP.

Q Okay.

If we can turn down to the column -- the heading you have, "Maintaining Search Ads 360."

A Yes.

Q You state, "Search Ads 360, our enterprise search ads buying product, is the primary interface used by customers representing," and then, sir, Google's requested

that certain numbers be treated as confidential.

A Okay.

Q So I'm not going to use the actual number. I'd ask you not to use the actual number, okay?

A Sure.

Q So you say, "By customers representing X dollars in Google Ads' annual revenue"; is that correct?

A Yes.

Q All right.

And when you prepared this promotional packet, you went through numbers to make sure you were providing accurate information?

A To the best of my ability, yes.

Q And you go on to say, "It's clearly No. 1 in the product space."

And by "product space," you're referring to SEM tools?

A Yeah, I believe -- yes, I was.

Q And then you go on to provide what you meant by that, "(X share of wallet)."

And by "wallet," you were referring to the dollars spent by advertisers?

A So here I was referring to kind of the -- my understanding kind of from the data I had available to me on kind of the spend that was going through our product.

Q As a percentage of what was going through the other SEM tools, correct?

A So I didn't know what was going through the other tools. I was using the information I had from within Google.

Q I understand that, but you were providing an estimate of what you believed the percentage was of Google's share of advertising spend that was going through SEM tools, correct?

A Yes -- yeah, it was the share of Google ad spend that I had access to that was going through -- that was going through SEM tools.

Q If we could go down to the second bullet point under the heading "Maintaining Search Ads 360."

THE COURT: I'm sorry, could we just get clarification --

MR. CAVANAUGH: Sure.

THE COURT: -- Mr. Cavanaugh?

The percentage here, is that -- I think what Mr. Cavanaugh is trying to get at, is that your estimation of SA360's market share with respect to all SEM tools and advertising placed through SEM tools? Including your competitors?

THE WITNESS: So to -- the challenge with that was there was a variety of non-Google ad spend going through SEM

tools. So that was stuff I didn't have access to.

So with the information kind of -- as I was putting together my promo packet, I was just using the information within Google that I had.

So it wouldn't represent the -- it wouldn't represent anything like market share or anything like that because there was a variety of spend outside of Google that was also going through these tools.

THE COURT: So this percentage here is the percentage of SA360 ad spend that went through Google Ads.

THE WITNESS: So I think it -- I think it would have been --

THE COURT: That was placed in Google Ads.

THE WITNESS: It would have been Google ad spend going through SA360 and other SEM tools.

THE COURT: Okay. I get it. I think I understand. Thank you.

BY MR. CAVANAUGH:

Q So if I could just follow up.

So the X percent share you're noting here was the percent of Google Ads spend that goes through SA360?

A Google ad spend that was going through SEM tools, 78 percent -- I believe at this time when I was writing it, it was something like 78 percent was going through SA360.

THE COURT: In other words, ad spend that goes

through SEM tools to Google, that percentage was coming through SA360?

THE WITNESS: Yeah.

So there was also ad spend that was not going through SEM tools that was not reflected in this number.

THE COURT: Yeah. I think we understand.

MR. CAVANAUGH: Thank you. I think we got it.

BY MR. CAVANAUGH:

Q Now, the next bullet point you have, "Drive auction-time bidding (AKA MYX) adoption from single digit to X percent."

There you're referring to -- and MYX was the effort by Google to integrate the auction-time bidding feature in Google Ads into SA360, correct?

A Yes, into SA360 bid strategies, yeah.

Q And so in terms of advertiser adoption of that auction-time bidding feature through SA360, grew from single digits to the X percent you have there, correct?

A I'm sorry, could you ask that question one more time.

Q Sure.

The percentage that you're reflecting here is the percentage of, within SA360, the utilization of Google Ads auction-time bidding feature?

A Yes, it was the adoption of the auction-time

bidding capability within SA360 bid strategies.

So prior to MYX, customers who were using those bid strategies would be using our intraday bidding, so this was reflecting those customers who had migrated from using our intraday bidding over to using auction-time bidding.

Q And so this is -- I mean, we've had testimony that Project MYX resulted in the integration of auction -- the auction-time bidding feature into SA360 in September of 2019, and you did this promotional packet in August of 2020.

So in roughly a year, it had grown from single digits to X percent?

A Not necessarily.

Prior to our blog post in 2019, we had entered what we had called open beta. Open beta was where customers of ours, hundreds of advertisers, were able to choose to participate in the beta, in the program and then start adopting. So adoption happened, could have started well before that.

Q Through limited beta testing?

A So we had a closed beta testing period where we would select the partners based on criteria, and then we entered open beta. So then open beta was where any customer who was interested in testing could request to join.

Q If you could turn to 268.

You note -- you ran point for product during

escalation with Microsoft, including negotiation strategy and leading to a rapid planning exercise across 10 teams in BP -- and BP again stands for?

A Buy-side platform.

Q Buy-side platform.

And what was that exercise?

A That exercise included -- so I don't remember all of the specifics, but we were evaluating a variety of things like cost, complexity, and effort that would be needed to -- you know, for certain features that we were evaluating during this.

Q Let me ask you to turn to 270.

MR. CAVANAUGH: Your Honor, I've been reminded I didn't move to admit PSX436. It was not already in evidence.

MS. WASZMER: Good morning, Your Honor. Wendy Waszmer for Google. No objection.

THE COURT: Thank you, Ms. Waszmer.

It will be admitted.

(Plaintiffs' Exhibit PSX436 received into evidence.)

BY MR. CAVANAUGH:

Q So, Mr. Varia, we're on page 270.

A Yes.

Q You state, "In mid-2018, I became the product lead

for Search Ads 360 and have maintained and grown that business: Grew managed spend from X percent -- X dollars to Y dollars." Correct?

A Yes.

Q Okay.

"And grew adoption of auction-time bidding, our most critical feature, from single digits to X percent."

A Yes.

Q And you believed at that time that auction-time bidding was your most critical feature, correct?

A So at that time, yeah, what I meant by critical was that it was one of our top customer priorities. And so something that customers were regularly asking about and interested in.

Q You also note in that same paragraph, you had "secured 15 additional head count to address a highly sensitive and confidential escalation from Microsoft to enhance our feature support," correct?

A Yes, I said that.

Q Was that engineering assistance?

A I don't recall what all 15 were, but it was mostly engineering, yes.

Q And part of that was evaluating integrating Microsoft's auction-time bidding feature into SA360?

A We had already been evaluating it prior to

securing this head count. But -- and I don't recall if we specifically used this head count for auction-time bidding.

Q You don't know one way or the other whether you did?

A With this head count, no, but prior to this, we were already evaluating auction-time bidding.

Q Then if you could look -- hold on one moment.

Turn to 272. Under SA360, you note you weathered COVID and maintained healthy business metrics, and then you refer to the dollar number you referenced in the prior page, correct?

A Yes, it looks like that.

Q And what is ARR?

A That would stand for annual run rate.

Q And then you refer to the X percent MYX adoption, that's the adoption of auction-time bidding and the percentage you referred to earlier?

A I believe so, yeah.

Q And then in bold, you have navigated new and unexpected legal risks.

That referred to the investigation undertaken by the States and the Department of Justice?

MS. WASZMER: Counsel, if the witness can answer without disclosing legal information, I have no objection. But I just want to caution that the witness not disclose

privileged information.

MR. CAVANAUGH: I'm simply asking his understanding, Your Honor.

THE COURT: That's fine. He can answer it.

THE WITNESS: If I recall -- yeah, I recall, I think this was just referring to the Microsoft escalation.

THE COURT: Sorry to interrupt.

Can I just confirm, I think you said this, but this was prepared in September of 2020?

THE WITNESS: I don't have the exact date of when -- or the period, but...

MR. CAVANAUGH: Your Honor, my notes indicate August, but I'm looking for a specific...

THE WITNESS: Yeah.

MR. CAVANAUGH: And I think the witness agreed with that, but...

THE WITNESS: It would have been for a promotion I was applying for in the fall of 2020.

THE COURT: Got you.

Okay. I just wanted to place this in time.

BY MR. CAVANAUGH:

Q So in the normal cycle of things you would have prepared this in the August time period for a potential fall promotion?

A I don't remember kind of a specific range. It

would some -- it would start sometime before the fall promotion period, which back in 2020, I don't remember when it actually started.

Q Okay. Do you recall about when you opened and closed the beta testing for Project MYX?

A Are you referring -- I mean, there was a closed and an open beta for MYX. Unfortunately, it was too far back for me to recall the periods where that happened.

Q Could you turn to PSX1110.

This is an email at the top from Ms. Lin Liao to you, correct?

A Yes. If you don't mind, just one minute to refresh myself on this.

Q Sure, of course.

A Okay. Thank you.

Sorry, can you ask the question again, please.

Q Sure.

This is emails -- the emails reference -- the subject matter is "Draft H1, 2020, SA360 roadmap proposal with details"?

A Yes.

Q Correct? Okay.

And if we look down on November 26th, 2019, there's an email from you, which you wrote, "What are the most painful cuts?"

And then did you provide that overview.

Or is that Ms. Sanan, S-a-n-a-n?

A Yeah, I believe Shibani had, or Ms. Sanan had sent an email prior in this thread, asking what were the most painful cuts, and so my response -- it was in response to her question.

Q Okay.

And this is your response, correct?

A This was -- yes, this would be my response.

Q All right.

And under that, the second bullet point, you identified Bing RSA and Bing LIA, correct?

A Yes, I do.

Q And those were being cut?

A Those features would have been out for that planning cycle and considered for future cycles.

Q All right.

And just so we're clear when you refer to the H1, 2020, SA360 roadmap, that's for the first half of 2020, correct?

A Yes.

Q And that's why you would be working on it in late 2019, correct?

A This is discussing kind of our planning -- our prioritization process and the screenshot on the following

page of outlining where we are with our planning.

Q Right.

And the goal was to have the plan in place obviously by the beginning of 2020, right?

A It's definitely -- it was definitely -- it was usually desirable for us to have it ready by then. Our planning cycle sometimes would spill into the next year, though.

Q But that's certainly not the goal?

A It would -- yeah, it would not be our goal, but it can happen.

Q Okay.

And underneath that, you say, "There is a real risk of escalation from Microsoft." Correct?

A Yes, I said that.

Q And that was if you made these cuts, you thought Microsoft would object to it, right?

A Yeah, I think it was just a risk of escalation from Microsoft.

Q Underneath that, you state, "There is good news" -- or, sorry.

"The good news is we did bring in other high prio" -- you meant priority, right?

A Yes, priority.

Q -- "high priority requests (DSA

management/optimization, Bing auction-time bidding testing)."

Correct?

A Yes, and sonic migrations.

Q Right.

And so you were -- in auction-time bidding testing, you were referring to the testing that you were having discussions with Microsoft on in this November time period, right?

A I believe here we're referring to kind of the initial explorations of what auction-time bidding, Bing auction-time bidding within SA360 bid strategies would look like, yeah.

Q And you thought that was good news, right?

A I mean, I don't recall the specifics at that time, but it does say that here.

Q Now, at this time, Google was also proceeding with Project Amalgam, right?

A At this time we were, yes.

Q And that was the introduction of a new SA360?

A Yeah, Project Amalgam was redesigning the platform on which we build the product. So we would call it something like a replatforming of the product.

Q And that was introduced in February of 2022, if I'm recalling correctly?

A I'd left the team by then, but I do recall there was a blog post about it.

MR. CAVANAUGH: Your Honor, I should have noted, this Exhibit 1110 is already in evidence.

BY MR. CAVANAUGH:

Q Can you turn to PSX462.

A Okay.

MR. CAVANAUGH: And, Your Honor, this is already in evidence.

BY MR. CAVANAUGH:

Q So if you start at the top, there's an email from a Jim La Force to Ryan Krueger.

Did Mr. Krueger report to you at this point?

A Ryan Krueger did not.

Q Was he within the group that reported to you?

A No, he did not.

Q But you worked with Mr. Ryan Krueger from -- from time to time?

A Yes, I did.

Q And his brother, Jason Krueger, reported to you?

A Jason did report to me for a period. I don't know if he -- I don't recall if he was at this point.

Q And on January 8th, 2020, Mr. Krueger had received an email from Jim La Force at Microsoft in which Microsoft stated, "We are ready to start in the recruitment of

customers for the Floodlight/auction-time bidding testing between SA360 and Microsoft Ads," correct?

A Yes, that's what it says.

Q And Mr. Krueger then, if you look to the bottom, sent that email to you, right?

A Yes, he did.

Q And he proposes "For now, I'll reply back and let them know to hold off on outreach to customers until the roadmap is shared with them." Correct?

A Yes.

Q All right.

And he also said he thought they'd be able to let them know early next week, right?

A Sorry.

I think he's saying ideally, we should get back to them by -- with our roadmap by end of next week.

Q And if you look at the bottom email, that is Mr. Krueger then reported to Mr. La Force, "The team is still working on the roadmap, so we have not yet started working through any specific requirements and scope of this effort," right?

A Yes, that's what he said.

Q Okay.

But, in fact, the decision had been made at that point not to go forward with it -- with that auction-time

testing project, correct?

A No, I don't think so.

Q Now, did you -- we don't see an email in which you advise Mr. Krueger whether you agreed or disagreed with his proposed approach to -- his proposed response to Microsoft, correct?

A In this email thread, you're asking?

Q Yes.

A I did not respond, no.

Q Okay.

Might you have used Google Chats to correspond with Mr. Krueger about how to respond to Microsoft?

A I don't know if I was -- if I'd use Google Chat for this.

Q Okay.

If you could turn to PX3023.

Okay.

This is a declaration you submitted in this matter?

A Just give me one second.

Okay. Thank you.

Yes, it is.

Q And am I correct that between May 1 -- let me make sure I have my dates right -- from May 1, 2019, to February 2023, your typical practice was to have the default setting

for one-on-one and informal group conversations on Google Chat set to history off?

A Yeah, I was relying on the default setting Google Chat had.

Q All right.

And so given those dates, you continued to do that after you had received a legal hold notice in March of 2021, correct?

A Yes, I was relying on the default settings.

Q Now, you state in your declaration, "As a general matter, my practice is to engage in substantive communications via email, commenting in Google documents, and live communications," correct?

A I apologize. Where --

Q Paragraph 3.

A Paragraph 3.

Yes, I said that.

Q All right.

You go on to state, "I use Google Chat primarily."

Primarily doesn't mean -- what was that, 60 percent of the time, 55 percent of the time?

A I mean, it's hard for me to quantify that. It was just -- it was what I was typically or primarily using.

Q If we could turn -- if you could turn to PX1195.

A Yep.

Q This is an example of a Google Chat you had with Jason Krueger, and this comes from February 10, 2021, correct?

A Yes, this appears to be a Google chat with me and Jason.

MR. CAVANAUGH: Your Honor, we would offer 1195 into evidence.

MS. WASZMER: No objection.

THE COURT: It will be admitted.

(Plaintiffs' Exhibit 1195 received into evidence.)

BY MR. CAVANAUGH:

Q And if you turn to the second page, Bates 665.

A Yes.

Q You're having a discussion with Mr. Krueger regarding the performance -- performance gains of Project MYX. If you look at the fifth item down.

A So can you give me one moment to familiarize myself?

Q Sure.

A Okay. Thank you.

Sorry, can you repeat the question?

Q Sure.

You're discussing in this chat the performance gains of Project MYX?

A I believe we're discussing a specific feature request for consideration to add to MYX -- or add to our SA360 bid strategies.

Q Right.

And that had to do with the issue of forecasting and what impact that might have on Project MYX?

A A forecasting feature for our advertisers to help them understand kind of what kind of results to expect from their bid strategy is what we were -- yeah, we were discussing a forecasting feature and, you know, where that was in customer priorities.

Q Right.

And if you look down, Mr. Krueger was noting -- Mr. Jason Krueger was noting that, but it could -- "But it could result in losing trust in what SA360 is doing."

A Sorry, I'm trying to see where that is.

Q It's about eight up from the bottom.

A Right, and compare -- yeah, I believe here he's talking about in comparison to capabilities that are intraday bidder offers with us at 360 bid strategies.

Q And so these are illustrative of the type of communications you had with your colleagues through Google Chat, correct?

A I don't know if I would say illustrative, but this is a chat we had, yes.

Q It's certainly discussing a substantive business issue?

A This is discussing a feature that was part of our prioritization process.

So I don't know if I would consider it substantive since we were also discussing it in other places, like our roadmap sheet.

Q But here you were discussing a substantive business issue. That's my only question, sir.

A I don't -- I guess if you could help me understand what -- when you -- when you're saying "substantive."

Q Well, you were discussing an added potential feature for SA360?

A We were -- yeah, I would say we were discussing the -- we were just doing follow-up on some analysis that -- oh, I see.

So here, we were just trying to understand the cost of that feature. So as part of our prioritization process, we oftentimes have to consider the engineering cost a feature might have, so we were discussing just if we had gotten those numbers to get into the sheet for our roadmap planning.

Q If you could turn to PX431.

Sorry, one second.

This is an email between you and Mr. Krueger,

Ryan Krueger, February 20th, 2020, correct?

A Give me one moment to familiarize.

Q Sure.

A Okay.

Yes, this is -- sorry, what was the question?

Q And this is an email, emails between you and Mr. Ryan Krueger, about how to respond to Microsoft regarding the auction-time bidding testing, correct?

A I mean, it's more of a -- it's -- it's capturing the common thread we are having in a Google document. I think Google Docs sends that as an email too.

Q Okay.

But what you were discussing was, what are we going to say to Microsoft, right, because you had decided to cancel the test?

A We hadn't decided to cancel it. We were deferring it from -- I think right now, we were deferring it from the H1, 2020 cycle, and we're going to reconsider it for future cycles.

And then here, we were discussing, you know, informing Microsoft about that.

Q So you were canceling it for the H1, 2020 period?

A I mean, yeah, we were deferring it, yeah.

Q And it wasn't done in H2, 2020, was it?

A We -- no, we had not.

Q Now, if you look at what Mr. Krueger was proposing to say, which Google has redacted, there's no reference there to any resource constraints as a reason for deferring the test?

A Let me see here.

MR. CAVANAUGH: Your Honor, 431 is already in evidence.

THE WITNESS: I mean, he's referring to some missing features on the Microsoft side, which, you know, our teams would have needed to work around to be able to -- or to be able to kind of -- to make this work. So it was increasing the complexity. So, you know, some of the features here he's referring to kind of were adding to complexity on our resources.

BY MR. CAVANAUGH:

Q But that really wasn't my question.

My question was, there was no proposal to say back to Microsoft, We don't have the resources for this, correct?

A Yeah, I would say kind of in the draft we were putting together, we weren't referring to our resources, but that didn't mean we didn't -- that our resources were available.

Q All right.

And what was actually sent -- well, you -- you edited what Mr. Krueger had drafted, and that's what -- you

said, "I'm hoping we can reduce this section down. Here's what I was thinking."

And what follows is what you were thinking, correct?

A What follows is a suggestion I made to Ryan, yes.

Q And that first sentence is what was adopted, correct, by Mr. Krueger in his communication to Microsoft?

A I would need to double-check what was actually sent in that email. I don't recall it.

Q Okay.

A Yeah, this here was my suggestion.

Q Let me ask you to turn to PSX450, which is already in evidence, Your Honor.

A Okay.

Q The heading is "SA360 Strategy for 2020+."

Are you familiar with this document?

A I recall putting something -- I recall this document but not really the specifics of it.

Q All right.

You drafted this document, correct?

A Yes, I did.

Q And, again, Google's requested some redactions on this as it relates to specific numbers, so you and I need to avoid mentioning the specific numbers.

So go to the -- you say, SA -- in the second

paragraph, "SA360 has served to disintermediate 3P SEM tools, which, at the beginning of the previous decade, were on track to become the primary interface by which customers would buy Google Ads search."

And by "disintermediate," you mean essentially that SA360 had replaced other SEM tools as the means by which advertisers would utilize Google Search ads, correct?

A I don't recall specifically what I was meaning by "disintermediate" here in this document. I think I was just trying to capture some of my thoughts. I don't even know how much I shared this document to others.

But, you know, generally when I talk about disintermediate, you know, I'm just referring to, you know, SA360 becoming the tool that advertisers want to use.

Q You then go on to say, "Over the last decade, SA360 has grown from less than X percent of the SEM tool space to Y percent."

Now, that is a market share reference, is it not, sir.

A So, again, here, would have been using the data and the tools I have within Google, so it would have been similar to kind of what I had mentioned kind of in the previous -- previously.

Q Well, you said, "Over the last decade, SA360 has grown from less than 10 percent of the tool space," so we're

working in the tool space, and you're saying, "At one point we had less than X percent and now we have 80 -- now we have Y percent of that tool space." That's what you were communicating, correct?

A Again, this was a document I kind of wrote for myself to gather my thoughts, so kind of the wordsmithing and kind of the accuracy of some of my statements, I hadn't -- I hadn't really edited for. So, you know, here again, I'm referring to kind of similar kind of metrics that I was referring to in my promo packet.

Q Well, you go on to say, under SEM tool landscape, you go on to say, "SA360 represents Y percent of the 3P SEM tools," correct?

A Yes, I say that here.

Q And then you go on in the parenthetical to identify your competitors in the SEM tool space, right?

A I mention a couple of -- yeah, I mention -- so I'm mentioning just some of the other SEM tools I'm aware of.

Q Now --

THE COURT: I'm sorry.

BY MR. CAVANAUGH:

Q -- as of --

THE COURT: Sorry. Quick question.

What does the 3P stand for before SEM?

THE WITNESS: 3P stands for third party. It was

just a common way of describing things. We would say third-party SEM tools.

BY MR. CAVANAUGH:

Q And so when you're referring to 3P, you're referring to Kenshoo, Marin, Adobe, right?

A It's hard for me to comment on this doc since it was a draft and just me organizing my thoughts. So, you know, the accuracy of this something that I'm not --

Q I'm just asking you, when you're referring to third parties, third-party SEM tools, then the parenthetical, you then identify your competitors in that space, right?

A Yeah, I think I had listed some of the -- I had listed some of the SEM tools I'm familiar with.

Q All right.

And as of the second quarter of 2021, the global spend that goes through SA360, in your view, approximately 85 to 90 percent went to Google Ads?

A I'm sorry, can you -- what period of time was it? You said 2021?

Q Yes, second quarter.

A Sorry.

I would need to see the -- it would help me if I had the numbers in front of me to recount that specific period, but at some points, yes, spends fluctuate, share

spend fluctuates, but that could -- that definitely could -- that could be the case at some point.

Q Okay.

Let me ask you --

MR. CAVANAUGH: Your Honor, may I approach?

BY MR. CAVANAUGH:

Q Mr. Varia, let me see if I can refresh your recollection on this.

You gave a deposition in this matter?

A Yes, I did.

Q And if you look, that was on August 12th of 2021, correct?

A Yes.

Q And let me ask you to turn to page 30.

A Yes, I'm there.

Q Line 15.

You were asked the question: "Of the spend that goes through SA360 for all engines, approximately how much of it goes to Google Ads?"

And then there's some colloquy.

And if you turn to the next page, you were asked the question: "For the most recent period of which you are aware, what is that number?"

And then you answered: "Most recently, I have looked at the prior quarter."

So that would be the second quarter of 2021?

A Yes.

Q If you're testifying in August, the second quarter would be -- that would be the prior quarter, right?

A Yeah, yeah, that would be.

Q Okay.

And you say: "That was approximately between 85 to 90 percent globally." Correct?

A Yes.

Q All right.

Does that refresh your recollection that as of second quarter of 2021, 85 to 90 percent of the spend that went through SA360 went to Google Ads?

A Yeah, so here I was saying -- yeah, it was approximately between 85 to 90 percent globally, yeah.

Q And would you agree with me that, given that percentage, that may well influence advertisers when they're focusing on what features and improvements they want to see in SA360?

A Yeah, I would -- I mean, without speculating on kind of what drives their priorities, kind of -- it does make sense that, you know, their priorities would be driven by where they can get the best impact or most impact and value.

Q So with 85 percent to 90 percent of the business

going to Google Ads, it wouldn't surprise you that most of the feature comments requests would all relate to Google Ads, right?

A I mean, so this would be a reflection of how advertisers are spending their money, nothing in SA3.

That said, we often got requests for a variety of features, Google Ads, Microsoft, other engines, as well as features that worked across engines. So, you know, bid strategies, bulk editing, rules, a lot of those things.

So the set of their priorities kind of evolved over time, quarter by quarter. So, yes.

MR. CAVANAUGH: Nothing further, Your Honor. Thank you. Pass the witness.

THE WITNESS: Thank you.

THE COURT: Okay. Ms. Waszmer.

MS. WASZMER: Thank you, Your Honor.

We'll just have a minute to hand some binders out.

And, Your Honor, may I approach?

And, Your Honor, just to give a time estimate, I think Mr. Cavanaugh was just about an hour, I'll be that or less.

THE COURT: Okay.

- - -

CROSS-EXAMINATION

BY MS. WASZMER:

Q Good morning, Mr. Varia.

A Good morning.

Q Thank you for being here.

THE COURT: Don't forget those, Mr. Cavanaugh.

MS. WASZMER: He needs to see my exhibits.

BY MS. WASZMER:

Q Mr. Varia, let me just ask you, I'm going to address some of Mr. Cavanaugh's exhibits and then ask you some related questions.

A Sure.

Q So would you be able to turn back to PSX1110 in Mr. Cavanaugh's binder?

A Okay.

Q And just for the record, I believe that he'd asked you about this email that is dated November 26th, 2019.

Do you see that?

A Yes.

Q Okay.

And I believe Mr. Cavanaugh asked you -- there's a segment in the first part of the page that is a 1:44 p.m. email where you have some responses.

Do you see that?

A Yes.

Q And I think he asked you about some painful cuts. Do you recall that?

A I do, yeah.

Q The first bullet point, do you see the language that says, "Google Analytics DDA reporting opt"?

A Yes.

Q Okay.

Was that a Google -- a Google feature?

A So this would have been what we consider Google -- I'm sorry, a cross-engine feature.

Q Okay.

And it's Google Analytics, it's a cross-engine feature, is that accurate?

A Right, DDA would allow them to apply different types of attribution to conversions across their engines.

Q And there's a bullet point underneath there that says, "A top sales request for a few cycles now, so a painful cut for the team."

And, Mr. Schliesske, I think we can put this up. Thank you.

A Yes, it says that.

Q In your experience with SA360, did the SA360 team have occasions to not include Google -- Google or Google Ads features in SA360?

A Yeah, that would happen quite often. It would just, kind of the resource constraints we operated under, we always needed to prioritize kind of that which we could fund.

Q And I think Mr. Cavanaugh also asked you about the bullet points right below, it says "Bing RSA and Bing LIA."

Do you see that?

THE COURT: Ms. Waszmer, can I just ask a point of clarification?

You said that this was across engines, that this was a tool across engines. Why did you mean by across engines?

THE WITNESS: Yeah, so Google Analytics was a -- I mean, is a pretty wide tool, but one aspect of it is conversion tracking, so helping you know if somebody converted on your site due to a search ads click or things like that.

So many of our conversion features, like Google Analytics, can apply to campaigns across engines. So Google campaigns, Microsoft campaigns, Yahoo!, you can apply -- you can integrate that with Google Analytics if you want to.

And so when we refer to features like this, it is that they work for each of the engines or across the engines that we support.

THE COURT: Thank you.

THE WITNESS: Yeah.

MS. WASZMER: Okay. Thank you.

BY MS. WASZMER:

Q Just for the Court's understanding when it says Bing RSA and Bing LIA, can you tell the Court what those acronyms mean?

A Yeah.

So RSA stands for responsive search ads.

And LIA stands for local inventory ads.

Q And as of the time that you were leaving SA360, I think Mr. Cavanaugh asked you about that, in 2021?

A Yes.

Q Okay.

Were RSA and LIA built into Amalgam, the new platform?

A They were -- so I left around October of 2021. I think they were in the process of launching. So they were being built into Amalgam at that time.

Q Okay.

And Mr. Cavanaugh asked you about another bullet point right below that says, "The good news is we did bring in other high prio requests."

Do you see that?

A Yes.

Q I just want you to look at that date,

November 26th, 2019, and I'm going to ask you to look at a document in the binder I just gave you, which has been marked PSX668. And just take a moment to look at that.

And, Your Honor, I believe this is already in evidence, PSX668.

A Give me one second.

Okay.

Q Okay.

And let's just keep up Mr. Cavanaugh's exhibit for a second.

Looking at 668, do you see there's a same date on this, November 26th, 2019?

A Yes.

Q Okay.

And just for the record, I'll come back to this exhibit in a minute, but I want to keep Mr. Cavanaugh's exhibit up.

What is the email that is 668? What's happening in this email, if you can look at it?

A Sorry, give me one second here.

So this email was a follow-up to a meeting we had in person with Microsoft, where they requested a variety of features.

And it ends with Bashar informing them about our prioritization process.

Q And so the email, Mr. Cavanaugh's email here, where there's a -- you state, "There is a real risk of escalations from Microsoft," and you describe high-prio requests.

Do you recall if you were talking about the dialogue you were having with Microsoft about their feature requests?

A Yes, I was.

Q Okay. You can put that down.

Let's go back to Mr. -- Mr. Cavanaugh also asked you about PSX450. So if you can turn back to that.

This was a document titled "SA360 Strategy for 2020+"?

A Yes.

Q And I'm just going to focus on the first page, going on to the second page.

And, Mr. Schliesske, I think you can put the first page up, and I'm going focus on the language at the bottom, "Marin, Kenshoo, Adobe."

I believe Mr. Cavanaugh asked you about these other SEM tools. Do you recall that?

A Yes, I do.

Q There's some language at the bottom that describes "Supporting more engine, especially FB and Amazon."

Do you see that?

A Yes.

Q Okay.

And there's a note here. "SA360 does not currently have access," and it goes on to the second page, "to API tokens to build a native integration with those engines."

At the time in 2020, was that accurate as to SA360's capabilities?

A Yes, it was.

Q And do you know if, at that time, any of the, what you were called -- what you refer to as third-party SEM tools, or 3P SEM tools, did any of those SEM tools have the ability for advertisers to buy or manage Facebook or Amazon campaigns?

A Yes, some of them did.

Q And I believe the Court and Mr. Cavanaugh were asking you about some language about share of wallet. Do you recall that?

A Yes.

Q And in sum and substance, I think you were explaining what data you did not have available in calculating numbers. Do you recall that?

A Uh-huh.

Q While you were at Google on SA360, did you have access to, for example, if another SEM tool had Amazon or

Facebook spend on the SEM stool, whatever percentage or amount of spend, let's say on Marin, Kenshoo, or Adobe would be Facebook or Amazon, do you have access to that data?

A No, I wouldn't have had access to that data.

Q I think we can put this down. Thank you.

Okay.

Mr. Varia, I'm just going to step back and ask a little bit of context.

Mr. Cavanaugh has asked some questions about features and about how the tool operates, so I'm going to ask you some more contextual questions.

A Okay.

Q We've been focused -- or the government's focused on a period of time in November 2019, and I just want to focus on that date for one minute.

From the time in November 2019 when Microsoft made feature requests to you, until you left the product in 2021, did Search Ads 360 ever refuse to build features for Microsoft?

A No, we never refused.

Q And did there come a time in Project Amalgam -- which I think has been referred to as the new SA360 platform. Did there come a time when SA360 launched new features for Microsoft in Amalgam?

A Yeah, we -- throughout the project, we were

building new features into it for Microsoft -- or for Microsoft features.

Q Okay. Mr. Varia, I'm going to refer to another exhibit in our binder, which has been marked PSX572.

MS. WASZMER: And, Your Honor, I believe this is also in evidence already.

BY MS. WASZMER:

Q PSX572.

A Okay.

Q And we'll ask Mr. Schliesske to put this up on the screen.

It's a very long list here, but I'm going to ask him to highlight a name at the bottom of this list as you read it.

Just have a look at that, and I'll ask you some questions.

A Yes.

Q Okay.

Did you receive this email?

A I did.

Q And what is the date at the top of the email?

A November 12th, 2021.

Q And the name in the "from" line is Jolyn Yao.

Who is Ms. Yao?

A At the time of the email, she was a product

manager on Search Ads 360.

Q Okay.

And let's now go to the first two paragraphs of the email. And Ms. Yao indicates -- and actually, you know what, let's show the subject heading.

Do you see this subject heading, Mr. Varia, "Launched Other Engines Feature Set in Amalgam!"?

A Yeah.

Q Okay.

Now let's go to the first two paragraphs.

Ms. Yao indicates, "I'm excited to announce we've launched a suite of 12 Microsoft and other engine features in Amalgam."

Do you see that?

A Yes.

Q And below she mentions "responsive search ads, more Microsoft audiences, Microsoft audience network in search, dynamic ads, and more."

And does that -- is your recollection that these features were launched in Amalgam?

A Yeah, these are features we were working on when I left, and we were set to launch so, yeah, those launched.

Q And then in the next line, she notes, "This was a herculean effort across 15 teams."

I'm just going to ask you in your experience in

Amalgam, how many years was that project ongoing at Google?

A Project Amalgam?

Q Yes.

A Quite a long time.

I think we started sometime in the middle of the 2010s, so 2015, 2016, and were still heavily working on it when I left. So, yeah, it's been going on for many years now.

Q And when Ms. Yao was referring to 15 teams, just if you recall, is this reference to 15 teams just for the Microsoft features that are being described here.

A Yeah, it would have been for these features.

Q Okay.

Let's go to the second page of this document, and I just have one line I'm going to show to you.

In the top half, there's a bunch of bullet points, and there's a bullet point that begins with "Began alpha testing."

Do you see that?

A Yes.

Q The line says, "Began alpha testing for Microsoft Ads auction-time bidding, ATB. This is the initial effort to understand more deeply how we might integrate with Microsoft ATB."

I believe you were explaining to the judge, but

let's start with, what is alpha testing?

A So generally, alpha testing for us is just a kind of very early stage in the product life cycle where we're introducing core functionality to help us get more feedback on areas -- you know, discovering unknown areas that we need to get ahead of or address.

Q And let me just ask. I know this is talking about Microsoft auction-time bidding, but just to go back to a topic Mr. Cavanaugh asked you about Project MYX -- which I believe you testified was Google Ads auction-time bidding.

With Google Ads auction-time bidding being integrated in SA3, would you explain to the Court what stages of testing occurred with Project MYX, M-Y-X?

A Yeah.

So very similar to this here, the -- we started with, you know, an evaluation phase where we were just trying to understand the complexity and the design that we would need:

Go to an alpha stage where we had developed some functionality.

We could do testing with a very limited set of customers.

Then move over to a closed beta, where we could -- you know, where we'd added more functionality and could continue to expand our testing.

And then over to an open beta.

And then finally to a full launch.

Q And just if you recall, how long did Project MYX take at Google?

A I don't recall exactly when we started, but it was easily three or more years for us to be able to get to a launch -- or get to an announcement.

Q And just one more part of this exhibit.

I'm going to have Mr. Schliesske highlight some of the names at the bottom.

There's you, Amit Varia, Emeritus. What does that mean here?

A Emeritus is just a way we identify folks who have helped -- contributed to the project but are no longer actively on the team.

Q Okay.

And one more name I want to ask you about. Eduardo Indacochea, who is Mr. Indacochea?

A At that time, Eduardo was the -- was the PM director over BP. So my skip manager.

Q Okay.

And if you know, did Mr. Indacochea previously work anywhere else prior to Google?

A Yes.

Prior to this role, he was at Microsoft Ads and

somebody we would interact there with.

Q Okay.

I think we can take this exhibit down.

Mr. Varia, let's now go back to 668, which is in our binder, the November 26, 2019 email.

A Yes.

Q Okay.

Let's put up the top half of the page.

Now, let me just identify some of the folks here.

Who's Bashar Kachachi?

A Bashar Kachachi was my manager at the time, and he was a PM director over Search Ads 360 and DV360.

Q And there's a response here from Shirley Heath. Who's Ms. Heath?

A I don't remember her exact role, but she was one of the -- she was a person at Microsoft that we would interface with when we were discussing kind of Microsoft Ads features and SA360.

Q And Mr. Kachachi has a sentence here, "As we've mentioned in our prior meetings, SA360 prioritizes feature investments based primarily on feedback from our customers."

In your work at SA360, was that your experience, that the SA360 team made feature decisions taking into account customer feedback?

A Yeah, that was my experience.

Q And just to give the Court some context, with each roadmap cycle, were there features that had some customer feedback that wouldn't make -- make it on to the roadmap for a six-month period?

A That was -- yeah, that was pretty common for us.

Q Why is that the case that a feature with some customer feedback would not make it on to the roadmap for a six-month period?

A Yeah, so, you know, we -- the challenge would be, you know, we have lots of customers, like tens of thousands of customers, and they oftentimes have a laundry list of capabilities and features that they would like to see in the product.

It's, you know, ultimately our job to kind of take that into account in our prioritization process but account for existing things we're working on, the resources we have available. And so oftentimes we would have to defer some functionality to -- in our prioritization cycle.

Q And I believe you testified about this just a few minutes ago, but -- in the context of Mr. Cavanaugh's exhibit, but let me just ask you directly.

Were there times when you worked at SA360 where your team communicated to Google Ads that their features did not make the roadmap?

A Yes, that would happen.

Q Okay.

Mr. Varia, there's a part of this email that's confidential, so I'm going to ask you not to read that part, but let me just give at the high level -- I have a high-level question for you about the overall subject matter.

There's a reference here to "clone" functionality, clone is in quotes. Could you just explain to the Court at a high level what clone functionality is.

A So the idea of that would be -- a simple example here would be, a customer would go and build out their strategy, their set of campaigns within a Google account, and they would want to apply that same strategy in Microsoft or other engines.

And so with this functionality, as supposed to saying, go do the work twice, we offered this ability, like copy and paste all the work you'd already done, paste it over into something like your Microsoft account. So simplify that process so you can copy and paste it over.

Q And maybe you can give the Court just an example. What's the kind of information that an advertiser would be able to copy and paste from SA360, for example, to Microsoft or another platform?

A So, you know, the normal structure would be, you have campaigns, ad groups, keywords, ads. And sometimes

these are complicated, especially for larger advertisers, these would be pretty complicated structures. So it could be hundreds of campaigns, thousands and thousands of keywords, hundreds of ads. So it was a pretty robust, sophisticated build-out they would do.

And so it was actually pretty cumbersome for them to go repeat that in another engine. And oftentimes there would be little differences so you couldn't just do it very quickly, you'd have to do all these, like, little changes. So part of this functionality we had built, we already built in SA360 would address that. So it would make it simple for customers to just say, take my strategy from -- that I built out into one account, copy it over into to another account so that way I can start running and expanding my capabilities on other engines.

THE COURT: Just to be clear in my own mind, this is the ability to cut and paste those items as you said, within the SA360 engine or from an engine that's outside SA360 and import it into SA360?

THE WITNESS: This would be within. So if you have one advertiser, they have a Google account and a Microsoft account, they could just go ahead and say, take everything I have here, bring it over here so that way I can expand my reach.

THE COURT: Got you. Thank you.

BY MS. WASZMER:

Q And, Mr. Varia, let me ask you a different point just while we're on different data or information in SA360.

During the course of this trial, the Court has heard testimony about the ability for advertisers to take data out of a SEM tool like SA360 and take it somewhere else.

Does SA360 offer the ability for advertisers to, for example, take their conversion data out of SA360 and bring it to another platform?

A Yeah, we offer a variety of ways, through data exports, APIs, and downloads, they can do that.

Q In your experience working at SA360, did advertisers ever use their conversion data in SA360 and also use conversion data in other platforms?

A Yeah, that would happen quite a bit.

Q And can you give the Court an example, if an advertiser is using its conversion data in more than one platform, are they using it, for example, internally or with another tool?

A Yeah, there's an example of a European retailer that they actually would use our product quite a bit and then extract the data from the VR APIs, import it into their in-house tools, and then use that to do analysis and decision-making for their campaigns. So they would do that

very regularly to be able to -- because they -- that's what they were looking to do.

There are often many, many examples of agencies that would import all of this data from SA360 into their tools so that they can provide dashboards and other types of insights and analysis to advertisers that they support.

So it was pretty common for people to take data out of SA360 and then integrate it into other tools.

MS. WASZMER: Your Honor, I think I can finish this document before the break. Does that make sense?

THE COURT: Okay. Great.

BY MS. WASZMER:

Q Mr. Varia, I'd like to now have you look at this same Exhibit 668 and turn to the second, third, and fourth pages, there's a chart that spans three pages.

Okay. Great.

A Yes.

Q Now, Mr. Varia, having had a look at this, what is the information that's reflected in this chart that goes over several pages?

A This is a list of -- this is a list of features from -- that Microsoft provided us that -- based on their analysis, was supported in SA360 for Microsoft versus Google.

Q Okay.

And I will just briefly pause.

Dynamic search ads and responsive search ads are listed here. Do you see that?

A Yes.

Q Were those features built into Amalgam, also known as the new SA360?

A Yes, they were.

Q Okay.

Now, I want to focus on the list at the bottom of page -- the page ending in 312 into 313.

A Yes.

Q Okay.

And let me just ask you to focus on the first five rows. Enhanced CPC, max clicks, max conversions, target CPA, target ROAS. That's a lot of acronyms.

Could you describe for the Court at a high level, what are those features?

A So these features here are referring to Microsoft bid strategy types that Microsoft supports within their product.

Q And I think we may need a real-world example.

Let me ask you to take target CPA as a bid strategy at Microsoft.

A Yeah.

Q If I'm a running shoe company, how might I use

target CPA in running a campaign?

A Yeah.

So you can imagine, as a running shoe company, you're launching a new shoe and you want to run a marketing campaign where you want people to sign up for a waiting list and you want to run an advertising campaign to encourage people to sign up for that waiting list.

So the conversion or the action you want is people signing up for the waiting listing and then the cost is how much you're spending on search ads to be able to pull that off.

So a, you know, pretty common thing within these companies with the marketing groups is going to be, great, we don't want to spend too much money to get somebody to sign up for this mailing list. So let's say something like $5 on average per action per sign-up is what we want to get to.

And so a target CPA then would be this idea of trying to manage against a goal of $5 per action.

And then a Microsoft -- the Microsoft bid strategy here that's referred to as target CPA is where you can then provide that configuration into the campaign setting, and then Microsoft's bid strategy would aim to achieve that by managing your bids and bidding effectively into auctions.

So target CPA then would be trying to achieve that

type of goal.

Q Okay.

Mr. Varia, I'm going to ask you, and with apologies that I may sound Neanderthalish from the perspective of your understanding, but let's talk about bid strategies for a moment.

Auction-time bidding and conversion sharing, let's just take those. What was your understanding of what Microsoft was asking for with auction-time bidding when you received this email?

A Yes.

So, one, there was a little bit of confusion on, are they asking us to integrate Microsoft bid strategies or, separately, look at auction-time bidding.

But kind of what we understood auction-time bidding here, at least what I understood it to be was, we have SA3 bid strategies. So Microsoft has Microsoft bid strategies, SA360 has SA bid strategies.

And the request for auction-time bidding was -- auction-time bidding, it's a technology, it's not like a bid strategy. So auction-time bidding was kind of replacing or adding on -- extending the SA3 bid strategy to use that -- their auction-time bidding, as opposed to using our intraday bidding capabilities. So it was kind of adding that into our -- adding that implementation to how our feature worked.

Q And the feature you're describing when you say how our feature worked was SA360's intraday bidding?

A It was SA360 bid strategies, is what we would call it.

Q And let me ask you about conversion sharing. What did you understand Microsoft to be asking for with this conversion sharing request?

A Yeah.

So here, the -- with conversion sharing, the idea would have been for SA360 to send advertisers' conversion data to Microsoft such that their auction-time bidding -- bidder could consume that data to -- as part of its -- as part of its decision-making.

Q Okay.

And as of the time of this request in November 2019, was there any occasion when Search Ads 360 was sending advertiser conversion data outside of Google?

A So the idea -- I mean, we offered the ability for advertisers to do this.

Ultimately, that conversion data is the advertiser's data. So, you know, if they wanted to go outside of our product, they can choose to do that, you know, through APIs and downloads that I was talking about before. So that was possible for them to do.

Q But at that time, was SA360 as a tool itself

sending information, for example, to Microsoft?

A No, it wasn't.

Q Okay. Just one more question, and then if the Court would like, we can take a break.

These rows being shown here, based on your understanding of what Microsoft was asking, did SA360 need to build all of these separately?

A Yes, each one of these would have been a separate implementation process.

Q Okay. Thank you.

MS. WASZMER: I think I'm done with this exhibit, Your Honor.

THE COURT: Okay.

All right. Let's go ahead and take our morning break. It's a little after 11:00. We'll just resume a little bit after 11:15.

Mr. Dintzer.

MR. DINTZER: Your Honor, in the interest of trying to finish up Professor Whinston's testimony today, perhaps we could ask that the break just be shortened just a little so that we can try to get a little bit more of his testimony in.

THE COURT: Okay. Well, we've got to give our court reporter --

MR. DINTZER: I understand.

THE COURT: -- a break.

So it's shortened by a few minutes, but we'll start at 11:15.

MR. DINTZER: Thank you.

THE COURT: Mr. Varia, I'll ask you not to discuss your testimony with anyone during the break.

THE WITNESS: Thank you.

COURTROOM DEPUTY: All rise. This Court stands in recess.

(Recess from 11:01 a.m. to 11:16 a.m.)

COURTROOM DEPUTY: All rise. This Honorable Court is again in session.

THE COURT: Please be seated, everyone. Thank you, all.

All right. Ms. Waszmer, ready when you are.

MS. WASZMER: Thank you.

BY MS. WASZMER:

Q Welcome back, Mr. Varia.

A Yeah.

Q Through the course of this trial, the Court's heard testimony about Project Amalgam, aka the new SA360 platform, so I just want to go back to that for a second.

I think you had testified earlier today that that was a multi-year build, is that accurate?

A Yeah, it was.

Q During that rebuild, did the resources needed for Amalgam impact SA360's ability to build new features?

A Yeah, it definitely did.

Q Okay.

I'm going to have you now look at what's been marked in our binder DX0132.

MS. WASZMER: And, your Honor, I believe this is already in evidence, DX132.

And let's put up the first page of this deck.

BY MS. WASZMER:

Q And, Mr. Varia, I think, as Mr. Cavanaugh had mentioned, there's some slides in this deck that have been redacted, but they're headings. So at some point later down the road, I'll just ask you questions at a high level about the redacted slides.

A Okay.

Q Okay.

The title of this page is "SA360 Argon Planning Recap."

What is argon?

A Yeah.

So at this time, we were doing six-month planning. So our prioritization process would plan out for the next six months.

So here, argon was referring to our prioritization

for H1 of 2019. And argon was just a periodic element we would use to codename them.

Q So just to place this in time, we've been showing you emails from November 2019. Was this the year prior?

A The -- yeah, the slides are, and it's referring to our plans for H1 of 2019.

Q Now, the date on this first slide is December 6th, 2018.

Do you see that?

A Yes.

Q And I think the Court has asked various questions about this, but just to make sure, for this planning cycle, what was the period of time for which you were planning?

A It would have been from January to June of 2019.

Q Let's turn to the second slide here. I think this explains what you were saying.

It's titled "Argon Planning-Summary."

And you see there's some dates here. It says -- states, "After a very intense month, SA360 has a roadmap and a set of instructions for where we are going from January to June 2019."

A Yes.

Q Do you see that?

And now, in the period of time from 2018 to 2021, when you left SA360, was that typical that SA360 was doing

six-month planning cycles?

A I think at the beginning of it, we were doing six months. Closer to when I left the team, we were moving to quarterly planning.

Q And why were you moving to quarterly close to the time you left?

A So with Project Amalgam, we were re-platforming the product. That platform that we were going to be using, that group relies on quarterly planning. So to better align our planning across teams, we shipped it over to quarterly planning.

Q Okay.

And when did -- when was Project Amalgam announced publicly?

A It was after I left, but I mean, I recall that there was an announcement, I think, sometime in February of 2022.

Q February of 2022?

A Yeah.

Q Okay.

Now, I'm going to have you look at the slide here that ends in 577, and just so you recognize, it's a pie chart.

We can blow that up.

A Okay.

Q And, Mr. Varia, there's some language redacted here just because it relates to Google's internal costing.

A Okay.

Q But there's some language on the right side of the page that describes Amalgam using 48 percent of argon eng capacity.

Do you know what that means?

A Yeah.

So for a planning cycle, we have a certain number of engineers that are available to work on the product, and so this is just saying 48 percent of that eng capacity, or engineers, are going to be working on Amalgam.

Q And I think the Court asked you earlier about what the term "cross-engine feature" means. Can you just explain again, when you use a term "cross-engine feature," what does that mean?

A Yeah, so those would be cross engine, or sometimes we would call them just SA3 features.

Those types of features can apply to multiple engines. So they can apply to Google, Microsoft, Yahoo!, Baidu, a variety of engines.

Q So let me actually ask you an example. On the left-hand side of this chart, there's a category called "Conflux & Pipeline." What is that?

A "Conflux & Pipeline" refers to the team or the

area that is typically working on conversion-related features. So cross-engine features.

Q Cross engine, okay.

A Yeah.

Q And MYX is listed here. And is that accurate that that was -- MYX was still going on as of this roadmap?

A Yes, we were still -- we were still continuing to expand on the MYX functionality.

Q And there's a yellow part here that's "Other Engines." Would that have included Microsoft?

A Yes, that would have included Microsoft.

Q I think you can -- let's now turn the page.

THE COURT: Just a quick clarifying question.

So the -- this chart, graph, does Google -- are these all of the engineers that are devoted to the SA360 product?

THE WITNESS: So with SA360, we have a set of engineers that work mostly on our product, and then there are other teams that would also be contributing to our product.

But, yeah, this is referring to the engineers that kind of we would consider to be engineers on SA360, yeah.

THE COURT: Okay.

MS. WASZMER: Thank you, Your Honor.

BY MS. WASZMER:

Q Okay.

Mr. Varia, I'm going to next have you turn the page, and there's two pages that are somewhat related, ending in 578 and 579, but let's just -- and they're confidential, but let me just have you look at both.

A I see.

Q And you see the titles, both have a similar title, "Roadmap Planning, What Features are In." It says, "What Features are In in Part 1 and Part 2."

Do you see that?

A Yes.

Q Now, because these are redacted, I'm just going to ask you almost at high level.

Looking at the -- looking at this planning, are there any Microsoft features listed on these slides?

A Yes, I see multiple features.

Q Okay.

And is Amalgam listed here on "What's In"?

A Yes, Amalgam is listed as well.

Q Okay.

And are there also some Google Ads features listed here?

A Yes, there are some here as well.

Q And then there appear to be a lot of entries that

don't have a search engine.

Can you explain, with all the other lines that are not Google or Microsoft or a specific engine, what -- what are those types of features?

A Yeah.

And so without going into the individual ones, so some of them are relating to kind of the cross-engine features that I was talking about before.

So features that aren't specific features that exist on Google, Microsoft, or an engine, but are features that we are producing ourselves to help advertisers do their job.

Some of these also refer to areas that are just kind of the cost of doing -- cost of having a platform, so we need to maintain it, invest in it, engineering teams need to do migrations and a variety of things like that.

Q Let's look at the next two slides ending in 580 and 581, and these are also redacted somewhat, but the title is "Roadmap Planning-What Features are Out?" and then Part 2 of that, and just have a look at that array of features.

A Okay.

Q Okay.

On the page ending in 580, do you see, in the top left-hand corner, there's a bunch of features that say "AW"?

A Yes, I do.

Q What is AW?
A That would refer to AdWords or Google Ads.
Q And just looking here, can you see there's at least five features here that say "AW"?
A Yeah.
Q And based on looking at this, were these features planned to be out, meaning not on the roadmap?
A These had been deferred to a future roadmap, yeah.
Q And I think you testified to this before, but was there ever occasion for a feature to be on this "out" or "not on the roadmap" list that then made it in subsequent periods of time on to the "in" list?
A Yeah, that was pretty common for that to happen.
Q Okay. I think we can take this down.
And, Mr. Varia, let me pivot for one moment.
The Court has heard testimony in the course of this case about concerns from Microsoft about what has been referred to as spend shift from Microsoft to Google after auction-time bidding for Google Ads was launched.
Do you recall at any point in time hearing that Microsoft was concerned about what they perceived as spend shift?
A Yes, I remember they had expressed that concern to me.
Q And in response to understanding that there was a

concern, did you take any action?

A I think when they brought it up -- yeah, when they brought it up, they -- I had asked my team to explore it further and see if we understand it, to help us build an understanding.

Q And do you know whether -- did your team conduct any analysis of "customer other spend"?

A Yeah, they ended up doing that.

Q And do you recall what the outcome was of that analysis?

A Yes.

So when the team kind of put together analysis, what we saw was that, you know, customers who were using SA3 bid strategies, when they were enabling -- enabling the auction-time bidding feature for Google Ads side, what we were noticing is that their Google ad spend was growing, and then their Microsoft spend was -- it was stable, if not growing just a little bit on -- you know, generally. So, yeah, we were kind of seeing that it was stable to growing for Microsoft.

Q And just in terms of the time period, do you recall, was that time period in which you asked your team to do the work, was it right after Google Ads auction-time bidding had launched in Search Ads 360?

A Yeah, it was sometime in the latter part of H2,

2019, yeah.

Q Now, let's go to the time right -- I think right before you're leaving SA360 in 2021.

A Yep.

Q At that point, did SA360 support every feature in Google Ads?

A No -- def- -- no.

Q And at that time -- we've heard about conversion tracking. Did SA360 provide conversion tracking capabilities for every type of -- every Google Ads ad type?

A No, we didn't. There were -- there were several that we didn't.

Q And from your experience with SA360, why would it be the case that there would be a Google Ads type supported in SA360 but not conversion tracking?

A So without going too technical with this, like each ad type operated slightly different from other -- the other ad types. So for conversion, our conversion tracking integration to work with it, it would really matter how that ad type operates, whether it supports some of the technologies we were using.

And so we would often find ourselves, for new ad types, having to evaluate if there's net new work that we have to do it make it work. So we'd have to then consider that for prioritization alongside other features that we

would be building before we could support it.

Q Okay. Mr. Varia, I want to turn to a topic that also has come up so far.

Are you familiar with the term "Floodlight," capital F?

A Yes.

Q What is Floodlight?

A Floodlight refers to the DoubleClick or -- I think now it's the Google marketing platform's version of conversion tracking.

Q And when you say "conversion tracking," is that technology or software or data?

A It's a technology.

Q Okay.

So if someone says, "Floodlight data," do you know what that means?

A Yeah, that would refer to the actual conversion. So in some of the previous examples of like somebody completing an action on the site, so the numbers associated to that.

Q If you know based on your experience working at SA360, do other ad platforms, meaning outside of Google, offer conversion tracking?

A Yeah, pretty much all of them do.

Q Is Floodlight conversion tracking, as far as you

know, unique to Google?

A No, there's -- there are many other types of conversion tracking products that are comparable.

Q Okay.

And let me just have you look at what's been marked as DX3052 in your binder for identification.

And just let me know when with you get there?

A Which one?

Q Our binder, which is Google's binder, which is the skinnier one, DX3052. Just have a look at that and then I'll ask you some questions.

A Okay.

Q In the top right-hand corner do you see there's some text that says, "What does Floodlight Search Ads 360 help"?

A Yes.

Q Did Search Ads 360 have help pages for advertisers as far as you know?

A Yes, we did.

Q And the title of this is "Report on Floodlight conversions: What is Floodlight?"

Are you familiar with the information here?

A I'm not familiar with the -- this page specifically, but, yeah, the information it's talking about is something I'm pretty familiar with.

MS. WASZMER: Your Honor, move to admit.

MR. CAVANAUGH: No objection.

MS. WASZMER: Thank you, Your Honor.

THE COURT: 5252 will be admitted.

MS. WASZMER: You can put that aside.

(Defendant's Exhibit 5252 received into evidence.)

MS. WASZMER: Just a final set of questions, Mr. Varia. I'm almost done.

BY MS. WASZMER:

Q During the course of this case, the Court has heard about periods of time in which two to three advertisers were testing Microsoft auction-time bidding.

Do you recall any period of time in which you learned that there may be a few advertisers who were testing Microsoft auction-time bidding on their own?

A Yes, I do remember that.

Q And just to give the Court some context, as of the time you were with SA360, how many advertising customers did SA360 have?

A I estimate somewhere in the tens of thousands.

Q Okay.

I'm just going to --

MS. WASZMER: Your Honor, I'm just going to put up a paragraph of the States' complaint just to ask Mr. Varia

about it, and we're going to put up paragraph 165 of the Colorado complaint.

BY MS. WASZMER:

Q Mr. Varia, you can just take a look at the screen. I'll represent to you this is a paragraph from the States' complaint in this case.

And what I just want to refer you to is language about switching, advertiser switching. It states that "An advertiser's choice of SEM tools is sticky, which makes it highly unlikely that an advertiser will recognize that Google is not supporting features and stop using SA360."

Do you see that?

A Yes, I do.

Q During your time at SA360, did advertisers switch away from SA360 to other platforms?

A Yes, that would happen.

MS. WASZMER: Thank you, Your Honor. No further questions.

- - -

REDIRECT EXAMINATION

BY MR. CAVANAUGH:

Q Very quickly, Your Honor, or Mr. Dintzer will kill me.

Now, after Amalgam was implemented, the new SA360, right?

A Uh-huh.

Q Google ad features are supported on day one on SA360, right?

A So just a quick clarification. I left before we actually launched it, but even then and during my time there, no, not all Google Ads features were supported day one.

Q But most of the features were. That was one of the purposes of Project Amalgam, to have Google ad features supported on day one, right?

A There were features that were supported but not all features.

So, yes, so not all features were supported.

Q On conversion data, you said that conversion data couldn't be used on all features on Google Ads, correct?

A Yes.

I think I was saying something like, yeah, there were certain ad types we didn't support.

Q Let me be clear.

Conversion data coming from SA360, your point was, they can't be used on all Google Ads features, correct?

A Not the conversion data, the conversion tracking technology wouldn't work for all Google Ads types.

Q But it did work for the Google Ads auction-time bidding feature, correct?

A It worked for -- so taking a step back here. The Google ad types that supported Google Ads bid strategies and supported our Floodlight tracking were kind of the part that would work within Google auction-time bidding. So it was kind of an overlap of, does it support our conversions and does it support auction-time bidding.

Q That was part of the point of Project MYX, right?

A Project MYX was bringing that Google Ads auction-time bidding into our SA360 bid strategies for the ad types we supported conversion tracking on.

MR. CAVANAUGH: Thank you.

Nothing further, Your Honor.

THE COURT: All right. Mr. Varia, thank you very much for your time and testimony, sir.

THE WITNESS: Thank you.

THE COURT: Safe travels home.

All right. See if the Whinston team has arrived.

MR. SEVERT: Yes, Your Honor. Ready to resume.

THE COURT: Professor Whinston, welcome back. I hope you had a nice evening.

THE WITNESS: I'm sorry, say it again.

THE COURT: I hope you had a nice evening.

THE WITNESS: Thank you. I did.

THE COURT: All right.

Mr. Severt, ready when you are.

MR. SEVERT: Adam Severt for the United States.

- - -

MICHAEL WHINSTON, WITNESS FOR THE PLAINTIFFS, HAVING BEEN PREVIOUSLY SWORN, RESUMED THE STAND AND TESTIFIED FURTHER AS FOLLOWS:

DIRECT EXAMINATION (CONTINUED)

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BY MR. SEVERT:

Q Professor Winston, we could maybe go to Slide 43 of your presentation you prepared.

A Yeah.

Actually, could I just interrupt just for one second?

Q Sure.

THE WITNESS: Your Honor, yesterday -- before Mr. Severt starts his questions, yesterday we were having a discussion, you had asked me about remarketing ads, and I guess there was one point that I thought might be helpful. These are the ads that if you go to --

THE COURT: Right.

THE WITNESS: -- a brown shoe website, you'll show up later.

So I don't know if it's okay if I do that, or no.

THE COURT: Go ahead. Yeah, sure.

THE WITNESS: Okay.

So yesterday I had talked to -- we had been talking about them and I had emphasized two things. One, recency was really important and that the amount of information available was important.

There's one other thing just to keep in mind about remarketing ads, which is someone has to go to your website first in order to do it. And so if a website relies and needs traffic from general search ads from general search text ads, then in some sense, they're not competing, it's kind of augmenting the value of the general search text ads.

The analogy I like to think of is, if I'm going to play baseball, I need a mitt and a ball and a bat, and they're not competing against each other, they're augmenting, they're enabling me to play baseball.

And it's kind of a more general point also just about ads that are at different points in the funnel. So if an advertiser needs to get someone from the beginning to the end of the funnel, there are various pieces that they have to do.

So it's easy -- you know, I've been speaking about whether things were not strong substitutes, but they could actually be complements, there can be actually important elements of being complements. Sorry about that.

BY MR. SEVERT:

Q Let's go to Slide 43 of your presentation, and just remind the Court what your second opinion is.

A So my second opinion is that Google possesses substantial market power protected by barriers to entry in each of the relevant markets.

Q And, Professor, what's the difference between substantial market power and monopoly power?

A So, to an economist, a monopoly is a situation where you just have one firm in a market. But my understanding is that in the law, that's not the case, that -- and so in -- at least my understanding is that a finding of monopoly power is supported by kind of two elements. One, that the firm has substantial market power, and, second, that that market power is protected by barriers to entry and expansion.

Q Let's go to the next slide on your presentation, 44, and just begin by discussing monopoly power in the general search services market.

Does Google have substantial market power that is protected by high barriers to entry in the U.S. general search services market?

A It does.

Q And what economic evidence did you see to support this conclusion?

A So if you go to Slide 45, you'll see five different pieces of evidence that I relied on in forming my opinion.

Q And the first bullet, I think, is red on the Slide 40. 46 deals with market shares.

Do you calculate market shares in the general search services market?

A I did.

Q What did you find?

A So if you go to Slide 47, you'll see what my estimates of Google's market share.

Q And what was your market share estimate for Google in 2020?

A 89.2 percent of the general search services market.

Q What did you rely upon to calculate these shares?

A Two kinds of information and data.

You know, one was data that Google and Bing provided, which included their -- the queries that they responded to, as well as the queries that syndicators from them responded to.

And then I augmented that with StatCounter data for other -- the kind of very small general search engines that wouldn't be covered in that.

Q And in addition to this sort of static look at

market shares in 2020, did you also look at Google's market share over time?

A I did.

So if you bring up Slide 48, you'll see this is StatCounter data that goes back well in time. And, you know, you can see that this goes from 2009 to 2021, and you can see Google's share in 2009 was about 80 percent, and it rises to a little under 90 now.

And I should say that, you know, I have also, Your Honor, looked at StatCounter data and compared it to the data that I got from the parties, and it's very reliable.

THE COURT: And I'm sorry, StatCounter is a, what, it's a third-party device?

THE WITNESS: Yeah. You can go yourself and go, you know, navigate this StatCounter and get the same picture for yourself.

BY MR. SEVERT:

Q And, Professor, did you also look at Google's market share, if we just look at mobile?

A I did.

Q What did you find there?

A So you bring up Slide 49, you'll see Google's share.

This is from StatCounter. Google's share in --

just for mobile phone queries, and it's just shy of 95 percent. So higher than the overall share.

Q And, Professor, during his testimony, Dr. Varian was asked about shares. He and his team, I think he said he calculated based on a method that he invented that used Google's internal data source AdSense.

Did you look at that as swell?

A I did.

Q And what did that tell you?

A The shares there were higher than the shares that I just talked about.

Q Okay.

Let's go back to your list, Professor, on page 50. And your second bullet is, "High Barriers to Entry and Expansion."

How are high barriers to entry and expansion relevant to determining whether Google has substantial market power in general search services?

A Right.

So, Your Honor, the thing about barriers to entry is that if barriers to entry are high, then market power can be sustainable over a long period of time.

If, instead, barriers to entry are low, we generally expect that entry will occur and market power will be eroded.

Q And did you see any evidence of high barriers to entry and expansion in general search services?

A I did.

Q And what did you see?

A So if you bring up the next slide, 52.

So -- sorry, yeah, I meant 51. My apologies.

Q Sure.

And on Slide 51, the first thing that you mention is the large fixed and sunk capital costs. What evidence did you see there?

A Right.

So fixed and sunk capital costs are a major source of barriers to entry when barriers to entry exist. And if you look at Slide 52, you'll see -- and this is redacted, Your Honor. This is information about Google's annual costs. On the one hand, the first bullet is what its annual costs are for search services, and then second bullet is showing its annual costs for search advertising.

And these are very big numbers, of course, you know, Google has a very big share. But in 2020, I think -- I think I'm getting this right within a year, Google estimated, for example, what it would cost Apple if Apple decided to enter.

And, you know, despite the fact that Apple has incurred, you know, costs already in the past to -- with its

Pegasus index and the like, the cost that it expected Apple to incur for search services if it didn't have any advertising were higher than this.

And just for context, at the bottom, I put what Bing's total revenue was from search ads in 2020. So you can kind of get a sense of how big these costs are.

Q Professor, if we go to your second bullet, I think, on Slide 53, you list "Google's Strong Brand Recognition and Loyalty," and I think we've heard -- the Court has heard about Google's brand during this trial.

How is that an entry barrier?

THE COURT: I'm sorry, before you move to that, let me -- does your opinion take into account emerging technology and how that might impact capital costs associated with building a new search engine or improving an existing one?

THE WITNESS: So, you know, there's some costs that are, you know, if you want to have an index of the web, that's extremely expensive and, from what I gather, in the billions.

If you're referring to AI machine learning, you know, AI is something that's emerging. You know, I think there are still very significant costs, but I haven't been able to look at that specifically. You know, the -- a lot of the AI things happened after my reports.

BY MR. SEVERT:

Q And your second bullet refers to "Brand Recognition." What did you have in mind there?

A Well, Google's a verb, and, you know, it has done -- it has well done many surveys. And you see in the documents that it feels it has a very strong brand recognition, a lot of consumer loyalty, and that's something that a new entrant would need to overcome, which will be -- would be tough.

Q And your third bullet is "Scale," and we're not going to talk in any detail about scale today, but just briefly, how is scale a barrier to entry and expansion?

A Well, if you need scale to have decent quality, it's going to be hard for a new entrant that comes in at a smaller scale to have quality that matches Google.

MR. SCHMIDTLEIN: Your Honor, just -- we had noted previously we had a *Daubert* motion directed at any opinion he's going to offer with respect to scale, because he is not an expert in scale.

But if we're just going to do a drive-by today, obviously that's -- we'll deal with it later.

THE COURT: Okay.

BY MR. SEVERT:

Q And, Professor, your fourth bullet is on "Google's Ownership of the Chrome Web Browser." How is that an entry

barrier?

A Again, you know, Google is the default in Chrome.

I'm not going to say much more about that because we're talking about that next time.

But that can shrink the available market.

Q Sure.

And then the final bullet you identify is the "Google's Control of the Search Access Points through its Contracts," and we're -- similarly we're not going to talk about that in any detail today.

But how does that -- how is that an entry barrier?

A Same thing. You know, to the extent that these contracts limit the available market, that is -- you know, the traffic that's available to entrants, that would make it hard to enter.

Q Okay.

And I think that wraps up your list of entry barriers and brings us back to the economic evidence of monopoly power that you identified on Slide 54.

And your next bullet there is "Google's Significant Advantages over its General Search Rivals."

Why are advantages evidence of market power?

A Well, you know, take, for example, you know, in general search services, quality is the big dimension of competition. And if you are a firm that is capable of much

higher quality than what your rivals are capable of, you can retain customers being better than rivals but not as good as you could be. And so, you know, in that -- you know, good enough, in some sense.

Q And what advantages does Google have over its general search engine rivals?

A So if you bring up Slide 55.

Here I list three quite important advantages that Google has, and they're quite significant.

The first is its "Search Services Quality Advantages."

So, Your Honor, I think you've heard a little bit about IS scores that Google uses as a quality measure.

And so here, it's redacted so I won't say the numbers, but between -- we have -- from Google -- you know, Google compared itself to Bing with IS score measures. From 2015 to '21, we have that information, and the difference I'm showing here between Google's and Bing's IS score had the range that I'm showing.

And I should say, IS are scores for searches on mobile devices, and so that's what that -- or search results served on mobile devices.

And, you know, maybe for -- I think it helps to have some context for what this means, Your Honor.

So Google's just -- I'd say two things. Google's

Pandu Nayak, I think he may testify, I don't know, but he's vice president for search at Google, and in his deposition, he said that a half point is a meaningful difference, and four points would be very significant.

So you can get a sense of what this is.

And I think Dr. Lehman also said something like, They hope for a one point increase in a year. So that just give kind of gives you a sense of what this difference means.

Q And then your next bullet, Professor, is about brand image and reputation advantages. Is that similar to what we were talking about earlier in entry barriers?

A Yes.

So -- exactly.

You know, it has a big advantage in that sense. Being a verb helps.

Q And then your last bullet, what are "Monetization Advantages," and why do they contribute to market power?

A So before -- I'll show this to you on the next slide, Your Honor, but for many products, you would talk about a firm, say, having a cost advantage on rivals, like, you know, I can produce my widgets much less expensively than you can, and that can give me market power.

Here for a search services, there are some direct costs of serving a query. You know, maybe you have to have

another server, you know, more servers or something.

But the biggest thing is the ad revenue. So the ad revenue is like a negative marginal cost.

Like when I serve a query, instead of it costing me something, effectively I make money on it, and that's the real -- so really, the -- but what -- and the key thing here is that Google is able to make much more money on a query than rivals are.

So if you turn to the next slide, Slide 56, again, it's redacted, so I won't say anything about the numbers, but, Your Honor, it's showing separately for PCs and for mobile queries. PCs in solid lines, mobile in dashed lines. It's showing the -- on average, each year, the revenue that Google in red and Bing in blue make per query.

And what you can see here is pretty much on PCs, they're making the same amount of money per query.

But in mobile -- and I can't -- you know, it's vastly, vastly different, and I can't say the number, you know, how many times number higher their revenue per thousand queries is on Mobile -- they, being Google -- than Bing's, but if you divide those two numbers, it's a big difference.

Q And then, Professor, on your -- I think turning to Slide 57, your next bullet is "Low Consumer Responsiveness."

Why is low consumer responsiveness evidence of

market power?

A Well, it goes back to things we talked about yesterday.

You know, low consumer responsiveness is kind of a bottom line of market power. I can -- if I lower my quality, do I lose consumers or not.

And so if you turn to the next slide, I know, Your Honor, you asked me yesterday if there were any empirical measures of responsiveness.

So Google did experiments, and it did a good number of experiments. And what it did in these experiments is it deliberately, for a sub- -- portion of its traffic, made its quality worse.

And these were called it ablation experiments.

And what they did is they basically would turn off some element of their ranking algorithm in order to make themselves deliberately worse. And they would see how much of an effect that had on consumer traffic, on the number of queries they got.

And they did this for various elements of their algorithm, and then kind of basically plotted -- oh, and I should say, in each experiment they would measure how much worse it made them in terms of the IS score.

And so then they would -- they basically plotted, Well, you know, as a function of how much we reduce our IS

score, how much traffic do we lose.

And so it's redacted, I won't say the numbers, but you can see here what one IS -- what their conclusion was, and this is in 2020, about the relationship between one IS score point and how much search traffic they would lose.

So as a percentage.

And it's stated here as "Search Revenue Ex-TAC" but it's really -- you can think of it as just percentage of queries, what percentage of queries would they lose.

And to put it in -- again, I think context is really important here.

So remember a moment ago I was saying that four IS score points is very significant, okay?

So you can take this number and ask yourself, well, how much market share would Google lose if it reduced its quality by four IS score points.

And the answer is, from their 89.2 percent share, they wouldn't fall very much, just -- and I can't say the number.

And it's really a measure of how insulated Google is from competition.

Like, either because their quality is that much higher than rivals or because of the contracts or something, but it is showing you something about kind of insulation.

THE COURT: Can you say whether the

experimentation showed that there was an amplification of loss as the IS score worsened?

THE WITNESS: So these experiments, they weren't that long. You know, they would be -- I remember -- and I'll talk about how long their advertiser experiments were. I don't remember exactly how long these were. But my recollection is they were in the space of weeks, months, something like that. It wasn't something where they were looking at for years.

BY MR. SEVERT:

Q And, Professor, earlier when we were discussing Google's IS score, just to be clear, I think you explained that Google has a significant advantage on Bing and I wanted to make sure your testimony is clear about that.

Am I right that IS scores in general can be measured on desktop and mobile; is that right?

A Well, I think I said it's on queries served on mobile devices.

Your Honor, the queries are drawn -- so it's human evaluators that are evaluating it, and the queries are drawn randomly from queries put in both on desktop and mobile, but the results that are being evaluated are on mobile.

Q And then going to your Slide 59, your last bullet is "The substantial profits Google earns from its distribution contracts."

And we'll certainly get into the details of the contracts next time, but for now, what is the level of profits just from the contracts that tell you about Google's monopoly power?

A So, Your Honor, I spent a fair amount of time looking at the profits that Google makes in its contracts.

Some of that involved thinking about incremental effects of defaults, and we're going to talking about that next time, I'm not going to say anything about that right now.

But you can just get a sense of what Google was making in its profit, you know, in one of these contracts pretty roughly without going into all of that detail.

You know, even against the very powerful, with a very, very powerful partner like Apple.

So if you want to think like how much money was Google making in the Apple contract, well, its contracts were paying Apple a percentage of net revenue. Net revenue is defined as revenue minus a standard reduction for Google's cost of serving the query.

So whatever -- you know, if Google was giving Apple all of that profit and not profiting out of these, it would pay 100 percent. So 100 percent minus the amount that it was paying is its profit. That's percentage of all the revenue. And it's, you know, in the billions. It's big.

Q And, Professor, let's now turn to monopoly power in the ads market.

A Can I just add to that just one second?

Q Sure. What do you need to add, Professor Whinston?

A So, Your Honor, why does that matter?

And the thing is, if Google -- you know, imagine if Google is involved in this -- negotiating this Apple contract, if it had equally capable rivals, it wouldn't be able to make that amount of money. Apple would play them off against each other. So when you see that level of profit, it's telling you that there's a really big gap and they have a lot of market power.

Q Let's turn to --

THE COURT: Sorry to interrupt.

But how is it that you assess that the profit is that of a monopolist versus profit that is being generated in a competitive marketplace?

THE WITNESS: So I guess there's two things I would say in response to that.

One is, of course, the size of profits and the size of the -- you know, when firms have a really, really big advantage, that is very likely to coincide with market power.

Now, just to be clear, no one's saying that that

is bad, like that they've -- you know, so there's a -- right now we're talking about market power and monopoly power, not whether there's anything bad about it. And that's an important distinction.

So, like, if I'm -- just to digress to an example, if I'm thinking about a pharmaceutical company that comes up with some amazing innovation that cures some disease, patented, they're the only one that has done it, they undoubtedly have a lot of market power even though we applaud the fact that they innovated.

So the question of whether there is something bad about it is separate.

But coming back to your question, it's possible for, of course, for a firm to make profits in a competitive market. But if you saw that, you should see a lot of consumer responsiveness, because we're in the -- you know, a situation where -- you know, the economists like to talk about price taking or, in this case, in this setting, quality taking. If there was like some quality you had to match, every firm had to match it, Google is able to do it more, you know, at a lower cost, et cetera.

You would see a lot of responsiveness, but here we're not. That was the evidence we just talked about.

And so Google is very insulated.

And so, you know, it's not -- I think any -- the

important thing about the opinion is that it's really based on a combination of different --

THE COURT: Right.

THE WITNESS: -- pieces of evidence. So it's in that sense that I would answer you.

THE COURT: Okay.

BY MR. SEVERT:

Q And, Professor, let's now turn to the ads markets, and then we're on Slide 60.

Does Google have substantial market power protected by barriers to entry in the general search text advertising market?

A It does.

Q And what about the broader search advertising market?

A There as well.

Q And what type of evidence leads you to those conclusions?

A If you go to Slide 61, you'll see four pieces of evidence that I rely on.

Q And the first one is market shares. And did you calculate market shares for each of the ad markets?

A I did.

Q And let's start with the general search text advertising market. I think that's Slide 62.

What did you find there?

A So, Your Honor, here you can see from 2016 to 2021, Google's market share in general search text advertising, and it ranges, beginning of 2016, a little over -- somewhat over 80 percent, and then by 2021, it's, you know, roughly 88 percent.

Q And what was it in 2020?

A 20 -- oh, 2020, I don't have a -- I said -- I think the 88 percent, I'm not sure whether it's in 2020 or 2021, and I can't read the difference between --

Q Just the heading of the Slide is 88 percent?

A Oh, all right. My apologies.

Yes, it was 88 percent in 2020. Thank you.

Q And that's indeed what you calculated?

A Yes.

Q And did you calculate market shares, Professor, in the search advertising market?

A I did.

Q Actually, first, before we go there, let me ask you, on the general search text advertising market, what did you rely upon to arrive at these shares?

A So what I relied on was we had data from Google and Bing about their general search text advertising revenue.

And then for general search engines other than

Google and Bing, I had their query shares or estimates of their query shares and used a very conservative assumption about their revenue per query, actually that it would be the higher of Google or Bing's revenue -- revenue per query or a thousand queries in every year, you know, on each device. So just conservative assumptions.

Q And then turning to the search advertising markets, did you calculate market shares in that market?

A I did.

Q And what did you find?

A So if you look at Slide 63, Your Honor, this is my estimate of -- or -- of Google's share of the overall -- the broader search advertising market. You can see, you know, it has ranged over the years from a little below 65 percent to 74 percent in 2020.

Q And what did you rely upon to calculate these shares?

A So the numerator, we have from Google, Google data telling us what their search ad revenue is.

The denominator is really -- I think yesterday, Your Honor, we were talking a lot about what is a search ad and what isn't a search ad. And I told -- I told you what conceptually it is, and I said something to you about, I think the expression I used was when the rubber hits the road.

So this is where the rubber hits the road as, like, what I'm counting as the denominator when I'm thinking about what Google's share is.

And the thing is I don't have direct measure of all of these different kinds of ads. And so here what I'm relying on are industry estimates of what the search ad market is.

So on the one hand, I have a source -- standard marketing source called eMarketer that gives an estimate of search -- of total search ad revenue in the U.S. And on the other hand, Google has something that -- it uses three different industry estimates in something it calls its industry metrics data. And for each year comes up with, based on these three different sources -- one is Forrester Research, I forget the other two -- comes up with an estimate of what it thinks the total size of the market is. And so I used that.

And then what I did was, again, for each year and each device, I picked the bigger number to be conservative. And so that's how I got these.

So at some level when the rubber hits the road, I'm kind of relying in this estimate on what industry participants and Google think is the size of the search ad market.

THE COURT: And so we talked about this yesterday.

Who is an other? What companies would you put in the other category?

THE WITNESS: I mean, it would be other general search engine, other specialized search engines.

And so -- but, really, what it is it's -- in some sense, it's a residual. So, like, I have the estimate from the industry participants of what the total is and I know exactly what Google and Bing's shares are; other is just the difference.

BY MR. SEVERT:

Q And then, Professor, turning back here to your list of economic evidence on Slide 64, you next list "barriers to entry." And what did you have in mind there?

A So the same kind of barriers to entry that we talked about. You know, what we were looking at the size, what it takes to service an ad platform, you know, what Google's expenses are.

And, you know, it's very expensive to run an ad platform so that's the kind of thing that I was relying on.

Q And then in the next bullet, in the third bullet is "Google's significant advantages over its search ad rivals." What did you mean by -- in that bullet?

A Well, Your Honor, a few minutes ago I showed you the difference in revenue per query on mobile phones, especially between Google and Bing.

One of the key contributors to that is the difference in clickthrough rate, which picks up kind of that Google is much -- is better than Microsoft on mobile devices at finding relevant ads that consumers will click on. And so that's a significant advantage that it has in this market.

Q And then, Professor, your last bullet is "Low advertiser responsiveness allowed Google to raise its text ad prices significantly."

What did you mean by that?

A Well, there are two pieces of that bullet sentence or bullet point.

One is that Google raises text ad prices significantly and we'll see evidence -- I'll show evidence of that on the next slide when we turn to it.

And the second is that the reason they decided they could do that is exactly that they had evidence that advertisers didn't respond very much.

So this is the second -- Your Honor, the second piece that I was referring to of empirical evidence about responsiveness, and we'll come to that.

Q So what did you see in terms of text ad prices?

A So if you go to Slide 65, Your Honor, this is showing you, from 2013 to 2021, the -- what the average prices were per click for Google on -- and this is for

general search text ads, just to be really clear, on PCs and on mobile phones.

And a couple things to say about this.

One, this is Google's index. So when you're doing a price -- looking at prices, Your Honor, you know -- and this comes up in -- you know, when the BLS does the Consumer Price Index.

Two things can make -- kinds of things can make prices change over time. One is that prices really are going up, and the other is that there are compositional changes. Maybe prices might go up because people start, in this case, doing queries that have higher ad prices.

And so what this index -- what Google did when it constructed this index is exactly try to do what the BLS does when it does a price index, which is take out the compositional effects.

And, you know, without going into too much detail, or very little, you know, how Do you do that? Well, you hold the queries fixed that -- you know, this month, and you look at how the total price would change if you held the queries fixed. And you kind of just do that period to period to period. So that's the idea of a price index.

And so this is Google's price index. And what you can -- so that's the first thing.

And the second thing is, I can't say the numbers

but -- so in this -- the way this index is shown here, 2021 is an index value of 100. So these -- and, like, I won't say, you know, that's just a normalization.

What I can't say is in 2013, what that value of the index is. You can read it.

And so if you want to know -- and I actually apologize that I didn't just do the computation and show it here for you. But if you want to know, like, how much did prices -- what percent did prices go up, you know, just divide that first -- the hundred by that first number, and you can see it went up a lot.

And if you want, again, context, from 2013 to 2021, the Consumer Price Index -- both the Consumer Price Index and the Producer Price Indexes went up way less. So I think the Consumer Price Index went up 13 percent total over those years. The Producer Price Index went up 5 percent.

I hope I'm not switching those two around. But in any case, they're both very small. This is a much, much bigger increase.

Q And just so we have a clear record, what did you mean by "BLS"?

A Oh, Bureau of Labor Statistics that produces the Consumer Price Index and the Producer Price Index.

Q And then, Professor, have you seen testimony in

this trial about Google raising its prices?

A I have.

Q What did you see?

A So on the next slide you'll see testimony from Jerry Dischler talking about Google -- being asked about Google launches, and that they -- did they launch price increases of 5 percent on search ads, and I think what's meant there is general search text ads, and that -- did that happen, and he said, Yes, yeah -- you can read the answer.

Q And have you seen documents showing Google adjusting the rules of its auction to raise prices?

A I have.

And so if you look at the next slide, Slide 67, you know, this really kind of gets at the whole thing that Google was doing and is able to do.

So, you know, it runs -- there's an ad auction. You know, every time a query is, you know, received, instantaneously, Google runs an auction to decide which ads are going to be shown in the best posi- -- in each of the slides, ad slots.

And so what you can see here is their recognition that, you know, one, they want to attract -- extract value, meaning they want to extract the advertisers' values. So that advertiser -- Google benefits, not advertisers.

And how do they do it? Well, "pricing mechanisms

that use pricing knobs."

And so what that means, Your Honor, is that there are various ways that Google can change the way the auction runs that change prices in a very clear way, and Google over the period of 2016 on, studied this in a very, very deliberate way.

Q And can you give the Court a specific example?

A Sure.

So I think, Your Honor, you've heard, if you -- about one part of this, a project called Momiji, I think.

So Momiji was trying to figure out, you know, can we raise prices, how much can we raise prices, how should we raise prices.

And if you go to the next slide, this is -- Your Honor, this is a slide of a document that I think Jerry Dischler was asked about.

What you're seeing here -- you know, after seeing this slide in testimony, I went through and I read this slide -- I read the document, and you're seeing here two call-outs from this document.

The top is -- so what this document was doing was it was -- there were four meetings over the period of a month or so about the Momiji project. And, you know, this is -- for one of the meetings, I think, it says Meeting 2, what was the agenda? Do we want to raise prices? Is it

okay to raise prices? And how do we do it? How do we roll it out?

So that's the first -- kind of a first thing to take from this is Google was very aware that it had ways to raise prices, and that's what it was interested in studying.

The second part, it's redacted on the slide, but my understanding is I can read it. And as an economist, I think I can usefully help you understand what this second part means.

MR. SCHMIDTLEIN: Your Honor -- what's your basis for him being able to read this?

MR. SEVERT: Mr. Safty's email.

(Plaintiffs' counsel conferred off the record.)

MR. SEVERT: And this is also -- it was talked about extensively with Mr. Juda and Dischler.

MR. SCHMIDTLEIN: Well, I don't agree with that.

THE COURT: Well, I guess the question is, is there -- did Google consent to unsealing this portion?

MR. SCHMIDTLEIN: Can I just confer?

(Defense counsel conferred off the record.)

MR. SEVERT: If it would help, we're happy to not say the numbers.

MR. SCHMIDTLEIN: My apologies, Your Honor. There are a lot of documents that have gone back and forth.

MR. SEVERT: Mr. Schmidtlein, I'm happy to let you

look at the email from Mr. Safty.

MR. SCHMIDTLEIN: I'm trying to read the entire string here.

It's fine.

THE COURT: Okay.

THE WITNESS: So, Your Honor, as I was saying, and I think as an economist, I can help -- it's a little bit harder maybe to decipher this, but I think I can explain it to you in a way that's helpful.

So, the first thing that's being said in this portion, in this call-out is, Why do you think it's poorly priced.

And they're speaking about whether they're pricing high -- in essence, are we pricing too low.

And what they're really speaking about is too low especially for the highest ranked bidder.

So a key thing throughout a lot of these documents is the question of whether we're extracting enough profit out of the bidder that is, you know, most highly ranked, has the highest willingness to pay, is the most relevant on a query.

So the second -- then there's three sub-bullet points.

The first one says, "Because runner is less than 80 percent of his score, not putting high pricing pressure

on him." Okay. So who's "him" and who's "his"? It's the highest rank bidder.

And who's "runner"? It's the runner-up, it's the second ranked bidder.

And so what they're saying is that the runner-up's bid is only 80 percent of what the highest bidder's score is.

And because of that, we're not putting enough pricing pressure on that high bidder.

THE COURT: In other words, because in the second price auction, the price would be 80.1.

THE WITNESS: Correct.

THE COURT: Right.

THE WITNESS: Second --

THE COURT: And they're not covering the delta between what the No. 1 one bidder is willing to pay versus what the No. 2 bidder is willing to pay.

THE WITNESS: Exactly.

The second sub-bullet is Jerry Dischler, and he's saying -- well, he's explaining, you know, why would there be a 20 percent gap if it's good, there should -- i.e., it isn't good because there's a 20 percent gap.

The third bullet point is Adam Juda, who I think just recently testified. And I don't remember whether his testimony was sealed or not, but, in general terms, he spoke

to you about, are we really -- you know, are we really able to control prices, were we -- you know, were we really focused on raising prices, things like that, and I won't say what he said, but it's in the record. So he's in this meeting.

What he says is, "One way to phrase this is that under perfect prices, one penny less than the breaking point is the right amount. The advertiser is currently paying at least 20 percent less than their willingness to pay."

So what he's saying is what we want to do is price a penny below the willingness to pay of the highest bidder. That's the goal. And that's what they're trying to figure out.

And so by doing that, if -- to the extent that they're able to do that, they will extract all of the advertisers' benefits and put it into Google profits. So that's what this slide is showing you.

BY MR. SEVERT:

Q And then, Professor, have you seen any evidence that Google has a lot of influence over price?

A I have.

So if you bring up Slide 69, you'll see an earlier, slightly earlier slide deck about Momoji, and it's talking about how much they could make by essentially, A, raising format pricing.

So, Your Honor, I don't really recall whether anyone has spoken to you about formats, but they're basically the little extensions on text ads that give more information or let you hit a button to call the advertiser.

So they were looking at raising the prices of those, and they also were interested in this thing called squashing. And, again, I don't know -- I can't recall whether anyone's talked to you about quashing, but it was another mechanism. Basically what they would do is they would take the second highest bidder, who -- the bidder who had the second highest predicted clickthrough rate, and, in essence, in the formula for the auction, boost that ranking of that. And why? To basically raise the price against the highest bidder.

So they're talking about doing both of those things and saying, we can increase RPM, revenue for thousand queries, 10 percent from format pricing, 5 percent from squashing, and they work well together, so if we do both, we'll raise prices 15 percent.

So that's what this slide is talking about.

Q And what convinced them that they could raise prices like this?

A So what convinced them is that they did these experiments Your Honor, that showed them that there was low advertiser responsiveness to price increases. And so

starting in 2016, I don't have a slide on this, although in my report there's a figure showing you this, but, you know, just to tell you this story, and, again, this comes back to your question about, is there empirical evidence about responsiveness.

So they did this with advertisers starting in 2016.

What they did is they artificially lowered or raised prices to advertisers, and they looked to see what happened to ad revenue. Did advertisers flee off to alternatives or did they stick with us?

And they started first and they did this for -- a six-week experiments and they found that, oh, they're not fleeing.

Then they were like, well, we're a little -- maybe they don't leave after six weeks and we should do a longer experiment. So they did a three-month experiment.

Then, same thing they were like, well, what about longer term, so they did a six-month experiment.

And the bottom line on this that they came to was, if we -- basically there's what they called a stickage of 50 percent. So if they raised prices 10 percent, revenue would go up 5. So, yes, there was some reduction in advertising, but it was low enough that raising prices was profitable, and that's what convinced them that they could

do this.

Q And what was the effect on the efficiency of the auction?

A Well, so one of the things, you know, things like squashing, and there was another thing that they did called rGSP, where they randomize -- I don't know if anyone's spoke -- where they would randomize -- the winner, the highest bidder in order to be sure to get that top spot had it bid like three times what another bidder, the second bidder did.

So all of these things are, in some sense, introducing inefficiency into the auction. You're going to sometimes put a less relevant ad in the top spot.

But they're willing to do that because it helped them extract more out of the highest -- the advertiser most likely to win -- the top advertiser. And so they were -- that's one of the -- you know, there's a tradeoff.

THE COURT: You say that because a top advertiser would increase the bid in order to avoid the switching?

THE WITNESS: Depended on the mechanism.

So the squashing mechanism was kind of -- for the second price reason that you said, was kind of a direct thing. That basically they increased the score of the second highest, and that made automatically the highest, if they still won, pay more.

rGSP is, instead, it's ran -- it's random whether you're going to win. And so what does that make the winner do? It makes the highest rank bidder worried that he's not going to win, okay?

So let me give you an analogy.

So I don't know if you remember the runner Usain Bolt, the Jamaican runner, super fast, okay? He came along, he was way faster than everyone else, okay?

And if you remember, one of the really striking things was he was so much faster than everyone else that sometimes at the end of this 100-meter race, he'd coast, because he knew he was going to win.

So suppose you wanted him to run fast all the way to the end, what could you do? Well, you could kind of make it so that he wasn't going to get the gold medal unless -- you know, for sure, unless he beat everybody by 15 meters. And if he did that, he would run fast all the way to the end.

So you would be creating -- it's almost like you were starting all the runners at some random -- ten yards ahead randomly and not telling Bolt where they are and he just has to keep running and running and running really fast to win.

So that's, in essence, what rGSP did. It created pressure on that top advertiser so that they would

bid high -- you know, they were worried they were not going to get that gold metal medal of the top spot and they'd bid high in order to do it.

THE COURT: What's the basis for thinking that's the behavioral response by the top bidder, if, as I understand it, maybe I'm wrong, the top bidder is not aware of when that occurs and the frequency with which it occurs? In other words, they may not know --

THE WITNESS: Right.

THE COURT: -- that, in fact, they are being switched out for a lower bid.

THE WITNESS: Right.

So Google has not been transparent about what they're doing with rGSP, from what I've seen.

But advertisers, you know, can see an experiment with -- when we bid this way, what's the chance we win? When we bid lower, what's the chance we win?

And so they can, you know, get evidence to themselves of the likelihood. That's the first thing I would say to you is they do have ways of finding out even if they don't know exactly what Google is doing. You know, suddenly Google starts doing it and someone who was winning for sure now isn't winning or is only winning with 30 percent of the time with the same bid. And so they start seeing.

But the second piece of evidence is in the record of how Google thinks about it. That's why they're doing this, because they realize that it's going to create more pricing pressure for that top bidder. And so all of these knobs, these pricing knobs are really aimed at affecting these prices.

And I think that's one of the real lessons here also, is they understand really well how price -- how competitive pressure can affect a leader, they understand that.

BY MR. SEVERT:

Q Professor, it's an auction. Isn't an auction the outcome of competition?

A So that's a really -- you know, I think it's really easy to sometimes slip into the thought, well, it's an auction, and an auction is competition so how could there be market power?

But the thing is, you know, it's the advertisers competing and running in this little race. It's Google setting the rules. It's Google setting the rules in a way that extracts those advertisers' value.

Q And what does this tell you about market power that Google has in the general search text ads market?

A It tells me they have market power.

I mean it's, you know, the legal term power over

price, this is it, you can see it.

Q And does Google's ability to raise general search text ad prices also tell you something about its market power in the broader search ads market?

A It does.

Excuse me, that was a little loud.

It does. And, you know, general search text advertising -- Your Honor, I think I referred to this a little bit -- my estimate is it's around 64 percent of total search ad market. And so, you know, Google has, you know, this direct evidence that Google has this pricing power in a large segment of the search advertising market. And that's not even counting the fact that they also are selling PLAs in addition, which is a significant part of the rest.

Q And then just to go back, does the fact that Google is able to exercise substantial market power in its selling of ads tell us -- tell you anything about market definition that we talked about yesterday?

A It does.

Q What does it tell you?

A So, Your Honor, yesterday you asked me what kinds of evidence I look to about market definition, given the issues that we discussed. And I referred to evidence of differentiation and that market participants see that differentiation, and I also referred to direct evidence

about lack of responsiveness.

But there's one other thing that I didn't mention, which is what we're talking about now, which is direct evidence of market power.

And one way that you can -- one other reliable way that you can -- proper way you can -- for evidence of market definition is if a firm within it -- within the market, in this case Google, if you see evidence that they have a lot of market power, it must be that it's a relevant market, because Google couldn't have a lot of market power if these other things were sufficient substitutes to discipline a hypothetical monopolist.

MR. SEVERT: I have no further questions at this time, Your Honor.

At this time, I move to admit Professor Winston's slide deck, which is UPXD102, to complete his testimony since there were a number of numbers and other things he would have otherwise been able to say that in open session that he just couldn't.

MR. SCHMIDTLEIN: No objection.

THE COURT: Okay. All right.

So that slide deck will be admitted.

(Plaintiffs' Exhibit UPXD102 received into evidence.)

THE COURT: All right. So that -- Mr. Schmidtlein.

MR. SCHMIDTLEIN: Your Honor, I would just ask that you directly instruct this witness on the rules of engagement here, because it's a little bit different, and specifically about that he should not be talking to anyone about the testimony he's given, he should not be reviewing transcript of the testimony that he has given, and so he doesn't come back on the stand and start his next round of testimony with, there were some things I'd like to add from the last go-around. So just so that we know that we are done today on these subject matters.

MR. DINTZER: We're comfortable with the instruction that he not review his transcript of what he's given.

He's a professor of economics and to ask him not to think about what he said is, perhaps, asking more than anybody can ask.

And so the lines would be, we don't expect -- we're certainly not going to ask him to go back and re-do any of this, and talk -- and look at what he's done. But the -- and I think fairly ask that he not go back and review this to look at where he's going to -- he wants to add other things.

But I think that's where to draw the line,

Your Honor, given that the Court may have questions, he may have -- and so we will not -- we certainly won't prepare anything else to add to what he said here.

THE COURT: Okay.

All right. So, Professor Whinston, here will be the ground rules until you return next time.

Your testimony that you have provided us today and yesterday, I'll ask you please not to discuss that with anyone between now and your next appearance in court, and that includes lawyers for the plaintiffs.

I'll ask you also or direct you to also not to review your testimony that you have already provided, as well as the slide deck.

You may, however, speak to plaintiffs' counsel and may speak to plaintiffs' counsel about your upcoming testimony. And when you are talking to them about your upcoming testimony, I'm going to instruct you not to discuss with them the testimony that you've given the last two days.

THE WITNESS: Can I ask one question?

THE COURT: Of course.

THE WITNESS: When I go home tonight and my wife asks how did it go, can I tell her?

THE COURT: You can talk to her.

THE WITNESS: Okay. Thanks. Thank you.

MR. DINTZER: Thank you for that clarity,

Your Honor.

THE COURT: All right.

MR. DINTZER: I think there's one issue regarding -- and we'll address it -- regarding the transcript --

I'm sorry, if we're done with this and we can excuse Professor Winston.

THE COURT: Professor Winston, you can step down and step out and we'll see you soon.

THE WITNESS: Thanks.

MR. DINTZER: It's just about the transcript that -- and Samsung, were you all going to say something or --

MR. SCHMIDTLEIN: We have, I think, a couple of witness testimony that you had asked for us to provide redactions or closed session evaluation.

THE COURT: Right.

MR. SCHMIDTLEIN: I believe of Mr. Dischler and -- well, Higgins I think we dealt with yesterday. So I think Your Honor has given us -- or has given Verizon until Monday.

THE COURT: Right.

MR. SCHMIDTLEIN: We have Mr. Kolotouros and Dischler.

THE COURT: Right.

MR. SCHMIDTLEIN: As you may remember, Mr. Kolotouros was -- is involved in Android contracts --

THE COURT: Right.

MR. SCHMIDTLEIN: -- with various third parties.

We have gotten proposed, I guess, redactions from the plaintiffs. Some of that testimony, as you may remember, also involves third parties like a Samsung and a Motorola. We have reached out to them to try to give them an opportunity to review this, and we are efforting to get them to get us their redactions today, because that was, I think, the deadline that you had asked us to try to meet.

THE COURT: Right.

MR. SCHMIDTLEIN: They may or may not be able to make that deadline. And if they are not, I guess I would ask for a Monday extension for them.

We -- I think we've got everything we need or we're in a position, as we reviewed it internally with Google, but these third parties do have, I think, an interest fairly. They weren't here obviously for their testimony like Mr. Higgins.

THE COURT: Right.

MR. SCHMIDTLEIN: So if we don't hear from them, I'd ask until Monday so we can accommodate them.

THE COURT: Counsel.

MR. CONRAD: Just briefly, we have no objection to

that.

THE COURT: Well, here's what I would propose which is, by the end of the day, get me what you've got. In other words to the extent that you've collected your proposals with the plaintiffs' proposals, please send that over and just mark any areas that are still open for discussion with the third parties. That way we can at least get started on looking at those transcripts and get a head start on reviewing those, and it will make our -- the output much shorter.

MR. SCHMIDTLEIN: Yeah, the only -- obviously the only question is if they come in and ask for something above and beyond what we've asked for, but we'll certainly -- we can certainly get you what we have today.

THE COURT: Sure. Okay.

All right. So, terrific.

All right. So just to close the loop on the transcript issue, we have concluded our review of Mr. Cue's transcripts, so those will be made available, at least the public portions will be made available or will be made available this afternoon after we're done here today. And that's all I have on my list of things.

Anything else?

MR. DINTZER: Nothing else from the DOJ Plaintiffs.

MR. CAVANAUGH: Nothing for us, Your Honor.

MR. SCHMIDTLEIN: Nothing for Google, Your Honor.

THE COURT: Thank you, all. And I will request another housekeeping trip up here. Thank you, everyone.

COURTROOM DEPUTY: All rise. This Court stands in recess.

(Proceedings concluded at 12:43 p.m.)

C E R T I F I C A T E

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: October 7, 2023

William P. Zaremba, RMR, CRR

BY MR. CAVANAUGH: [13] 4683/18 4690/18 4691/8 4693/22 4696/21 4701/5 4701/10 4705/12 4709/15 4712/21 4713/3 4714/6 4755/21
BY MR. SEVERT: [10] 4758/9 4759/25 4762/18 4766/1 4766/23 4773/10 4777/7 4781/10 4790/18 4796/11
BY MS. WASZMER: [11] 4717/3 4717/9 4720/3 4725/7 4734/1 4735/12 4741/17 4742/10 4746/25 4754/10 4755/3
COURTROOM DEPUTY: [7] 4682/2 4682/6 4683/5 4683/8 4741/8 4741/11 4804/5
MR. CAVANAUGH: [20] 4682/13 4682/17 4683/3 4683/11 4683/13 4689/17 4691/7 4693/13 4696/2 4696/12 4696/15 4701/3 4701/8 4705/6 4709/6 4714/5 4716/12 4754/2 4757/11 4804/1
MR. CONRAD: [1] 4802/25
MR. DINTZER: [8] 4740/18 4740/25 4741/4 4799/13 4800/25 4801/3 4801/11 4803/24
MR. SCHMIDTLEIN: [17] 4766/16 4787/10 4787/16 4787/19 4787/23 4788/2 4798/20 4799/3 4801/14 4801/18 4801/23 4802/1 4802/4 4802/13 4802/22 4803/11 4804/2
MR. SEVERT: [7] 4757/18 4758/1 4787/12 4787/14 4787/21 4787/25 4798/13
MS. BELLSHAW: [2] 4682/19 4682/25
MS. WASZMER: [18] 4693/16 4695/23 4705/8 4716/16 4717/8 4720/2 4725/5 4735/9 4740/11 4741/16 4742/7 4746/24 4754/1 4754/3 4754/5 4754/8 4754/24 4755/17
THE COURT: [77] 4682/4 4682/12 4682/14 4682/18 4682/23 4683/9 4683/12 4689/15 4689/18 4690/9 4690/13 4690/16 4690/25 4691/6 4693/18 4696/4 4696/7 4696/19 4705/9 4712/20 4712/23 4716/15 4716/22 4717/7 4719/8 4719/25 4733/16 4733/25 4735/11 4740/13 4740/23 4741/1 4741/5 4741/13 4746/13 4746/23 4754/4 4757/13 4757/16 4757/19 4757/22 4757/24 4758/21 4758/25 4762/13 4765/12 4766/22 4772/25 4775/15 4777/3 4777/6 4780/25 4787/17 4788/5 4789/10 4789/13 4789/15 4793/18 4795/4 4795/10 4798/21 4798/24 4800/4 4800/20 4800/23 4801/2 4801/8 4801/17 4801/22 4801/25 4802/3 4802/12 4802/21 4802/24 4803/2 4803/15 4804/3
THE WITNESS: [40] 4683/14 4689/24 4690/11 4690/14 4691/3 4696/5 4696/10 4696/14 4696/17 4709/8 4712/25 4716/14 4719/13 4720/1 4733/20 4741/7 4746/17 4757/15 4757/21 4757/23 4758/16 4758/22 4759/1 4762/15 4765/17 4773/3 4775/19 4777/4 4781/3 4788/6 4789/12 4789/14 4789/18 4793/20 4795/9 4795/12 4800/19 4800/21 4800/24 4801/10

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$5 [2] 4737/16 4737/19

'

'21 [1] 4768/17

0

0340 [1] 4679/4

1

10 [2] 4693/2 4705/2
10 percent [3] 4711/25 4791/17 4792/22
100 [1] 4784/2
100 percent [2] 4774/23 4774/23
100-meter [1] 4794/11
10019 [1] 4680/14
10036-6710 [1] 4679/20
1100 [1] 4679/3
1110 [1] 4701/4
1133 [1] 4679/19
1195 [2] 4705/6 4705/10
11:00 [1] 4740/15
11:01 [1] 4741/10
11:15 [2] 4740/16 4741/3
11:16 [1] 4741/10
12 [1] 4726/12
12:43 [1] 4804/7
12th [2] 4714/11 4725/22
13 percent [1] 4784/15
1300 [1] 4679/15
1301 [1] 4680/13
15 [8] 4686/15 4694/16 4694/21 4714/16 4726/24 4727/9 4727/10 4794/16
15 percent [1] 4791/19
165 [1] 4755/1
18 [1] 4678/7
1:44 [1] 4717/23

2

20 [1] 4778/8
20 percent [3] 4789/21 4789/22 4790/9
20-3010 [2] 4678/4 4682/7
20001 [1] 4680/19
20024 [1] 4680/9
2009 [2] 4762/6 4762/7
2010s [1] 4727/6
2011 [1] 4683/22
2013 [4] 4684/7 4782/24 4784/4 4784/12
2015 [2] 4727/6 4768/17
2016 [6] 4727/6 4778/2 4778/4 4786/5 4792/1 4792/7
2018 [4] 4684/19 4693/25 4743/8 4743/24
2019 [18] 4692/9 4692/13 4697/23 4698/23 4703/24 4717/18 4721/1 4721/12 4724/14 4724/16 4730/5 4739/16 4743/1 4743/4 4743/6 4743/14 4743/21 4751/1
202 [4] 4679/4 4679/9 4680/10 4680/20
2020 [28] 4685/5 4685/25 4692/9 4696/9 4696/18 4697/2 4697/19 4698/19 4698/19 4699/4 4701/23 4708/1 4708/18 4708/22 4708/24 4710/15 4722/13 4723/7 4761/13 4762/1 4764/20 4765/5 4772/4 4778/7 4778/8 4778/9 4778/13 4779/15
2021 [21] 4685/12 4704/7 4705/2 4713/16 4713/20 4714/11 4715/1 4715/12 4720/11 4720/16 4724/17 4725/22 4743/24 4751/3 4762/6 4778/3 4778/5 4778/10 4782/24 4784/1 4784/13
2022 [3] 4700/24 4744/17 4744/18
2023 [3] 4678/5 4703/25 4805/7
20530 [1] 4679/8
20th [1] 4708/1
2115 [1] 4680/4
212 [2] 4679/21 4680/15
2200 [1] 4679/20
2307 [1] 4679/9
26 [1] 4730/5
266 [1] 4686/10
267 [1] 4686/23
268 [1] 4692/24
26th [4] 4697/23 4717/18 4721/1 4721/12
270 [2] 4693/12 4693/23
272 [1] 4695/8
2793 [1] 4679/21

3

30 [1] 4714/14
30 percent [1] 4795/24
3010 [2] 4678/4 4682/7
307-0340 [1] 4679/4
312 [1] 4736/10
313 [1] 4736/10
3249 [1] 4680/20
333 [1] 4680/19
335-2793 [1] 4679/21
354-3249 [1] 4680/20
360 [12] 4687/21 4687/23 4689/14 4694/1 4706/20 4724/18 4726/1 4730/12 4739/16 4750/24 4753/14 4753/17
3840 [1] 4680/5
3P [6] 4711/1 4712/12 4712/24 4712/25 4713/4 4723/12

4

40 [1] 4761/5
402 [1] 4680/5
40th [1] 4680/14
43 [2] 4758/10 4760/2
431 [1] 4709/6
434-5000 [1] 4680/10
44 [1] 4760/18
45 [1] 4761/1
450 [1] 4679/8
46 [1] 4761/5
47 [1] 4761/10
471-3840 [1] 4680/5
48 [1] 4762/4
48 percent [2] 4745/5 4745/11
49 [1] 4762/23
497-7702 [1] 4680/15

5

5 percent [3] 4784/17 4785/7 4791/17
50 [1] 4763/13
50 percent [1] 4792/22
5000 [1] 4680/10
508-6000 [1] 4679/16
51 [2] 4764/6 4764/8
52 [2] 4764/5 4764/14
5252 [2] 4754/4 4754/6
53 [1] 4765/8
54 [1] 4767/19
55 [2] 4704/21 4768/7
56 [1] 4770/9
57 [1] 4770/24
577 [1] 4744/22
578 [1] 4747/5
579 [1] 4747/5
580 [2] 4748/17 4748/23
581 [1] 4748/18
59 [1] 4773/23
598-2307 [1] 4679/9
5th [1] 4679/8

6

60 [1] 4777/9
60 percent [1] 4704/21
6000 [1] 4679/16
61 [1] 4777/19
62 [1] 4777/25
63 [1] 4779/11
64 [2] 4781/12 4797/9
65 [1] 4782/23
65 percent [1] 4779/14
665 [1] 4705/13
668 [4] 4721/11 4721/18 4730/4 4735/14
67 [1] 4785/13
6710 [1] 4679/20
680 [1] 4680/9
68509 [1] 4680/5
69 [1] 4790/22
6th [1] 4743/7

7

720 [1] 4679/16
74 [1] 4779/15
7702 [1] 4680/15
78 percent [2] 4690/23 4690/24

7

7th [1] 4679/15

8

80 [1] 4712/2
80 percent [4] 4762/7 4778/5 4788/25 4789/6
80.1 [1] 4789/11
80203 [1] 4679/16
85 [5] 4713/18 4715/7 4715/12 4715/15 4715/25
88 [1] 4778/9
88 percent [3] 4778/6 4778/11 4778/13
89.2 [2] 4761/14 4772/17
8th [1] 4701/23

9

90 [1] 4762/8
90 percent [5] 4713/18 4715/8 4715/12 4715/15 4715/25
95 percent [1] 4763/2
9:30 [1] 4678/6

A

a.m [3] 4678/6 4741/10 4741/10
Aaron [1] 4680/8
ability [9] 4688/13 4723/13 4732/16 4733/17 4734/5 4734/8 4739/18 4742/2 4797/2
ablation [1] 4771/14
able [20] 4692/15 4702/12 4709/10 4709/11 4717/14 4729/6 4732/22 4735/1 4737/10 4765/24 4770/7 4775/10 4776/20 4785/15 4787/11 4790/1 4790/15 4797/16 4798/18 4802/13
about [127] 4694/13 4697/4 4701/2 4703/12 4706/17 4706/19 4708/7 4708/21 4711/12 4716/20 4717/18 4718/2 4719/5 4720/11 4720/20 4721/24 4722/5 4722/6 4722/11 4722/20 4723/17 4723/17 4724/9 4724/10 4728/7 4728/9 4729/17 4731/19 4732/5 4734/5 4738/5 4739/5 4739/23 4741/21 4742/14 4743/12 4745/13 4748/8 4749/17 4749/17 4749/21 4751/8 4753/24 4754/12 4755/1 4755/8 4758/18 4759/3 4759/6 4759/17 4759/21 4759/24 4762/7 4763/4 4763/11 4763/20 4764/15 4765/10 4766/11 4767/3 4767/4 4767/10 4768/13 4769/10 4769/12 4769/21 4770/10 4771/2 4772/4 4772/24 4773/5 4773/14 4774/3 4774/7 4774/8 4774/9 4776/2 4776/3 4776/6 4776/12 4776/18 4776/23 4777/1 4777/14 4778/23 4779/3 4779/21 4779/23 4780/3 4780/25 4781/15 4782/20 4783/3 4785/1 4785/5 4785/5 4786/10 4786/16 4786/23 4787/15 4788/13 4788/15 4790/1 4790/23 4790/24 4791/2 4791/8 4791/15 4791/20 4792/4 4792/4 4792/18 4795/13 4796/2 4796/22 4797/3 4797/17 4797/18 4797/22 4798/1 4798/3 4799/6 4799/7 4799/17 4800/15 4800/16 4801/11
above [2] 4803/12 4805/4
above-titled [1] 4805/4
accept [1] 4682/23
access [7] 4689/11 4690/1 4723/4 4723/25 4724/3 4724/4 4767/8
accommodate [1] 4802/23
account [11] 4684/3 4730/24 4731/15 4731/15 4732/12 4732/18 4733/13 4733/13 4733/21 4733/22 4765/13
accuracy [2] 4712/7 4713/8
accurate [5] 4688/12 4718/14 4723/7 4741/24 4746/5
achieve [2] 4737/23 4737/25
acronyms [2] 4720/6 4736/15
across [11] 4686/16 4693/2 4716/8 4718/16 4719/10 4719/11 4719/11 4719/19 4719/23 4726/24 4744/10
action [6] 4682/7 4737/8 4737/16 4737/19 4750/1 4752/19
actively [1] 4729/15
actual [3] 4688/3 4688/4 4752/17
actually [14] 4697/3 4709/24 4710/8 4726/4 4733/6 4734/22 4745/22 4756/5 4758/13 4759/23 4759/23 4778/19 4779/3 4784/6
ad [42] 4689/10 4689/25 4690/10 4690/14 4690/22 4690/25 4691/4 4732/25 4750/16 4751/10 4751/17 4751/18 4751/20 4751/22 4752/22 4756/2 4756/9 4756/18 4757/2 4757/10 4770/2 4770/3 4777/22 4779/19 4779/21 4779/22 4780/6 4780/10 4780/23 4781/16 4781/18 4781/21 4782/9 4782/13 4782/22 4783/12 4785/16 4785/20 4792/10 4793/13 4797/3 4797/10
Adam [3] 4679/6 4758/1 4789/23
adam.severt [1] 4679/10
add [7] 4706/2 4706/2 4775/3 4775/4 4799/10 4799/23 4800/3
added [2] 4707/12 4728/24
adding [4] 4709/13 4738/22 4738/24 4738/25
addition [2] 4761/25 4797/14
additional [1] 4694/16
address [5] 4694/16 4717/11 4728/6 4733/11 4801/4
adjusting [1] 4785/11
admit [3] 4693/14 4754/1 4798/15
admitted [6] 4681/4 4681/18 4693/19 4705/9 4754/4 4798/22
Adobe [3] 4713/5 4722/19 4724/2
adopted [1] 4710/6
adopting [1] 4692/17
adoption [7] 4691/10 4691/16 4691/25 4692/17 4694/6 4695/15 4695/16
ads [78] 4687/21 4687/23 4687/24 4689/14 4690/10 4690/13 4690/21 4691/14 4691/23 4694/1 4702/2 4711/4 4711/7 4713/18 4714/19 4715/13 4716/1 4716/3 4716/7 4718/24 4719/16 4720/8 4720/9 4724/18 4726/1 4726/16 4726/18 4727/22 4728/10 4728/11 4729/25 4730/12 4730/17 4731/23 4732/25 4733/4 4736/2 4736/2 4737/10 4739/16 4747/22 4749/2 4749/19 4750/15 4750/23 4750/24 4751/6 4751/10 4751/14 4753/14 4753/17 4756/6 4756/15 4756/21 4756/23 4756/24 4757/2 4757/8 4758/18 4758/20 4759/7 4759/9 4759/10 4759/11 4759/17 4765/5 4775/2 4777/8 4780/5 4782/4 4783/1 4785/7 4785/8 4785/18 4791/3 4796/23 4797/4 4797/17
Ads 360 [8] 4687/21 4687/23 4724/18 4730/12 4739/16 4750/24 4753/14 4753/17
Ads' [1] 4688/7
AdSense [1] 4763/6
advantage [5] 4769/15 4769/21 4773/13 4775/23 4782/5
advantages [8] 4767/21 4767/22 4768/5 4768/8 4768/11 4769/11 4769/18 4781/21
advertiser [18] 4691/16 4732/21 4733/21 4734/18 4739/17 4755/8 4755/10 4759/18 4773/5 4782/8 4785/24 4790/8 4791/4 4791/25 4793/15 4793/16 4793/18 4794/25
advertiser's [2] 4739/21 4755/9
advertisers [26] 4688/22 4692/15 4706/7 4711/7 4711/14 4715/17 4716/5 4723/13 4733/1 4734/5 4734/8 4734/14 4735/6 4739/19 4748/11 4753/17 4754/13 4754/15 4755/14 4782/18 4785/24 4792/6 4792/9 4792/10 4795/15 4796/18
advertisers' [4] 4739/10 4785/23 4790/16 4796/21
advertising [18] 4689/8 4689/22 4737/6 4754/19 4764/18 4765/3 4777/12 4777/14 4777/25 4778/4 4778/17 4778/20 4778/23 4779/7 4779/13 4792/24 4797/8 4797/12
advise [1] 4703/4
AdWords [1] 4749/2
affect [1] 4796/9
affecting [1] 4796/5
after [12] 4704/7 4740/15 4740/16 4743/19 4744/15 4749/18 4750/23 4755/24 4765/25 4786/17 4792/16 4803/21
afternoon [1] 4803/21
again [16] 4693/3 4697/16 4710/22 4711/20 4712/5 4712/9 4741/12 4745/15 4757/21 4767/2 4770/9 4772/10 4780/18 4784/12 4791/7 4792/3
against [5] 4737/19 4759/14 4774/14 4775/11 4791/13
agencies [1] 4735/3
agenda [1] 4786/25
ago [3] 4731/20 4772/12 4781/23
agree [2] 4715/16 4787/16
agreed [2] 4696/15 4703/4
ahead [5] 4728/6 4733/22 4740/14 4758/25 4794/21
AI [3] 4765/21 4765/22 4765/25
aided [1] 4680/21
aim [1] 4737/23
aimed [1] 4796/5
aka [2] 4691/10 4741/21
al [2] 4678/3 4682/8
algorithm [2] 4771/16 4771/21
align [1] 4744/9
all [61] 4682/2 4682/15 4682/23 4683/9 4688/9 4689/21 4693/7 4694/21 4698/10 4698/17 4702/11 4704/5 4704/18 4709/23 4710/19 4713/15 4714/18 4715/10 4716/2 4732/17 4733/9 4735/4 4740/7 4740/14 4741/8 4741/11 4741/14 4741/15 4746/15

A

all... [32] 4748/2 4752/24 4756/6 4756/12 4756/13 4756/15 4756/21 4756/23 4757/13 4757/17 4757/24 4774/13 4774/22 4774/24 4778/12 4780/5 4790/15 4793/11 4794/13 4794/17 4794/20 4796/4 4798/21 4798/24 4800/5 4801/2 4801/12 4803/16 4803/17 4803/22 4804/3 4804/5
All right [1] 4709/23
allow [1] 4718/15
allowed [1] 4782/8
almost [3] 4747/14 4754/9 4794/19
along [1] 4794/7
alongside [1] 4751/25
alpha [5] 4727/17 4727/21 4728/1 4728/2 4728/19
already [14] 4693/14 4694/25 4695/6 4701/4 4701/8 4709/6 4710/12 4721/4 4725/6 4732/17 4733/10 4742/8 4764/25 4800/12
also [31] 4684/9 4690/8 4691/4 4694/15 4700/17 4702/12 4707/6 4719/5 4722/10 4725/6 4734/14 4736/5 4746/19 4747/22 4748/13 4748/18 4752/3 4759/16 4762/1 4762/9 4762/19 4769/6 4787/14 4791/6 4796/8 4797/3 4797/13 4797/25 4800/11 4800/11 4802/7
alternatives [1] 4792/11
although [1] 4792/1
always [1] 4719/3
am [2] 4703/23 4773/15
Amalgam [22] 4700/18 4700/21 4720/14 4720/18 4724/21 4724/24 4726/7 4726/13 4726/20 4727/1 4727/2 4736/5 4741/21 4742/2 4744/7 4744/13 4745/5 4745/12 4747/19 4747/20 4755/24 4756/9
amaurer [1] 4680/11
amazing [1] 4776/7
Amazon [4] 4722/24 4723/13 4723/25 4724/3
AMERICA [2] 4678/3 4682/7
Americas [2] 4679/19 4680/13
AMIT [5] 4678/9 4682/3 4683/4 4683/16 4729/11
Amit P [1] 4682/3
Amit Varia [1] 4729/11
amount [7] 4724/2 4759/4 4770/16 4774/5 4774/23 4775/10 4790/8
amplification [1] 4773/1
analogy [2] 4759/12 4794/5
analysis [7] 4707/15 4734/24 4735/6 4735/23 4750/7 4750/10 4750/12
Analytics [5] 4718/6 4718/13 4719/13 4719/19 4719/21
Android [2] 4685/13 4802/2
announce [1] 4726/11
announced [1] 4744/13
announcement [2] 4729/7 4744/16
annual [5] 4688/7 4695/14 4764/15 4764/16 4764/18
another [13] 4720/20 4723/25 4725/3 4732/23 4733/7 4733/13 4734/10 4734/20 4770/1 4791/9 4793/5 4793/9 4804/4
answer [5] 4695/23 4696/4 4772/17 4777/5 4785/9
answered [1] 4714/24
Antitrust [2] 4679/7 4679/13
any [22] 4692/22 4702/20 4709/3 4723/10 4723/12 4739/16 4747/16 4749/20 4750/1 4750/7 4754/14 4764/1 4765/2 4766/11 4766/17 4767/10 4771/8 4776/25 4784/19 4790/19 4799/21 4803/6
anybody [1] 4799/18
anyone [4] 4741/6 4791/2 4799/6 4800/9
anyone's [2] 4791/8 4793/6
anything [8] 4690/6 4690/6 4770/10 4774/9 4776/3 4797/17 4800/3 4803/23
anywhere [1] 4729/23
API [1] 4723/5
APIs [3] 4734/12 4734/23 4739/23
apologies [4] 4738/4 4764/6 4778/12 4787/23
apologize [2] 4704/14 4784/7
appear [1] 4747/25
appearance [1] 4800/9
APPEARANCES [2] 4678/11 4679/23
appears [1] 4705/4
applaud [1] 4776/10
Apple [10] 4764/22 4764/22 4764/24 4765/1 4774/15 4774/17 4774/18 4774/22 4775/8 4775/10
apply [6] 4718/15 4719/19 4719/20 4732/13 4745/19 4745/20
applying [1] 4696/18
approach [4] 4683/11 4703/5 4714/5 4716/18
approximately [4] 4713/17 4714/18 4715/7 4715/15
are [96] 4697/6 4697/24 4699/1 4701/25 4706/19 4706/21 4708/10 4708/13 4710/16 4714/22 4716/5 4726/21 4727/11 4729/14 4733/1 4734/19 4735/3 4736/2 4736/17 4736/18 4738/13 4741/15 4743/5 4743/20 4745/10 4745/12 4746/14 4746/15 4746/19 4747/4 4747/9 4747/10 4747/13 4747/15 4747/22 4747/24 4748/2 4748/4 4748/7 4748/10 4748/11 4748/13 4748/18 4748/19 4752/4 4753/2 4753/3 4753/22 4756/2 4757/25 4758/20 4759/17 4759/19 4763/16 4763/21 4763/23 4764/12 4764/17 4764/19 4765/6 4765/18 4765/23 4767/22 4767/25 4768/1 4768/20 4769/17 4769/24 4770/8 4773/19 4773/20 4773/20 4773/22 4773/22 4780/6 4781/8 4781/17 4782/11 4783/9 4783/10 4785/19 4786/3 4787/24 4788/14 4790/1 4790/1 4793/11 4794/21 4795/10 4796/5 4797/13 4799/11 4800/16 4802/9 4802/14 4803/6
area [1] 4746/1
areas [4] 4728/5 4728/5 4748/13 4803/6
aren't [1] 4748/9
argon [6] 4742/18 4742/20 4742/25 4743/1 4743/17 4745/5
around [7] 4684/19 4685/5 4709/10 4720/16 4784/18 4797/9 4799/11
ARR [1] 4695/13
array [1] 4748/20
arrive [1] 4778/21
arrived [1] 4757/17
artificially [1] 4792/8
as [72] 4684/3 4684/11 4686/11 4686/13 4688/1 4689/1 4690/2 4704/10 4707/18 4708/11 4709/3 4710/23 4711/6 4712/22 4713/16 4715/11 4716/7 4716/7 4720/10 4723/7 4723/11 4724/22 4725/13 4730/19 4732/15 4733/17 4736/6 4736/22 4737/3 4737/21 4738/23 4739/12 4739/12 4739/15 4739/25 4742/11 4746/6 4747/20 4747/24 4749/18 4749/21 4752/25 4752/25 4753/6 4753/18 4753/18 4754/18 4758/4 4761/20 4761/20 4763/7 4768/2 4768/2 4768/13 4771/25 4772/6 4772/7 4772/8 4773/2 4774/19 4777/16 4780/1 4780/2 4787/7 4788/6 4788/7 4795/5 4800/12 4800/13 4802/1 4802/6 4802/17
aside [1] 4754/5
ask [47] 4685/22 4688/4 4691/19 4693/12 4697/16 4710/12 4714/4 4714/14 4717/10 4717/11 4719/8 4721/1 4724/7 4724/11 4725/10 4725/12 4725/15 4726/25 4728/7 4729/17 4731/21 4732/3 4734/2 4736/13 4736/22 4738/3 4739/5 4740/20 4741/5 4742/14 4745/22 4747/14 4753/11 4754/25 4772/14 4778/19 4799/3 4799/16 4799/18 4799/20 4799/22 4800/8 4800/11 4800/19 4802/15 4802/23 4803/12
asked [25] 4714/17 4714/21 4717/17 4717/22 4718/2 4719/5 4720/11 4720/20 4722/10 4722/20 4724/9 4728/9 4743/11 4745/13 4750/3 4750/22 4758/18 4763/4 4771/8 4785/5 4786/16 4797/21 4801/15 4802/11 4803/13
asking [11] 4694/13 4696/2 4698/4 4703/7 4713/9 4723/17 4738/9 4738/13 4739/6 4740/6 4799/17
asks [1] 4800/22
aspect [1] 4719/14
assess [1] 4775/16
assistance [1] 4694/20
associated [2] 4752/19 4765/15
assumption [1] 4779/2
assumptions [1] 4779/6
ATB [2] 4727/22 4727/24
ATTORNEY [1] 4680/3
attract [1] 4785/22
attribution [1] 4718/16
auction [55] 4691/10 4691/13 4691/17 4691/24 4691/25 4692/5 4692/7 4692/8 4694/6 4694/9 4694/24 4695/2 4695/6 4695/16 4700/1 4700/6 4700/11 4700/12 4702/1 4702/25 4708/8 4727/22 4728/8 4728/10 4728/11 4738/7 4738/9 4738/14 4738/15 4738/19 4738/20 4738/21 4738/23 4739/11 4749/19 4750/15 4750/23 4754/13 4754/16 4756/24 4757/4 4757/6 4757/9 4785/11 4785/16 4785/18 4786/3 4789/11 4791/12 4793/3 4793/12 4796/12 4796/12 4796/16 4796/16
auction-time [41] 4691/10 4691/13

A

auction-time... [39] 4691/17 4691/24 4691/25 4692/5 4692/8 4694/6 4694/9 4694/24 4695/2 4695/6 4695/16 4700/1 4700/6 4700/11 4700/12 4702/25 4708/8 4727/22 4728/8 4728/10 4728/11 4738/7 4738/9 4738/14 4738/15 4738/19 4738/20 4738/21 4738/23 4739/11 4749/19 4750/15 4750/23 4754/13 4754/16 4756/24 4757/4 4757/6 4757/9
auctions [1] 4737/24
audience [1] 4726/17
audiences [1] 4726/17
augmented [1] 4761/22
augmenting [2] 4759/11 4759/15
August [6] 4685/25 4692/9 4696/13 4696/23 4714/11 4715/3
automatically [1] 4793/24
available [12] 4688/24 4709/22 4723/21 4731/17 4745/10 4759/5 4767/5 4767/13 4767/14 4803/19 4803/20 4803/21
Avenue [4] 4679/19 4680/9 4680/13 4680/19
average [3] 4737/16 4770/13 4782/24
avoid [2] 4710/24 4793/19
AW [3] 4748/24 4749/1 4749/4
aware [4] 4712/18 4714/23 4787/4 4795/7
away [1] 4755/15

B

back [28] 4697/2 4697/8 4702/7 4702/15 4709/17 4717/14 4721/15 4722/10 4722/11 4724/7 4728/8 4730/4 4741/18 4741/22 4757/1 4757/19 4762/5 4763/13 4767/18 4771/2 4776/13 4781/11 4787/24 4792/3 4797/15 4799/9 4799/20 4799/22
bad [3] 4776/1 4776/3 4776/11
Baidu [1] 4745/21
ball [1] 4759/13
Barrett [1] 4680/18
barrier [4] 4765/11 4766/12 4767/1 4767/11
barriers [16] 4760/5 4760/15 4760/21 4763/14 4763/16 4763/20 4763/21 4763/23 4764/1 4764/13 4764/13 4767/18 4769/12 4777/11 4781/13 4781/14
baseball [2] 4759/13 4759/15
based [9] 4692/21 4730/21 4735/22 4740/5 4749/6 4752/21 4763/5 4777/1 4780/14
Bashar [3] 4721/24 4730/10 4730/11
basically [8] 4771/15 4771/21 4771/24 4791/3 4791/9 4791/13 4792/21 4793/23
basis [2] 4787/10 4795/4
bat [1] 4759/13
Bates [2] 4686/5 4705/13
be [96] 4682/4 4686/4 4688/1 4692/3 4693/9 4693/19 4698/9 4698/22 4699/10 4702/12 4705/4 4705/9 4709/10 4709/11 4714/2 4715/1 4715/4 4715/4 4715/5 4715/22 4716/4 4716/20 4717/14 4724/3 4729/6 4731/9 4732/10 4732/11 4732/21 4732/24 4733/2 4733/3 4733/8 4733/16 4733/20 4735/1 4737/10 4737/13 4737/18 4737/25 4738/16 4739/6 4740/20 4741/13 4744/8 4745/12 4745/17 4746/19 4746/22 4747/25 4749/7 4749/10 4751/14 4751/14 4752/1 4754/4 4754/15 4756/15 4756/19 4756/21 4758/19 4759/23 4759/23 4761/24 4763/22 4763/25 4766/8 4766/9 4766/14 4768/3 4769/4 4773/4 4773/12 4773/15 4775/9 4775/25 4779/3 4780/19 4781/3 4783/1 4785/19 4789/11 4789/21 4793/8 4794/19 4796/17 4798/9 4798/22 4799/6 4799/7 4799/19 4800/5 4802/13 4803/19 4803/20 4803/20
bearing [1] 4683/13
beat [1] 4794/16
became [2] 4684/7 4693/25
because [22] 4690/7 4708/14 4735/1 4745/2 4747/13 4766/18 4767/3 4772/22 4772/23 4776/16 4783/11 4788/24 4789/8 4789/10 4789/22 4793/14 4793/18 4794/12 4796/3 4798/10 4799/5 4802/10
become [1] 4711/3
becoming [1] 4711/14
been [34] 4683/22 4687/14 4687/14 4690/12 4690/14 4693/13 4694/25 4696/17 4698/15 4702/24 4711/20 4711/21 4718/10 4721/2 4724/13 4724/22 4725/4 4727/7 4727/12 4739/10 4740/8 4742/5 4742/12 4743/3 4743/14 4749/8 4749/17 4753/5 4758/3 4759/2 4759/21 4765/24 4795/13 4798/18
before [16] 4678/9 4683/5 4692/18 4697/1 4712/24 4735/10 4739/24 4748/8 4749/9 4751/3 4752/1 4756/4 4758/16 4765/12 4769/19 4778/19
Began [2] 4727/17 4727/21
begin [2] 4682/15 4760/18
beginning [5] 4699/4 4711/2 4744/2 4759/18 4778/4
begins [1] 4727/17
behalf [2] 4682/10 4682/11
behavioral [1] 4795/5
being [16] 4698/14 4717/6 4720/18 4727/11 4728/11 4740/5 4759/24 4768/2 4769/16 4770/20 4773/22 4775/17 4785/5 4787/11 4788/10 4795/10
believe [19] 4687/6 4688/18 4690/23 4695/18 4698/3 4700/10 4706/1 4706/18 4717/17 4717/22 4721/4 4722/20 4723/16 4725/5 4727/25 4728/10 4731/19 4742/7 4801/18
believed [2] 4689/7 4694/9
BELKNAP [1] 4679/18
Bellshaw [1] 4679/6
below [5] 4719/6 4720/21 4726/16 4779/14 4790/11
BENCH [1] 4678/9
benefits [2] 4785/24 4790/16
best [3] 4688/13 4715/23 4785/19
beta [11] 4692/14 4692/14 4692/16 4692/19 4692/20 4692/22 4692/22 4697/5 4697/7 4728/23 4729/1
better [3] 4744/9 4768/2 4782/3
between [14] 4702/2 4703/23 4707/25 4708/6 4715/7 4715/15 4760/7 4768/15 4768/18 4772/4 4778/10 4781/25 4789/16 4800/9
beyond [1] 4803/13
bid [32] 4691/15 4692/1 4692/3 4700/12 4706/3 4706/9 4706/20 4716/8 4736/19 4736/22 4737/20 4737/23 4738/5 4738/13 4738/17 4738/17 4738/18 4738/20 4738/22 4739/3 4750/14 4757/2 4757/9 4789/6 4793/9 4793/19 4795/1 4795/2 4795/11 4795/16 4795/17 4795/24
bidder [20] 4706/20 4739/12 4788/16 4788/19 4789/2 4789/4 4789/9 4789/16 4789/17 4790/11 4791/10 4791/10 4791/14 4793/8 4793/9 4793/10 4794/3 4795/5 4795/6 4796/4
bidder's [1] 4789/6
bidding [46] 4691/10 4691/13 4691/17 4691/24 4692/1 4692/3 4692/5 4692/5 4692/8 4694/6 4694/10 4694/24 4695/2 4695/6 4695/16 4700/1 4700/6 4700/11 4700/12 4702/1 4708/8 4727/22 4728/8 4728/10 4728/11 4737/24 4738/7 4738/9 4738/14 4738/16 4738/19 4738/20 4738/21 4738/23 4738/24 4739/2 4739/11 4749/19 4750/15 4750/24 4754/13 4754/16 4756/25 4757/4 4757/6 4757/9
bids [1] 4737/24
big [9] 4764/19 4764/20 4765/6 4767/24 4769/15 4770/21 4774/25 4775/12 4775/23
bigger [2] 4780/19 4784/20
biggest [1] 4770/2
billions [2] 4765/20 4774/25
binder [10] 4683/13 4685/22 4717/15 4721/2 4725/4 4730/5 4742/6 4753/6 4753/9 4753/9
binders [1] 4716/17
Bing [15] 4698/12 4698/12 4700/1 4700/11 4719/6 4719/6 4720/5 4720/5 4761/18 4768/16 4770/14 4773/13 4778/23 4779/1 4781/25
Bing's [5] 4765/5 4768/18 4770/21 4779/4 4781/8
bit [11] 4724/8 4734/16 4734/22 4738/12 4740/16 4740/21 4750/18 4768/12 4788/7 4797/9 4799/5
blog [2] 4692/13 4701/2
blow [1] 4744/24
BLS [3] 4783/6 4783/14 4784/22
blue [1] 4770/14
bold [1] 4695/19
Bolt [2] 4794/7 4794/21
boost [1] 4791/12
both [8] 4682/24 4747/6 4747/8 4773/21 4784/13 4784/19 4791/15 4791/18
bottom [12] 4686/5 4702/4 4702/17 4706/17 4722/18 4722/23 4725/13 4729/10 4736/9 4765/4 4771/5 4792/20
BP [7] 4686/16 4686/17 4686/18 4687/18 4693/3 4693/3 4729/20
brand [5] 4765/8 4765/10 4766/2 4766/6 4769/11

B

break [6] 4735/10 4740/4 4740/15 4740/20 4741/1 4741/6
breaking [1] 4790/7
brief [1] 4682/19
briefly [3] 4736/1 4766/12 4802/25
bring [10] 4682/18 4699/22 4720/21 4733/23 4734/10 4762/4 4762/23 4764/5 4768/7 4790/22
bringing [1] 4757/8
brings [1] 4767/18
broader [3] 4777/14 4779/13 4797/4
Broadway [1] 4679/15
brother [1] 4701/20
brought [2] 4750/2 4750/3
brown [1] 4758/22
Browser [1] 4766/25
Bruce [1] 4679/12
build [9] 4700/22 4723/5 4724/18 4732/11 4733/5 4740/7 4741/24 4742/2 4750/4
build-out [1] 4733/5
building [4] 4680/4 4725/1 4752/1 4765/15
built [6] 4720/14 4720/18 4733/10 4733/10 4733/12 4736/5
bulk [1] 4716/9
bullet [32] 4689/13 4691/9 4698/11 4718/5 4718/17 4719/6 4720/20 4727/16 4727/17 4761/4 4763/14 4764/16 4764/17 4765/7 4766/2 4766/10 4766/24 4767/7 4767/20 4769/10 4769/17 4770/24 4773/23 4781/20 4781/20 4781/22 4782/7 4782/11 4782/12 4788/22 4789/19 4789/23
bunch [2] 4727/16 4748/24
Bureau [1] 4784/23
business [5] 4694/2 4695/9 4707/1 4707/9 4715/25
button [1] 4791/4
buy [6] 4686/18 4686/21 4693/4 4693/5 4711/4 4723/13
buy-side [4] 4686/18 4686/21 4693/4 4693/5
buying [1] 4687/24

C

calculate [6] 4761/6 4761/16 4777/22 4778/16 4779/8 4779/16
calculated [2] 4763/5 4778/14
calculating [1] 4723/22
call [7] 4683/3 4700/22 4739/3 4745/18 4786/20 4788/11 4791/4
call-out [1] 4788/11
called [9] 4692/14 4723/11 4745/23 4771/14 4780/9 4786/10 4791/6 4792/21 4793/5
calls [1] 4780/12
came [2] 4792/20 4794/7
campaign [4] 4737/1 4737/5 4737/6 4737/22
campaigns [8] 4719/19 4719/20 4719/20 4723/14 4732/12 4732/25 4733/3 4734/25
can [104] 4687/20 4695/23 4696/4 4696/8 4697/16 4699/11 4701/6 4705/18 4705/22 4710/1 4713/19 4714/7 4715/23 4718/20 4719/8 4719/19 4719/20 4719/21 4720/5 4721/19 4722/9 4722/11 4722/17 4724/5 4730/3 4732/19 4732/20 4733/14 4733/23 4734/12 4734/17 4735/5 4735/9 4737/3 4737/21 4739/22 4740/4 4740/21 4744/24 4745/14 4745/19 4745/20 4746/12 4748/2 4749/3 4749/14 4754/5 4755/4 4759/23 4762/6 4762/7 4762/15 4763/21 4765/6 4767/5 4768/1 4769/5 4769/22 4769/23 4769/23 4770/15 4771/5 4772/3 4772/8 4772/14 4772/25 4773/15 4774/11 4775/3 4778/2 4779/13 4783/8 4783/8 4783/24 4784/5 4784/11 4785/9 4785/21 4786/3 4786/7 4786/11 4786/12 4787/7 4787/8 4787/19 4788/7 4788/8 4791/16 4795/15 4795/18 4796/9 4797/1 4798/5 4798/6 4798/6 4799/18 4800/19 4800/22 4800/23 4801/6 4801/8 4802/23 4803/7 4803/14
can't [8] 4756/21 4770/17 4770/18 4772/18 4778/10 4783/25 4784/4 4791/7
cancel [2] 4708/15 4708/16
canceling [1] 4708/22
capabilities [6] 4706/19 4723/8 4731/12 4733/15 4738/24 4751/10
capability [1] 4692/1
capable [3] 4767/25 4768/1 4775/9
capacity [2] 4745/6 4745/11
capital [4] 4752/5 4764/9 4764/12 4765/14
Capitol [1] 4680/4
capture [1] 4711/10
capturing [1] 4708/9
Carr [1] 4679/14
case [11] 4714/2 4731/6 4749/17 4751/14 4754/11 4755/6 4760/11 4776/18 4783/12 4784/19 4798/8
category [2] 4745/23 4781/2
caution [1] 4695/25
Cavanaugh [18] 4679/18 4682/10 4682/14 4683/10 4689/18 4689/20 4716/20 4717/7 4717/22 4719/5 4720/11 4720/20 4722/10 4722/20 4723/16 4724/9 4728/9 4742/11
Cavanaugh's [6] 4717/11 4717/15 4721/9 4721/16 4722/1 4731/20
Center [1] 4679/14
certain [4] 4688/1 4693/10 4745/9 4756/18
certainly [7] 4699/9 4707/1 4774/1 4799/20 4800/2 4803/13 4803/14
Certified [1] 4680/17
certify [1] 4805/2
cetera [1] 4776/21
CH [1] 4680/18
challenge [2] 4689/24 4731/9
chance [2] 4795/16 4795/17
Chang [1] 4682/21
change [4] 4783/9 4783/20 4786/3 4786/4
changes [2] 4733/9 4783/11
chart [5] 4735/15 4735/19 4744/23 4745/23 4746/14
chat [9] 4703/13 4704/2 4704/4 4704/19 4705/1 4705/4 4705/24 4706/23 4706/25
Chats [1] 4703/11
check [1] 4710/8
choice [1] 4755/9
choose [2] 4692/15 4739/22
Chrome [2] 4766/25 4767/2
Civil [1] 4682/7
clarification [3] 4689/16 4719/9 4756/4
clarifying [1] 4746/13
clarity [1] 4800/25
clear [9] 4698/18 4733/16 4756/19 4773/12 4773/14 4775/25 4783/1 4784/21 4786/4
clearly [1] 4688/14
click [3] 4719/16 4782/4 4782/25
clicks [1] 4736/14
clickthrough [2] 4782/2 4791/11
clone [3] 4732/7 4732/8 4732/9
close [2] 4744/5 4803/17
closed [5] 4692/20 4697/5 4697/6 4728/23 4801/16
closely [1] 4687/10
Closer [1] 4744/3
CO [1] 4679/16
coag.gov [1] 4679/17
coast [1] 4794/11
codename [1] 4743/2
coincide [1] 4775/23
colleague [1] 4682/20
colleagues [1] 4706/22
collected [1] 4803/4
colloquy [1] 4714/20
Colorado [4] 4679/12 4679/12 4679/14 4755/2
COLUMBIA [1] 4678/1
column [1] 4687/20
combination [1] 4777/2
come [8] 4683/13 4721/15 4724/21 4724/23 4752/3 4782/21 4799/9 4803/12
comes [7] 4705/2 4766/14 4776/6 4780/13 4780/15 4783/6 4792/3
comfortable [1] 4799/13
coming [3] 4691/1 4756/20 4776/13
comment [1] 4713/6
commenting [1] 4704/12
comments [1] 4716/2
common [6] 4708/10 4713/1 4731/5 4735/7 4737/12 4749/13
communicated [1] 4731/23
communicating [1] 4712/4
communication [1] 4710/7
communications [3] 4704/12 4704/13 4706/22
companies [2] 4737/13 4781/1
company [3] 4736/25 4737/3 4776/6
comparable [1] 4753/3
compare [1] 4706/18
compared [3] 4687/17 4762/10 4768/16
comparison [1] 4706/19
competing [3] 4759/10 4759/14 4796/19
competition [4] 4767/25 4772/21 4796/13 4796/16
competitive [3] 4775/18 4776/14 4796/9
competitors [3] 4689/23 4712/16 4713/11
complaint [3] 4754/25 4755/2 4755/6
complements [2] 4759/23 4759/24
complete [1] 4798/16
completing [1] 4752/19
complexity [4] 4693/9 4709/12 4709/14 4728/17
complicated [2] 4733/1 4733/2
compositional [2] 4783/10 4783/16
computation [1] 4784/7
computer [1] 4680/21
computer-aided [1] 4680/21
conceptually [1] 4779/23
concern [2] 4749/23 4750/1
concerned [1] 4749/21
concerns [1] 4749/17
concluded [2] 4803/18 4804/7
conclusion [2] 4760/25 4772/3
conclusions [1]

C

conclusions... [1] 4777/18
conduct [1] 4750/6
confer [1] 4787/19
conferred [2] 4787/13 4787/20
confidential [4] 4688/1 4694/17 4732/3 4747/6
configuration [1] 4737/22
confirm [1] 4696/8
Conflux [2] 4745/24 4745/25
confusion [1] 4738/12
CONNOLLY [1] 4680/8
Conrad [1] 4680/2
consent [1] 4787/18
conservative [3] 4779/2 4779/6 4780/19
consider [5] 4707/5 4707/19 4718/10 4746/22 4751/24
consideration [1] 4706/2
considered [1] 4698/16
Constitution [1] 4680/19
constraints [2] 4709/3 4719/2
constructed [1] 4783/14
consume [1] 4739/12
consumer [13] 4679/13 4680/4 4766/7 4770/24 4770/25 4771/4 4771/18 4776/16 4783/6 4784/13 4784/13 4784/15 4784/24
consumers [2] 4771/6 4782/4
context [8] 4724/8 4731/1 4731/20 4754/18 4765/4 4768/24 4772/10 4784/12
contextual [1] 4724/11
continue [1] 4728/25
continued [3] 4680/1 4704/6 4758/6
continuing [1] 4746/7
contract [2] 4774/17 4775/9
contracts [10] 4767/9 4767/13 4772/23 4773/25 4774/2 4774/3 4774/6 4774/12 4774/17 4802/2
contractual [2] 4687/9 4687/13
contribute [1] 4769/18
contributed [1] 4729/14
contributing [1] 4746/19
contributions [1] 4686/15
contributors [1] 4782/1
control [2] 4767/8 4790/2
conversations [1] 4704/1
conversion [32] 4719/15 4719/18 4734/9 4734/14 4734/15 4734/18 4737/8 4738/7 4739/5 4739/7 4739/9 4739/10 4739/17 4739/20 4746/1 4751/8 4751/9 4751/15 4751/18 4751/18 4752/10 4752/11 4752/17 4752/23 4752/25 4753/3 4756/14 4756/14 4756/20 4756/22 4756/22 4757/10
conversion-related [1] 4746/1
conversions [8] 4686/25 4687/1 4687/10 4687/10 4718/16 4736/14 4753/21 4757/5
converted [1] 4719/16
convinced [3] 4791/21 4791/23 4792/25
copy [4] 4732/17 4732/19 4732/22 4733/13
core [1] 4728/4
corner [3] 4686/6 4748/24 4753/13
correct [45] 4685/2 4685/11 4687/11 4688/7 4689/2 4689/9 4691/14 4691/18 4694/3 4694/10 4694/18 4695/11 4697/11 4697/22 4698/8 4698/12 4698/20 4698/23 4699/14 4700/3 4702/2 4702/9 4703/1 4703/6 4703/23 4704/8 4704/13 4705/3 4706/23 4708/1 4708/8 4709/18 4710/4 4710/7 4710/20 4711/7 4712/4 4712/13 4714/12 4715/8 4756/15 4756/21 4756/25 4789/12 4805/3
correctly [1] 4700/25
correspond [1] 4703/11
cost [12] 4693/9 4707/18 4707/19 4737/9 4748/14 4748/14 4764/22 4765/1 4769/21 4770/3 4774/20 4776/21
costing [2] 4745/2 4770/4
costs [11] 4764/9 4764/12 4764/16 4764/17 4764/18 4764/25 4765/6 4765/14 4765/17 4765/23 4769/25
could [42] 4683/5 4689/13 4689/15 4690/19 4691/19 4692/17 4692/23 4692/24 4695/7 4697/9 4703/16 4704/24 4704/24 4706/14 4706/15 4707/10 4707/23 4714/1 4714/1 4714/2 4719/3 4728/21 4728/23 4728/24 4732/8 4733/2 4733/22 4736/16 4739/12 4740/20 4752/1 4758/10 4758/13 4759/22 4768/3 4782/17 4790/24 4791/21 4792/25 4794/14 4794/14 4796/16
couldn't [4] 4733/8 4756/15 4798/10 4798/19
counsel [6] 4695/23 4787/13 4787/20 4800/14 4800/15 4802/24
count [4] 4694/16 4695/1 4695/2 4695/5
counting [2] 4780/2 4797/13
couple [3] 4712/17 4783/3 4801/14
course [9] 4697/14 4734/4 4741/20 4749/16 4754/11 4764/19 4775/21 4776/14 4800/20
court [27] 4678/1 4680/16 4680/18 4720/5 4723/16 4728/12 4731/1 4732/8 4732/20 4734/4 4734/17 4736/16 4740/4 4740/24 4741/8 4741/11 4743/11 4745/13 4749/16 4754/11 4754/18 4760/3 4765/10 4786/7 4800/1 4800/9 4804/5
Court's [2] 4720/4 4741/20
covered [1] 4761/24
covering [1] 4789/15
COVID [1] 4695/9
CPA [6] 4736/15 4736/22 4737/1 4737/18 4737/21 4737/25
CPC [1] 4736/14
create [1] 4796/3
created [1] 4794/25
creating [1] 4794/19
criteria [1] 4692/21
critical [3] 4694/7 4694/10 4694/11
cross [10] 4681/12 4717/2 4718/11 4718/13 4745/14 4745/15 4745/17 4746/2 4746/3 4748/7
cross-engine [6] 4718/11 4718/13 4745/14 4745/15 4746/2 4748/7
CROSS-EXAMINATION [1] 4717/2
CRR [2] 4805/2 4805/8
Cue's [1] 4803/18
cumbersome [1] 4733/6
cures [1] 4776/7
current [1] 4683/24
currently [2] 4723/4 4790/8
customer [9] 4684/5 4692/22 4694/12 4706/11 4730/24 4731/2 4731/7 4732/11 4750/7
customers [17] 4687/25 4688/6 4692/2 4692/4 4692/14 4694/13 4702/1 4702/8 4711/3 4728/22 4730/21 4731/10 4731/11 4733/12 4750/13 4754/19 4768/2
cut [3] 4698/14 4718/19 4733/17
cuts [4] 4697/25 4698/5 4699/16 4718/2
CV [1] 4678/4
cycle [9] 4696/22 4698/16 4699/7 4708/18 4728/3 4731/2 4731/18 4743/12 4745/9
cycles [4] 4698/16 4708/19 4718/18 4744/1

D

D.C [5] 4678/5 4679/3 4679/8 4680/9 4680/19
dashboards [1] 4735/5
dashed [1] 4770/12
data [37] 4687/17 4688/24 4711/20 4723/21 4724/3 4724/4 4734/3 4734/6 4734/9 4734/11 4734/14 4734/15 4734/18 4734/23 4735/4 4735/7 4739/11 4739/12 4739/17 4739/20 4739/21 4752/12 4752/15 4756/14 4756/14 4756/20 4756/22 4761/17 4761/18 4761/22 4762/5 4762/10 4762/11 4763/6 4778/22 4779/18 4780/13
date [7] 4696/10 4720/25 4721/11 4724/15 4725/21 4743/7 4805/7
dated [1] 4717/18
dates [3] 4703/24 4704/6 4743/18
Daubert [1] 4766/17
day [5] 4678/7 4756/2 4756/6 4756/10 4803/3
days [1] 4800/18
DDA [2] 4718/6 4718/15
deadline [2] 4802/11 4802/14
deal [1] 4766/21
deals [1] 4761/5
dealt [1] 4801/19
decade [3] 4711/2 4711/15 4711/24
December [1] 4743/7
December 6th [1] 4743/7
decent [1] 4766/13
decide [1] 4785/18
decided [4] 4708/14 4708/16 4764/23 4782/16
decipher [1] 4788/8
decision [3] 4702/24 4734/25 4739/13
decision-making [2] 4734/25 4739/13
decisions [1] 4730/23
deck [6] 4742/9 4742/12 4790/23 4798/16 4798/22 4800/13
declaration [2] 4703/18 4704/10
deeply [1] 4727/23
def [1] 4751/7
default [4] 4703/25 4704/3 4704/9 4767/2
defaults [1] 4774/8
Defendant [2] 4678/7 4680/7
DEFENDANT'S [2] 4681/18 4754/6
Defense [1] 4787/20
defer [1] 4731/17
deferred [1] 4749/8
deferring [4] 4708/16 4708/17 4708/23 4709/3
defined [1] 4774/19
defining [1] 4684/12
definitely [4] 4699/5 4699/5 4714/1 4742/3
definition [3] 4797/18

D

definition... [2] 4797/22 4798/7
deliberate [1] 4786/6
deliberately [2] 4771/12 4771/17
delta [1] 4789/15
denominator [2] 4779/20 4780/2
Denver [1] 4679/16
DEPARTMENT [4] 4679/2 4679/7 4679/12 4695/22
Depended [1] 4793/20
deposition [2] 4714/9 4769/2
describe [2] 4722/3 4736/16
described [1] 4727/11
describes [2] 4722/23 4745/5
describing [2] 4713/1 4739/1
design [1] 4728/17
desirable [1] 4699/6
desktop [2] 4773/16 4773/21
despite [1] 4764/24
detail [4] 4766/11 4767/10 4774/13 4783/17
details [2] 4697/20 4774/1
determining [1] 4763/17
developed [1] 4728/19
device [3] 4762/14 4779/5 4780/19
devices [4] 4768/21 4768/22 4773/18 4782/3
devoted [1] 4746/15
dialogue [1] 4722/6
did [107] 4684/6 4684/8 4685/19 4685/21 4692/9 4695/4 4698/1 4699/22 4701/13 4701/14 4701/16 4701/19 4701/21 4702/6 4703/3 4703/9 4710/21 4714/10 4718/23 4719/11 4720/21 4723/12 4723/15 4723/21 4723/24 4724/18 4724/21 4724/23 4725/19 4725/20 4729/3 4729/22 4731/23 4734/13 4739/6 4740/6 4742/1 4742/3 4744/13 4750/1 4750/6 4751/5 4751/9 4753/17 4753/19 4754/19 4755/14 4756/24 4757/23 4760/24 4761/8 4761/9 4761/16 4762/1 4762/3 4762/19 4762/21 4762/22 4763/7 4763/8 4763/9 4764/1 4764/3 4764/4 4764/10 4766/3 4771/10 4771/10 4771/11 4771/15 4771/20 4777/21 4777/23 4778/1 4778/16 4778/18 4778/21 4779/8 4779/9 4779/10 4779/16 4780/18 4781/13 4781/22 4782/10 4782/22 4783/13 4784/8 4784/9 4784/21 4785/3 4785/6 4785/8 4787/18 4791/23 4792/6 4792/8 4792/10 4792/11 4792/12 4792/17 4792/19 4793/5 4793/10 4794/17 4794/24 4800/22
did you [13] 4698/1 4703/3 4725/19 4750/1 4761/16 4762/1 4762/19 4763/7 4777/21 4778/16 4778/21 4779/8 4779/16
didn't [14] 4682/20 4685/8 4689/3 4690/1 4693/14 4709/21 4709/21 4751/11 4751/12 4756/18 4765/2 4782/18 4784/7 4798/2
differ [1] 4685/8
difference [9] 4760/7 4768/17 4769/3 4769/8 4770/22 4778/10 4781/9 4781/24 4782/2
differences [1] 4733/8
different [12] 4718/15 4734/2 4734/3 4751/17 4759/17 4761/2 4770/18 4777/2 4780/5 4780/12 4780/14 4799/5
differentiation [2] 4797/24 4797/25
digit [1] 4691/10
digits [3] 4691/18 4692/11 4694/7
digress [1] 4776/5
dimension [1] 4767/24
Dintzer [4] 4679/2 4682/9 4740/17 4755/22
direct [10] 4681/12 4683/17 4758/6 4769/24 4780/4 4793/22 4797/11 4797/25 4798/4 4800/11
direct evidence [1] 4798/4
directed [1] 4766/17
directly [2] 4731/21 4799/4
director [4] 4683/25 4684/1 4729/20 4730/12
disagreed [1] 4703/4
Dischler [6] 4785/5 4786/16 4787/15 4789/19 4801/18 4801/24
discipline [1] 4798/11
disclose [1] 4695/25
disclosing [1] 4695/24
discovering [1] 4728/5
discuss [3] 4741/5 4800/8 4800/17
discussed [1] 4797/23
discussing [16] 4698/24 4705/24 4706/1 4706/10 4707/1 4707/3 4707/6 4707/8 4707/12 4707/14 4707/20 4708/13 4708/20 4730/17 4760/18 4773/11
discussion [3] 4705/15 4758/18 4803/7
discussions [1] 4700/8
disease [1] 4776/7
disintermediate [4] 4711/1 4711/5 4711/9 4711/13
distinction [1] 4776/4
distribution [1] 4773/25
DISTRICT [3] 4678/1 4678/1 4678/10
divide [2] 4770/21 4784/10
Division [2] 4679/7 4680/4
do [98] 4686/8 4686/12 4697/4 4698/13 4701/1 4704/6 4706/5 4717/19 4717/25 4718/3 4718/4 4718/5 4719/7 4720/23 4721/11 4722/5 4722/21 4722/22 4722/25 4723/10 4723/18 4723/22 4724/3 4726/6 4726/14 4727/19 4728/21 4732/16 4733/5 4733/8 4733/9 4734/12 4734/24 4734/25 4735/2 4736/3 4739/19 4739/22 4739/24 4743/9 4743/23 4745/7 4747/11 4748/11 4748/16 4748/23 4748/25 4749/20 4750/6 4750/9 4750/21 4750/23 4751/24 4752/15 4752/22 4752/24 4753/13 4754/14 4754/17 4755/12 4755/13 4758/24 4759/8 4759/20 4761/6 4766/20 4769/18 4771/6 4772/1 4775/4 4776/20 4782/17 4783/14 4783/18 4783/18 4783/21 4784/7 4785/15 4785/25 4785/25 4786/25 4787/1 4787/1 4787/1 4788/11 4790/10 4790/15 4791/9 4791/18 4792/16 4793/1 4793/14 4794/3 4794/14 4795/3 4795/20 4799/20 4802/18
do you [12] 4697/4 4718/3 4722/5 4722/21 4723/18 4723/22 4749/20 4750/9 4750/21 4754/14 4761/6 4775/4
do you have [1] 4724/3
do you know [3] 4723/10 4745/7 4750/6
do you see [18] 4686/8 4717/19 4717/25 4718/5 4719/7 4720/23 4721/11 4722/25 4726/6 4726/14 4727/19 4736/3 4743/9 4743/23 4747/11 4748/23 4753/13 4755/12
doc [1] 4713/6
Docs [1] 4708/11
document [16] 4687/16 4708/10 4710/16 4710/18 4710/20 4711/9 4711/11 4712/5 4721/2 4722/12 4727/14 4735/10 4786/15 4786/19 4786/20 4786/21
documents [5] 4704/12 4766/6 4785/10 4787/24 4788/17
does [33] 4700/16 4712/24 4715/11 4715/21 4723/3 4726/19 4729/11 4734/8 4735/10 4745/15 4746/14 4753/14 4757/5 4757/6 4760/20 4760/23 4765/13 4767/11 4768/5 4775/6 4777/10 4777/13 4783/6 4783/15 4783/15 4794/2 4796/22 4797/2 4797/5 4797/7 4797/15 4797/19 4797/20
doesn't [2] 4704/20 4799/9
doing [17] 4706/15 4707/15 4742/22 4743/25 4744/2 4748/14 4750/8 4783/4 4783/12 4785/15 4786/21 4790/14 4791/15 4795/14 4795/21 4795/22 4796/2
DOJ [3] 4679/2 4682/9 4803/24
dollar [1] 4695/10
dollars [4] 4688/6 4688/21 4694/2 4694/3
don't [43] 4687/15 4693/7 4694/21 4695/1 4695/3 4696/10 4696/25 4697/2 4697/12 4700/15 4701/21 4701/22 4703/2 4703/3 4703/13 4706/24 4707/5 4707/10 4709/18 4710/9 4711/8 4711/10 4717/7 4729/5 4730/15 4737/14 4748/1 4758/24 4769/1 4773/6 4778/8 4780/4 4787/16 4789/24 4791/1 4791/7 4792/1 4792/16 4793/6 4794/6 4795/21 4799/19 4802/22
done [11] 4708/24 4732/17 4740/11 4754/9 4766/5 4766/5 4776/8 4799/12 4799/21 4801/6 4803/21
double [1] 4710/8
double-check [1] 4710/8
DoubleClick [5] 4684/4 4684/9 4684/13 4684/16 4752/8
down [12] 4687/20 4689/13 4697/23 4705/17 4706/13 4710/1 4722/9 4724/5 4730/3 4742/13 4749/14 4801/8
downloads [2] 4734/12 4739/23
Dr. [2] 4763/3 4769/6
Dr. Lehman [1] 4769/6
Dr. Varian [1] 4763/3
draft [3] 4697/19 4709/19 4713/7
drafted [2] 4709/25 4710/20
draw [1] 4799/25
drawn [2] 4773/19 4773/20
drive [2] 4691/9 4766/20
drive-by [1] 4766/20
driven [1] 4715/22
drives [1] 4715/21
DSA [1] 4699/25

D

due [1] 4719/16
during [11] 4682/21 4692/25 4693/11 4734/4 4741/6 4742/1 4754/11 4755/14 4756/5 4763/3 4765/10
DV360 [1] 4730/12
DX0132 [1] 4742/6
DX132 [1] 4742/8
DX3052 [2] 4753/6 4753/10
dynamic [2] 4726/18 4736/2

E

each [15] 4719/23 4731/1 4740/8 4751/17 4759/14 4760/6 4770/13 4771/22 4775/11 4777/22 4779/5 4780/13 4780/18 4780/19 4785/19
earlier [7] 4695/17 4741/23 4745/13 4769/12 4773/11 4790/23 4790/23
early [2] 4702/13 4728/3
earns [1] 4773/24
easily [1] 4729/6
easy [2] 4759/21 4796/15
economic [3] 4760/24 4767/18 4781/12
economics [1] 4799/16
economist [3] 4760/9 4787/7 4788/7
economists [1] 4776/17
edited [2] 4709/25 4712/8
editing [1] 4716/9
Eduardo [2] 4729/18 4729/19
Eduardo Indacochea [1] 4729/18
effect [2] 4771/18 4793/2
effectively [2] 4737/24 4770/5
effects [2] 4774/8 4783/16
efficiency [1] 4793/2
effort [5] 4691/13 4693/9 4702/21 4726/24 4727/22
efforting [1] 4802/9
eight [1] 4706/17
either [1] 4772/22
element [2] 4743/1 4771/16
elements [3] 4759/24 4760/14 4771/20
else [7] 4729/23 4734/7 4794/8 4794/10 4800/3 4803/23 4803/24
email [39] 4679/4 4679/9 4679/10 4679/17 4679/21 4680/6 4680/10 4680/11 4680/15 4697/10 4697/24 4698/4 4701/11 4701/24 4702/5 4702/17 4703/3 4703/7 4704/12 4707/25 4708/6 4708/11 4710/9 4717/18 4717/24 4721/18 4721/19 4721/21 4722/1 4722/1 4725/19 4725/21 4725/25 4726/4 4730/5 4732/2 4738/10 4787/12 4788/1
emails [4] 4697/18 4697/18 4708/6 4743/4
eMarketer [1] 4780/9
emerging [2] 4765/13 4765/22
Emeritus [2] 4729/11 4729/13
emphasized [1] 4759/3
empirical [3] 4771/9 4782/20 4792/4
employed [2] 4683/20 4683/22
enabling [3] 4750/14 4750/14 4759/15
encourage [1] 4737/6
end [7] 4685/20 4702/16 4759/19 4794/11 4794/14 4794/18 4803/3
ended [1] 4750/8
ending [4] 4736/10 4747/5 4748/17 4748/23
ends [2] 4721/24 4744/22
eng [2] 4745/5 4745/11
engage [1] 4704/11
engagement [1] 4799/5
engine [19] 4718/11 4718/13 4722/24 4726/12 4733/7 4733/18 4733/18 4745/14 4745/15 4745/17 4746/2 4746/3 4748/1 4748/3 4748/7 4748/10 4765/15 4768/6 4781/4
engineering [4] 4694/20 4694/22 4707/19 4748/15
engineers [6] 4745/10 4745/12 4746/15 4746/18 4746/21 4746/22
engines [20] 4714/18 4716/7 4716/8 4718/16 4719/10 4719/11 4719/12 4719/19 4719/23 4719/23 4723/6 4726/7 4732/14 4733/15 4745/20 4745/21 4746/10 4761/23 4778/25 4781/4
enhance [1] 4694/18
Enhanced [1] 4736/14
enough [4] 4768/4 4788/18 4789/8 4792/24
enter [2] 4764/23 4767/15
entered [2] 4692/13 4692/22
enterprise [1] 4687/23
entire [1] 4788/2
entrant [2] 4766/8 4766/14
entrants [1] 4767/14
entries [1] 4747/25
entry [21] 4760/5 4760/16 4760/21 4763/14 4763/16 4763/20 4763/21 4763/23 4763/24 4764/2 4764/13 4764/13 4765/11 4766/12 4766/25 4767/11 4767/17 4769/12 4777/11 4781/13 4781/14
equally [1] 4775/9
eroded [1] 4763/25
escalation [5] 4693/1 4694/17 4696/6 4699/14 4699/18
escalations [1] 4722/3
especially [4] 4722/24 4733/1 4781/25 4788/16
essence [3] 4788/14 4791/12 4794/24
essentially [2] 4711/5 4790/24
estimate [10] 4689/7 4716/19 4754/21 4761/12 4779/12 4780/9 4780/16 4780/22 4781/6 4797/9
estimated [1] 4764/22
estimates [4] 4761/11 4779/1 4780/6 4780/12
estimation [1] 4689/20
et [3] 4678/3 4682/8 4776/21
et al [1] 4682/8
et cetera [1] 4776/21
European [1] 4734/21
evaluate [1] 4751/23
evaluated [1] 4773/22
evaluating [6] 4693/8 4693/10 4694/23 4694/25 4695/6 4773/20
evaluation [2] 4728/16 4801/16
evaluators [1] 4773/20
even [6] 4711/10 4756/5 4774/14 4776/9 4795/20 4797/13
evening [2] 4757/20 4757/22
ever [3] 4724/18 4734/14 4749/10
every [6] 4751/5 4751/10 4751/10 4776/20 4779/5 4785/17
everybody [1] 4794/16
everyone [6] 4682/4 4682/12 4741/13 4794/8 4794/10 4804/4
everything [2] 4733/23 4802/16
evidence [41] 4683/1 4693/15 4693/20 4701/4 4701/9 4705/7 4705/10 4709/7 4710/13 4721/5 4725/6 4742/8 4754/6 4760/24 4761/2 4764/1 4764/9 4767/18 4767/22 4770/25 4776/23 4777/4 4777/17 4777/20 4781/12 4782/14 4782/14 4782/17 4782/20 4790/19 4792/4 4795/18 4796/1 4797/11 4797/22 4797/23 4797/25 4798/4 4798/6 4798/8 4798/23
evolved [1] 4716/10
Ex [1] 4772/7
Ex-TAC [1] 4772/7
exact [2] 4696/10 4730/15
exactly [8] 4729/5 4769/14 4773/6 4781/8 4782/17 4783/14 4789/18 4795/21
exam [1] 4682/21
EXAMINATION [4] 4683/17 4717/2 4755/20 4758/6
example [16] 4705/1 4723/25 4732/10 4732/20 4732/22 4734/9 4734/17 4734/19 4734/21 4736/21 4740/1 4745/22 4764/22 4767/23 4776/5 4786/7
examples [2] 4735/3 4752/18
excited [1] 4726/11
excuse [2] 4797/6 4801/7
exercise [4] 4693/2 4693/6 4693/7 4797/16
exhibit [15] 4683/1 4693/20 4701/4 4705/10 4721/9 4721/16 4721/17 4725/4 4729/8 4730/3 4731/21 4735/14 4740/11 4754/6 4798/23
exhibits [4] 4681/2 4681/16 4717/8 4717/11
exist [2] 4748/10 4764/13
existing [2] 4731/16 4765/16
expand [3] 4728/25 4733/24 4746/8
expanding [1] 4733/14
expansion [5] 4760/16 4763/15 4763/16 4764/2 4766/12
expect [3] 4706/8 4763/24 4799/19
expected [1] 4765/1
expenses [1] 4781/17
expensive [2] 4765/19 4781/18
expensively [1] 4769/22
experience [7] 4718/23 4726/25 4730/22 4730/25 4734/13 4751/13 4752/21
experiment [5] 4771/22 4792/17 4792/17 4792/19 4795/15
experimentation [1] 4773/1
experiments [8] 4771/10 4771/11 4771/11 4771/14 4773/3 4773/5 4791/24 4792/13
expert [1] 4766/19
explain [5] 4728/12 4732/8 4745/14 4748/2 4788/8
explained [1] 4773/12
explaining [3] 4723/21 4727/25 4789/20
explains [1] 4743/16
explorations [1] 4700/11
explore [1] 4750/3
exports [1] 4734/12
expressed [1] 4749/23
expression [1] 4779/24
extending [1] 4738/22
extension [1] 4802/15
extensions [1] 4791/3
extensively [1] 4787/15
extent [3] 4767/12 4790/14 4803/4
extract [5] 4734/23 4785/22 4785/23 4790/15 4793/15
extracting [1] 4788/18
extracts [1] 4796/21
extremely [1] 4765/19

F

Facebook [3] 4723/13 4724/1 4724/3
fact [6] 4702/24 4764/24 4776/10 4795/10 4797/13 4797/15
fair [1] 4774/5
fairly [2] 4799/22 4802/19
fall [4] 4696/18 4696/23 4697/1 4772/18
familiar [6] 4710/16 4713/14 4752/4 4753/22 4753/23 4753/25
familiarize [2] 4705/18 4708/2
far [4] 4697/7 4752/3 4752/25 4753/18
fast [4] 4794/7 4794/13 4794/17 4794/22
faster [2] 4794/8 4794/10
FB [1] 4722/24
feature [34] 4691/14 4691/17 4691/24 4692/8 4694/7 4694/10 4694/18 4694/24 4706/1 4706/7 4706/10 4707/3 4707/13 4707/18 4707/20 4716/2 4718/9 4718/11 4718/14 4722/6 4724/17 4726/7 4730/20 4730/23 4731/6 4738/25 4739/1 4739/2 4745/14 4745/15 4749/10 4750/15 4751/5 4756/25
features [60] 4693/10 4698/15 4709/9 4709/13 4715/18 4716/7 4716/8 4718/25 4719/18 4719/22 4721/23 4724/10 4724/18 4724/24 4725/1 4725/2 4726/12 4726/20 4726/21 4727/11 4727/12 4730/18 4731/2 4731/12 4731/23 4735/21 4736/5 4736/17 4736/18 4742/2 4745/18 4745/19 4746/2 4746/2 4747/9 4747/10 4747/16 4747/17 4747/22 4748/4 4748/8 4748/9 4748/9 4748/10 4748/19 4748/20 4748/24 4749/4 4749/6 4751/25 4755/11 4756/2 4756/6 4756/8 4756/9 4756/11 4756/12 4756/13 4756/15 4756/21
February [6] 4700/24 4703/24 4705/2 4708/1 4744/16 4744/18
feedback [5] 4728/4 4730/21 4730/24 4731/3 4731/7
feels [1] 4766/6
few [5] 4718/18 4731/19 4741/2 4754/15 4781/23
fifth [1] 4705/17
figure [3] 4786/11 4790/13 4792/2
figure out [1] 4790/13
final [2] 4754/8 4767/7
finally [1] 4729/2
find [5] 4751/22 4761/9 4762/22 4778/1 4779/10
finding [3] 4760/13 4782/4 4795/20
fine [2] 4696/4 4788/4
finish [2] 4735/9 4740/19
firm [7] 4760/10 4760/14 4767/25 4769/21 4776/14 4776/20 4798/7
firms [1] 4775/22
first [28] 4686/10 4698/19 4710/6 4717/23 4718/5 4722/15 4722/17 4726/3 4726/10 4736/13 4742/9 4743/7 4759/8 4761/4 4764/8 4764/16 4768/10 4777/21 4778/19 4783/24 4784/10 4784/10 4787/3 4787/3 4788/10 4788/24 4792/12 4795/19
five [3] 4736/13 4749/4 4761/1
fixed [4] 4764/9 4764/12 4783/19 4783/21
flee [1] 4792/10
fleeing [1] 4792/14
Floodlight [10] 4702/1 4752/4 4752/7 4752/8 4752/15 4752/25 4753/14 4753/20 4753/21 4757/3
Floodlight/auction-time [1] 4702/1
Floor [2] 4679/15 4680/14
fluctuate [1] 4713/25
fluctuates [1] 4714/1
focus [5] 4722/15 4722/18 4724/15 4736/9 4736/13
focused [3] 4724/13 4724/13 4790/3
focusing [1] 4715/18
folks [2] 4729/13 4730/9
follow [3] 4690/19 4707/15 4721/21
follow-up [2] 4707/15 4721/21
following [1] 4698/25
follows [3] 4710/3 4710/5 4758/5
Force [3] 4701/12 4701/24 4702/18
forecasting [3] 4706/5 4706/7 4706/10
foregoing [1] 4805/3
forget [2] 4717/7 4780/15
format [2] 4790/25 4791/17
formats [1] 4791/2
forming [1] 4761/2
formula [1] 4791/12
Forrester [1] 4780/14
forth [1] 4787/24
forward [1] 4702/25
found [1] 4792/13
four [5] 4769/4 4772/12 4772/16 4777/19 4786/22
fourth [2] 4735/14 4766/24
frequency [1] 4795/7
front [1] 4713/24
full [1] 4729/2
function [1] 4771/25
functionality [9] 4728/4 4728/20 4728/24 4731/18 4732/7 4732/9 4732/15 4733/10 4746/8
fund [1] 4719/4
funnel [2] 4759/17 4759/19
further [6] 4716/12 4750/4 4755/17 4757/12 4758/4 4798/13
future [3] 4698/16 4708/18 4749/8

G

gains [2] 4705/16 4705/25
gap [3] 4775/12 4789/21 4789/22
gather [2] 4712/6 4765/19
gave [2] 4714/9 4721/2
general [30] 4680/3 4704/10 4759/9 4759/9 4759/11 4759/16 4760/19 4760/21 4761/6 4761/14 4761/23 4763/18 4764/2 4767/21 4767/24 4768/6 4773/15 4777/11 4777/24 4778/3 4778/20 4778/23 4778/25 4781/3 4783/1 4785/8 4789/25 4796/23 4797/2 4797/7
GENERAL/NE [1] 4680/3
generally [4] 4711/12 4728/2 4750/18 4763/24
generated [1] 4775/17
get [30] 4689/15 4689/20 4690/16 4702/15 4707/21 4715/23 4728/4 4728/6 4729/6 4729/7 4737/14 4737/16 4740/21 4753/7 4759/18 4762/16 4765/6 4769/5 4774/1 4774/11 4793/8 4794/15 4795/2 4795/18 4802/9 4802/10 4803/3 4803/8 4803/8 4803/14
gets [1] 4785/14
getting [1] 4764/21
give [19] 4686/1 4703/20 4705/18 4708/2 4716/19 4721/6 4721/20 4731/1 4732/4 4732/20 4734/17 4740/23 4754/18 4769/8 4769/23 4786/7 4791/3 4794/5 4802/8
given [10] 4704/6 4715/16 4797/22 4799/7 4799/8 4799/15 4800/1 4800/18 4801/20 4801/20
gives [2] 4769/8 4780/9
giving [1] 4774/21
global [1] 4713/16
globally [2] 4715/8 4715/15
go [50] 4688/14 4688/19 4689/13 4702/25 4704/19 4710/25 4711/15 4712/11 4712/12 4712/15 4722/10 4726/3 4726/10 4727/14 4728/8 4728/19 4730/4 4732/11 4732/16 4733/7 4733/22 4739/21 4740/14 4741/22 4751/2 4758/10 4758/20 4758/25 4759/7 4760/2 4760/17 4761/1 4761/10 4762/15 4762/15 4763/13 4765/7 4777/19 4778/19 4782/23 4783/11 4784/9 4786/14 4792/23 4797/15 4799/11 4799/20 4799/22 4800/21 4800/22
go ahead [3] 4733/22 4740/14 4758/25
go-around [1] 4799/11
goal [6] 4699/3 4699/9 4699/10 4737/19 4738/1 4790/12
goes [10] 4690/21 4690/25 4713/17 4714/18 4714/19 4723/4 4735/19 4762/5 4762/6 4771/2
going [72] 4682/15 4686/4 4688/3 4688/25 4689/1 4689/3 4689/8 4689/11 4689/12 4689/25 4690/8 4690/15 4690/22 4690/24 4691/4 4708/14 4708/18 4716/1 4717/10 4721/1 4722/15 4722/16 4722/18 4724/7 4724/10 4725/3 4725/12 4726/25 4727/7 4727/15 4729/9 4732/3 4737/13 4738/3 4742/5 4743/20 4744/8 4744/21 4745/12 4746/6 4747/3 4747/13 4748/6 4751/16 4754/23 4754/24 4755/1 4759/12 4766/11 4766/14 4766/18 4766/20 4767/3 4767/9 4773/23 4774/8 4774/9 4774/13 4783/10 4783/17 4785/19 4793/12 4794/2 4794/4 4794/12 4794/15 4795/1 4796/3 4799/20 4799/23 4800/17 4801/12
gold [2] 4794/15 4795/2
gone [1] 4787/24
good [18] 4682/4 4682/6 4682/12 4682/12 4682/13 4683/19 4693/16 4699/20 4699/22 4700/14 4717/4 4717/5 4720/21 4768/2 4768/3 4771/10 4789/21 4789/22
Good morning [6] 4682/12 4682/12 4683/19 4693/16 4717/4 4717/5
GOODRICH [1] 4680/13
GOOGLE [169]
Google LLC [1] 4682/8
Google's [33] 4687/25 4689/7 4710/22 4745/2 4753/9 4761/11 4762/1 4762/7 4762/19 4762/23 4762/25 4763/6 4764/15 4765/8 4765/10 4766/4

G

Google's... [17] 4766/24 4767/8 4767/20 4768/18 4768/25 4768/25 4773/12 4774/3 4774/20 4778/3 4779/12 4780/3 4781/17 4781/21 4783/4 4783/23 4797/2
got [10] 4691/7 4696/19 4716/6 4733/25 4740/23 4762/11 4771/19 4780/20 4802/16 4803/3
gotten [2] 4707/21 4802/5
government's [1] 4724/13
graph [1] 4746/14
great [3] 4735/11 4735/16 4737/13
grew [3] 4691/17 4694/2 4694/6
ground [1] 4800/6
group [9] 4683/24 4684/23 4685/5 4685/13 4686/19 4686/21 4701/15 4704/1 4744/9
groups [2] 4732/25 4737/13
growing [3] 4750/16 4750/18 4750/19
grown [4] 4692/10 4694/1 4711/16 4711/25
guess [6] 4707/10 4758/19 4775/19 4787/17 4802/5 4802/14

H

H1 [6] 4697/19 4698/18 4708/18 4708/22 4743/1 4743/6
H2 [2] 4708/24 4750/25
had [66] 4688/24 4689/4 4689/11 4690/4 4692/4 4692/6 4692/10 4692/13 4692/14 4692/20 4694/15 4694/25 4698/3 4698/3 4701/23 4702/24 4704/4 4704/7 4705/1 4706/5 4706/22 4706/25 4707/20 4708/14 4708/25 4709/25 4711/6 4711/22 4712/2 4713/13 4713/13 4713/24 4721/21 4723/25 4724/4 4728/19 4731/2 4733/10 4735/18 4741/23 4742/11 4749/8 4749/23 4750/3 4750/24 4757/20 4757/22 4758/18 4759/2 4759/2 4759/3 4766/16 4766/17 4768/18 4771/18 4775/9 4776/19 4776/20 4778/22 4779/1 4782/17 4787/4 4791/11 4793/8 4801/15 4802/11
hadn't [3] 4708/16 4712/8 4712/8
half [4] 4698/19 4727/16 4730/8 4769/3
hand [9] 4683/6 4686/5 4716/17 4745/23 4748/24 4753/13 4764/16 4780/8 4780/11
happen [7] 4699/11 4719/1 4731/25 4734/16 4749/13 4755/16 4785/9
happened [4] 4692/17 4697/8 4765/25 4792/10
happening [1] 4721/18
happy [2] 4787/21 4787/25
hard [4] 4704/22 4713/6 4766/14 4767/15
harder [1] 4788/8
has [46] 4709/2 4711/1 4711/16 4711/24 4721/2 4724/9 4724/22 4725/4 4730/19 4734/4 4738/17 4738/18 4743/11 4743/19 4749/16 4749/17 4752/3 4754/11 4757/17 4759/7 4760/14 4763/17 4764/20 4764/24 4765/10 4766/4 4766/5 4766/6 4768/9 4769/15 4773/13 4776/8 4779/14 4780/11 4782/5 4788/19 4790/20 4791/2 4794/22 4795/13 4796/23 4797/10 4797/11 4799/8 4801/20 4801/20
have [137]
haven't [1] 4765/24
having [10] 4700/8 4705/15 4708/10 4722/6 4735/18 4748/14 4751/23 4758/3 4758/17 4769/21
he [47] 4696/4 4701/15 4701/16 4701/22 4701/22 4702/6 4702/7 4702/12 4702/12 4702/22 4717/8 4718/2 4729/25 4730/11 4763/4 4763/4 4763/4 4763/5 4766/18 4769/1 4769/3 4785/9 4789/25 4790/4 4790/6 4794/7 4794/8 4794/10 4794/12 4794/12 4794/15 4794/16 4794/17 4794/17 4794/21 4798/17 4798/19 4799/6 4799/7 4799/8 4799/8 4799/14 4799/17 4799/22 4799/23 4800/1 4800/3
he said [7] 4702/22 4763/4 4769/3 4785/9 4790/4 4799/17 4800/3
he'd [2] 4717/17 4794/11
he's [16] 4702/15 4706/18 4709/8 4709/13 4766/18 4769/1 4789/19 4789/20 4790/4 4790/10 4794/4 4799/7 4799/14 4799/16 4799/21 4799/23
head [5] 4694/16 4695/1 4695/2 4695/5 4803/8
heading [6] 4687/20 4689/14 4710/15 4726/5 4726/6 4778/11
headings [1] 4742/13
healthy [1] 4695/9
hear [1] 4802/22
heard [9] 4734/5 4741/21 4749/16 4751/8 4754/12 4765/9 4765/10 4768/12 4786/9
hearing [1] 4749/20
Heath [2] 4730/13 4730/14
heavily [1] 4727/6
held [1] 4783/20
help [11] 4706/7 4707/10 4713/23 4728/4 4748/11 4750/4 4753/15 4753/17 4787/8 4787/21 4788/7
helped [2] 4729/14 4793/14
helpful [2] 4758/19 4788/9
helping [1] 4719/15
helps [2] 4768/23 4769/16
her [4] 4698/6 4730/15 4800/22 4800/23
herculean [1] 4726/24
here [80] 4688/23 4689/19 4690/9 4690/20 4691/22 4700/10 4700/16 4706/18 4707/8 4707/17 4708/20 4709/5 4709/13 4710/11 4711/9 4711/20 4712/8 4712/14 4715/14 4717/6 4721/20 4722/1 4723/3 4725/12 4727/11 4728/15 4729/12 4730/9 4730/13 4730/19 4732/7 4732/11 4733/23 4733/23 4736/3 4736/18 4737/21 4738/16 4739/9 4740/5 4742/25 4743/15 4743/18 4744/21 4745/2 4746/5 4746/9 4747/19 4747/23 4747/24 4749/3 4749/4 4753/22 4757/1 4768/8 4768/14 4768/18 4769/24 4770/6 4770/15 4772/3 4772/7 4772/11 4776/22 4778/2 4780/5 4781/11 4784/1 4784/8 4785/21 4786/17 4786/19 4788/3 4796/7 4799/5 4800/3 4800/5 4802/19 4803/21 4804/4
here's [2] 4710/1 4803/2
Higgins [2] 4801/19 4802/20
high [20] 4699/22 4699/25 4720/22 4722/3 4732/4 4732/5 4732/9 4736/16 4742/14 4747/14 4760/21 4763/14 4763/16 4763/21 4764/1 4788/14 4788/25 4789/9 4795/1 4795/3
high-level [1] 4732/5
high-prio [1] 4722/3
higher [8] 4763/2 4763/10 4765/3 4768/1 4770/19 4772/23 4779/4 4783/12
highest [13] 4788/16 4788/20 4789/2 4789/6 4790/11 4791/10 4791/11 4791/14 4793/8 4793/15 4793/24 4793/24 4794/3
highlight [2] 4725/13 4729/9
highly [3] 4694/16 4755/10 4788/19
him [8] 4682/18 4725/13 4787/11 4789/1 4789/1 4794/13 4799/16 4799/20
his [16] 4696/2 4701/20 4703/4 4703/5 4710/7 4740/21 4758/17 4763/3 4763/4 4769/2 4788/25 4789/1 4789/24 4798/16 4799/9 4799/14
history [1] 4704/2
hit [1] 4791/4
hits [3] 4779/24 4780/1 4780/21
hold [4] 4695/7 4702/8 4704/7 4783/19
home [2] 4757/16 4800/21
Honor [70] 4682/6 4682/13 4682/19 4682/25 4683/3 4693/13 4693/16 4696/3 4696/12 4701/3 4701/8 4705/6 4709/6 4710/13 4714/5 4716/12 4716/16 4716/18 4716/19 4721/4 4725/5 4735/9 4740/12 4740/18 4742/7 4746/24 4754/1 4754/3 4754/24 4755/17 4755/22 4757/12 4757/18 4758/16 4762/10 4763/20 4764/15 4766/16 4768/12 4768/24 4769/20 4770/11 4771/8 4773/19 4774/5 4775/6 4778/2 4779/11 4779/21 4781/23 4782/19 4782/23 4783/5 4786/2 4786/9 4786/15 4787/10 4787/23 4788/6 4791/1 4791/24 4797/8 4797/21 4798/14 4799/3 4800/1 4801/1 4801/20 4804/1 4804/2
HONORABLE [3] 4678/9 4682/2 4741/11
hope [4] 4757/20 4757/22 4769/7 4784/18
hoping [1] 4710/1
hour [1] 4716/20
house [1] 4734/24
housekeeping [2] 4682/20 4804/4
how [51] 4687/8 4703/12 4708/7 4711/11 4714/18 4716/4 4724/10 4727/1 4727/23 4729/3 4736/25 4737/9 4738/25 4739/1 4751/19 4754/19 4763/16 4765/6 4765/11 4765/14 4766/12 4766/25 4767/11 4767/11 4770/19 4771/17 4771/22 4771/25 4772/1 4772/5 4772/15 4772/20 4773/5 4773/6 4774/16 4775/16

H

how... [15] 4780/20 4783/18 4783/20 4784/8 4785/25 4786/12 4786/12 4787/1 4787/1 4790/24 4796/2 4796/8 4796/8 4796/16 4800/22
however [1] 4800/14
huh [2] 4723/23 4756/1
human [1] 4773/19
hundred [1] 4784/10
hundreds [3] 4692/15 4733/3 4733/4
hypothetical [1] 4798/12

I

I apologize [1] 4704/14
I believe [16] 4687/6 4690/23 4698/3 4700/10 4706/1 4717/17 4717/22 4721/4 4722/20 4723/16 4725/5 4727/25 4728/10 4731/19 4742/7 4801/18
I believe -- yes [1] 4688/18
I can [9] 4733/14 4733/23 4735/9 4769/22 4771/5 4787/7 4787/8 4788/7 4788/8
I can't [2] 4770/17 4778/10
I did [11] 4703/9 4725/20 4757/23 4761/8 4762/3 4762/21 4764/3 4777/23 4778/18 4779/9 4780/18
I didn't [3] 4693/14 4784/7 4798/2
I didn't know [1] 4689/3
I don't [21] 4687/15 4693/7 4696/25 4697/2 4701/21 4703/13 4706/24 4707/5 4707/10 4711/8 4711/10 4730/15 4758/24 4769/1 4773/6 4787/16 4789/24 4791/1 4791/7 4793/6 4794/6
I don't have [4] 4696/10 4778/8 4780/4 4792/1
I don't recall [6] 4694/21 4695/1 4700/15 4701/22 4710/9 4729/5
I guess [6] 4707/10 4758/19 4775/19 4787/17 4802/5 4802/14
I have [14] 4695/24 4703/24 4711/21 4714/24 4732/4 4733/23 4762/9 4780/8 4781/6 4785/2 4785/12 4790/21 4798/13 4803/22
I hope [3] 4757/20 4757/22 4784/18
I just [9] 4695/25 4696/20 4720/25 4721/2 4727/15 4741/22 4755/7 4758/13 4763/11
I know [3] 4728/7 4771/7 4781/7
I mean [14] 4692/6 4697/6 4700/15 4704/22 4708/9 4708/23 4709/8 4715/20 4716/4 4719/14 4739/18 4744/15 4781/3 4796/25
I recall [4] 4696/5 4710/17 4710/17 4744/15
I say [1] 4712/14
I should [4] 4701/3 4762/9 4768/20 4771/22
I think [83] 4684/23 4687/15 4687/15 4689/19 4690/11 4690/16 4691/6 4691/7 4696/6 4696/8 4696/15 4699/18 4702/15 4708/11 4708/17 4711/9 4713/13 4716/20 4718/2 4718/20 4719/5 4720/11 4720/17 4723/20 4724/5 4724/22 4727/5 4730/3 4735/9 4736/21 4740/11 4741/23 4742/11 4743/11 4743/15 4744/2 4744/16 4745/13 4746/12 4749/9 4749/14 4750/2 4751/2 4752/8 4756/17 4761/4 4763/4 4764/20 4764/21 4765/8 4765/9 4765/23 4767/17 4768/12 4768/23 4769/1 4769/6 4770/23 4772/10 4773/12 4773/17 4776/25 4777/25 4778/9 4779/24 4785/7 4786/10 4786/15 4786/24 4787/8 4788/8 4789/23 4796/7 4796/14 4797/8 4799/22 4799/25 4801/3 4801/14 4801/19 4802/11 4802/16 4802/18
I thought [1] 4758/19
I told [2] 4779/22 4779/22
I understand [3] 4682/15 4689/6 4795/6
I want [3] 4721/16 4729/17 4736/9
I wanted [1] 4773/13
I was [20] 4685/15 4687/6 4688/18 4688/23 4689/4 4690/2 4690/3 4690/23 4696/18 4704/3 4704/9 4704/23 4710/2 4711/8 4711/9 4715/14 4756/17 4772/12 4781/19 4782/20
I went [1] 4786/18
I will [2] 4736/1 4804/3
I worked [1] 4686/19
I wouldn't [1] 4724/4
I'd [7] 4688/3 4701/1 4703/13 4735/13 4768/25 4799/10 4802/23
I'll [14] 4686/5 4702/7 4716/20 4721/15 4725/15 4741/5 4742/14 4753/11 4755/5 4769/19 4773/5 4782/14 4800/8 4800/11
I'm [69] 4684/22 4685/24 4686/4 4688/3 4689/15 4691/19 4696/2 4696/13 4700/25 4706/16 4710/1 4711/13 4712/9 4712/17 4712/18 4712/20 4713/8 4713/9 4713/14 4713/19 4714/15 4717/10 4718/11 4721/1 4722/15 4722/18 4724/7 4724/10 4725/3 4725/12 4726/11 4726/25 4727/15 4729/9 4732/3 4736/25 4738/3 4740/11 4742/5 4744/21 4747/3 4747/13 4753/23 4753/25 4754/9 4754/23 4754/24 4757/21 4759/12 4762/13 4764/21 4765/12 4767/3 4768/18 4768/19 4774/9 4776/5 4776/6 4778/9 4780/2 4780/2 4780/5 4780/22 4784/18 4787/25 4788/2 4795/6 4800/17 4801/6
I'm going [12] 4717/10 4721/1 4722/18 4724/10 4725/3 4725/12 4729/9 4738/3 4742/5 4744/21 4747/3 4800/17
I'm just [5] 4711/13 4722/15 4724/7 4747/13 4754/23
I'm not [6] 4688/3 4713/8 4753/23 4767/3 4774/9 4784/18
I'm not sure [1] 4778/9
I'm sorry [10] 4684/22 4689/15 4691/19 4712/20 4713/19 4718/11 4757/21 4762/13 4765/12 4801/6
I'm thinking [2] 4776/6 4780/2
I've [4] 4687/14 4693/13 4759/21 4795/14
i.e [1] 4789/21
idea [5] 4732/10 4737/18 4739/9 4739/18 4783/22
ideally [1] 4702/15
identification [1] 4753/6
identified [2] 4698/12 4767/19
identify [6] 4686/25 4712/16 4713/11 4729/13 4730/9 4767/7
illustrative [2] 4706/21 4706/24
image [1] 4769/11
imagine [2] 4737/3 4775/7
impact [5] 4706/6 4715/23 4715/23 4742/2 4765/14
implementation [2] 4738/25 4740/9
implemented [1] 4755/24
import [3] 4733/19 4734/23 4735/4
important [7] 4759/4 4759/5 4759/23 4768/8 4772/11 4776/4 4777/1
improvements [1] 4715/18
improving [1] 4765/15
inadvertently [1] 4682/20
include [1] 4718/24
included [4] 4693/7 4746/10 4746/11 4761/19
includes [1] 4800/10
including [2] 4689/22 4693/1
increase [4] 4769/7 4784/20 4791/16 4793/19
increased [1] 4793/23
increases [2] 4785/7 4791/25
increasing [1] 4709/12
incremental [1] 4774/7
incur [1] 4765/2
incurred [1] 4764/25
Indacochea [3] 4729/18 4729/18 4729/22
indeed [1] 4778/14
index [21] 4681/2 4681/10 4681/16 4765/1 4765/18 4783/4 4783/7 4783/13 4783/14 4783/15 4783/22 4783/23 4784/1 4784/2 4784/5 4784/13 4784/14 4784/15 4784/16 4784/24 4784/24
Indexes [1] 4784/14
indicate [1] 4696/12
indicates [2] 4726/4 4726/11
individual [1] 4748/6
industry [5] 4780/6 4780/12 4780/13 4780/22 4781/7
inefficiency [1] 4793/12
influence [2] 4715/17 4790/20
informal [1] 4704/1
information [17] 4688/12 4689/4 4690/2 4690/4 4695/24 4696/1 4732/21 4734/3 4735/19 4740/1 4753/22 4753/24 4759/5 4761/17 4764/15 4768/17 4791/4
informing [2] 4708/21 4721/24
initial [2] 4700/11 4727/22
innovated [1] 4776/10
innovation [1] 4776/7
insights [1] 4735/6
instantaneously [1] 4785/18
instead [3] 4763/23 4770/4 4794/1
instruct [2] 4799/4 4800/17
instruction [1] 4799/14
instructions [1] 4743/20
insulated [2] 4772/20 4776/24
insulation [1] 4772/24
integrate [5] 4691/13 4719/21 4727/23 4735/8 4738/13
integrated [1] 4728/12
integrating [1] 4694/23
integration [3] 4692/7 4723/5 4751/19
intense [1] 4743/19
interact [1] 4730/1
interest [2] 4740/18 4802/19

I

interested [4] 4692/23 4694/14 4787/5 4791/6
interface [3] 4687/24 4711/3 4730/17
internal [2] 4745/2 4763/6
internally [2] 4734/19 4802/17
interrupt [3] 4696/7 4758/13 4775/15
intraday [5] 4692/3 4692/5 4706/20 4738/23 4739/2
introduced [1] 4700/24
introducing [2] 4728/4 4793/12
introduction [1] 4700/20
invented [1] 4763/5
inventory [1] 4720/9
invest [1] 4748/15
investigation [1] 4695/21
investments [1] 4730/21
involved [3] 4774/7 4775/8 4802/2
involves [1] 4802/7
is [311]
is that correct [1] 4688/7
is that right [1] 4773/16
is there [2] 4787/18 4792/4
isn't [4] 4779/22 4789/22 4795/23 4796/12
issue [5] 4706/5 4707/2 4707/9 4801/3 4803/18
issues [1] 4797/23
it [258]
it would be [2] 4779/3 4781/3
it's [82] 4687/14 4688/14 4699/5 4704/22 4706/17 4707/1 4708/9 4708/9 4708/9 4713/6 4718/13 4718/13 4725/12 4727/7 4731/14 4738/20 4738/20 4740/15 4741/2 4743/5 4743/17 4744/22 4752/9 4752/13 4753/24 4758/24 4759/10 4759/16 4759/21 4762/11 4762/14 4763/1 4766/14 4768/14 4770/10 4770/11 4770/13 4770/17 4770/21 4772/2 4772/7 4772/8 4772/20 4773/17 4773/19 4774/25 4774/25 4775/12 4776/13 4776/25 4777/1 4777/4 4778/5 4778/9 4781/5 4781/6 4781/18 4787/6 4788/4 4788/7 4788/11 4789/1 4789/3 4789/3 4789/21 4790/4 4790/23 4794/1 4794/1 4794/19 4796/3 4796/12 4796/14 4796/15 4796/18 4796/19 4796/20 4796/25 4797/9 4798/9 4799/5 4801/11
item [1] 4705/17
items [1] 4733/17
its [25] 4734/18 4739/12 4739/13 4764/16 4764/18 4764/25 4767/8 4767/21 4768/5 4768/10 4771/12 4771/13 4772/16 4773/24 4774/6 4774/12 4774/17 4774/24 4780/12 4781/21 4782/8 4785/1 4785/11 4797/3 4797/16
itself [2] 4739/25 4768/16

J

Jamaican [1] 4794/7
January [3] 4701/23 4743/14 4743/20
Jason [5] 4701/20 4701/21 4705/2 4705/5 4706/14
Jerry [3] 4785/5 4786/16 4789/19
Jerry Dischler [2] 4786/16 4789/19
Jim [2] 4701/12 4701/24
job [2] 4731/14 4748/12
jobs [1] 4685/8
John [2] 4680/7 4682/11
join [1] 4692/23
Jolyn [1] 4725/23
Jolyn Yao [1] 4725/23
jon.sallet [1] 4679/17
Jonathan [1] 4679/12
Joseph [1] 4680/2
joseph.conrad [1] 4680/6
Jr [1] 4679/18
jschmidtlein [1] 4680/10
Juda [2] 4787/15 4789/23
judge [2] 4678/10 4727/25
Judicial [1] 4679/14
July [1] 4684/19
June [2] 4743/14 4743/21
just [151]
JUSTICE [3] 4679/2 4679/7 4695/22

K

Kachachi [3] 4730/10 4730/11 4730/19
Kara [1] 4679/6
keep [4] 4721/9 4721/16 4759/6 4794/22
Kenneth [2] 4679/2 4682/9
kenneth.dintzer2 [1] 4679/5
Kenshoo [3] 4713/5 4722/19 4724/2
key [3] 4770/6 4782/1 4788/17
keywords [2] 4732/25 4733/4
kill [1] 4755/22
kind [58] 4685/17 4688/23 4688/24 4688/25 4690/2 4696/25 4698/24 4700/10 4706/8 4706/8 4709/11 4709/13 4709/19 4711/22 4711/22 4712/5 4712/6 4712/7 4712/9 4712/9 4715/21 4715/21 4716/10 4719/2 4719/3 4728/2 4730/17 4731/14 4732/21 4738/15 4738/21 4738/24 4746/22 4748/7 4748/14 4750/12 4750/19 4757/3 4757/5 4759/11 4759/16 4760/13 4761/23 4765/6 4769/8 4771/4 4771/21 4772/24 4780/22 4781/14 4781/19 4782/2 4783/21 4785/14 4787/3 4793/21 4793/22 4794/14
kinds [4] 4761/17 4780/5 4783/8 4797/21
knew [1] 4794/12
knobs [3] 4786/1 4796/5 4796/5
know [139]
known [1] 4736/5
Kolotouros [2] 4801/23 4802/2
Krueger [20] 4701/12 4701/13 4701/14 4701/17 4701/20 4701/23 4702/4 4702/18 4703/4 4703/12 4705/2 4705/15 4706/13 4706/14 4707/25 4708/1 4708/7 4709/1 4709/25 4710/7

L

La [3] 4701/12 4701/24 4702/18
La Force [2] 4701/12 4701/24
Labor [1] 4784/23
lack [1] 4798/1
landscape [1] 4712/11
language [7] 4718/5 4722/18 4722/23 4723/17 4745/1 4745/4 4755/7
large [2] 4764/9 4797/12
larger [1] 4733/1
largest [1] 4687/2
last [7] 4711/15 4711/24 4769/17 4773/23 4782/7 4799/11 4800/18
late [1] 4698/22
later [3] 4742/13 4758/23 4766/21
lateral [1] 4685/17
latter [1] 4750/25
launch [4] 4726/22 4729/2 4729/7 4785/6
launched [8] 4724/23 4726/7 4726/12 4726/20 4726/22 4749/19 4750/24 4756/5
launches [1] 4785/6
launching [2] 4720/17 4737/4
laundry [1] 4731/11
law [2] 4679/12 4760/11
lawyers [1] 4800/10
lead [3] 4686/11 4686/13 4693/25
leader [1] 4796/9
leading [1] 4693/2
leads [1] 4777/17
learned [1] 4754/15
learning [1] 4765/21
least [6] 4738/16 4749/4 4760/12 4790/9 4803/7 4803/19
leave [1] 4792/16
leaving [2] 4720/10 4751/3
left [12] 4701/1 4720/16 4724/17 4726/22 4727/7 4743/25 4744/3 4744/6 4744/15 4745/23 4748/24 4756/4
left-hand [2] 4745/23 4748/24
legal [4] 4695/20 4695/24 4704/7 4796/25
Lehman [1] 4769/6
less [10] 4711/16 4711/25 4712/2 4716/21 4769/22 4784/14 4788/24 4790/7 4790/9 4793/13
lessons [1] 4796/7
let [30] 4685/22 4693/12 4702/7 4702/12 4703/23 4709/5 4710/12 4714/4 4714/7 4714/14 4717/10 4728/7 4730/9 4731/21 4732/4 4734/2 4736/13 4736/22 4739/5 4745/22 4747/6 4749/15 4753/5 4753/7 4756/19 4765/13 4778/19 4787/25 4791/4 4794/5
let's [29] 4682/18 4686/10 4721/9 4722/10 4724/2 4726/3 4726/5 4726/10 4727/14 4728/1 4730/4 4730/8 4737/15 4738/5 4738/7 4740/14 4742/9 4743/15 4746/12 4747/5 4748/17 4751/2 4760/2 4760/17 4763/13 4775/1 4775/14 4777/8 4777/24
level [9] 4732/4 4732/5 4732/9 4736/16 4742/14 4747/14 4774/2 4775/11 4780/21
LIA [5] 4698/12 4719/6 4720/5 4720/9 4720/14
Liao [1] 4697/10
life [1] 4728/3
like [54] 4682/22 4690/6 4690/6 4690/24 4693/9 4695/12 4700/13 4700/23 4707/6 4719/17 4719/18 4719/22 4731/10 4731/12 4732/16 4732/18 4733/9 4734/6 4735/13 4737/15 4738/20 4740/4 4748/16 4751/16 4752/18 4756/17 4759/12 4765/1 4769/6 4769/21 4770/3 4770/4 4772/22 4773/8 4774/15 4774/16 4776/1 4776/5 4776/17 4776/19 4780/2 4781/6 4784/2 4784/8 4790/3 4791/22 4792/15 4792/18 4793/4 4793/9 4794/19 4799/10 4802/7 4802/20
likelihood [1] 4795/19
likely [2] 4775/23 4793/16
limit [1] 4767/13
limited [2] 4692/19

L

limited... [1] 4728/21
Lin [1] 4697/10
Lincoln [1] 4680/5
line [8] 4714/16 4725/23 4726/23 4727/15 4727/21 4771/5 4792/20 4799/25
lines [4] 4748/2 4770/12 4770/12 4799/19
list [18] 4725/12 4725/13 4731/11 4735/21 4735/21 4736/9 4737/5 4737/7 4737/15 4749/11 4749/12 4763/13 4765/8 4767/17 4768/8 4781/12 4781/12 4803/22
listed [8] 4713/13 4713/14 4736/3 4746/5 4747/16 4747/19 4747/20 4747/22
listing [1] 4737/9
little [21] 4724/8 4733/8 4733/9 4738/12 4740/15 4740/16 4740/21 4740/21 4750/18 4762/8 4768/12 4778/4 4779/14 4783/18 4788/7 4791/3 4792/15 4796/19 4797/6 4797/9 4799/5
live [1] 4704/13
LLC [2] 4678/6 4682/8
LLP [2] 4679/19 4680/8
local [1] 4720/9
long [7] 4725/12 4727/4 4729/3 4763/22 4773/4 4773/5 4773/6
longer [3] 4729/14 4792/16 4792/19
look [39] 4695/7 4697/23 4700/12 4702/4 4702/17 4705/17 4706/13 4709/1 4714/11 4720/25 4721/1 4721/3 4721/19 4725/15 4735/13 4735/18 4738/14 4742/5 4744/21 4747/6 4748/17 4748/20 4753/5 4753/10 4755/4 4761/25 4762/1 4762/19 4762/20 4763/7 4764/14 4765/24 4779/11 4783/20 4785/13 4788/1 4797/22 4799/21 4799/23
looked [3] 4714/25 4762/10 4792/9
looking [13] 4696/13 4721/11 4735/2 4747/15 4747/15 4749/3 4749/6 4773/9 4774/6 4781/15 4783/5 4791/5 4803/8
looks [1] 4695/12
loop [1] 4803/17
lose [5] 4771/6 4772/1 4772/5 4772/9 4772/15
losing [1] 4706/15
loss [1] 4773/2
lot [16] 4716/9 4736/15 4747/25 4765/25 4766/7 4775/13 4776/9 4776/15 4776/22 4779/21 4784/11 4787/24 4788/17 4790/20 4798/8 4798/10
lots [1] 4731/10
loud [1] 4797/6
low [9] 4763/23 4770/24 4770/25 4771/4 4782/7 4788/14 4788/15 4791/24 4792/24
lower [4] 4771/5 4776/21 4795/11 4795/17
lowered [1] 4792/8
loyalty [2] 4765/9 4766/7

M

M-Y-X [1] 4728/13
machine [1] 4765/21
made [12] 4699/16 4702/24 4710/5 4724/16 4730/23 4749/11 4771/13 4771/23 4793/24 4803/19 4803/20 4803/20
mailing [1] 4737/15
Maine [1] 4680/9
maintain [1] 4748/15
maintained [2] 4694/1 4695/9
Maintaining [2] 4687/21 4689/14
major [1] 4764/12
make [27] 4688/11 4703/23 4709/11 4715/22 4731/3 4731/3 4731/7 4731/24 4733/11 4735/10 4743/12 4751/24 4767/14 4770/5 4770/7 4770/14 4771/16 4773/14 4775/10 4776/14 4783/8 4783/8 4790/24 4794/2 4794/14 4802/14 4803/9
makes [3] 4755/9 4774/6 4794/3
making [5] 4734/25 4739/13 4770/16 4774/12 4774/17
manage [2] 4723/13 4737/19
managed [1] 4694/2
management [3] 4683/25 4684/1 4700/1
management/optimization [1] 4700/1
manager [12] 4683/25 4684/4 4684/7 4684/11 4684/20 4684/23 4685/6 4685/9 4685/13 4726/1 4729/20 4730/11
managers [3] 4685/1 4686/15 4686/16
managing [3] 4684/4 4685/1 4737/24
many [10] 4719/18 4727/1 4727/7 4735/3 4735/3 4753/2 4754/19 4766/5 4769/20 4770/19
March [1] 4704/7
marginal [1] 4770/3
Marin [3] 4713/5 4722/19 4724/2
mark [1] 4803/6
marked [4] 4721/3 4725/4 4742/6 4753/6
market [72] 4689/21 4690/6 4711/18 4760/5 4760/8 4760/10 4760/14 4760/15 4760/19 4760/20 4760/22 4761/5 4761/6 4761/7 4761/11 4761/12 4761/15 4762/1 4762/1 4762/20 4763/18 4763/21 4763/24 4767/5 4767/13 4767/22 4769/18 4769/23 4771/1 4771/5 4772/15 4775/2 4775/13 4775/23 4776/2 4776/9 4776/15 4777/10 4777/12 4777/15 4777/21 4777/22 4777/25 4778/3 4778/16 4778/17 4778/20 4779/8 4779/8 4779/13 4780/7 4780/16 4780/24 4782/6 4796/17 4796/22 4796/23 4796/24 4797/3 4797/4 4797/10 4797/12 4797/16 4797/17 4797/22 4797/24 4798/4 4798/6 4798/7 4798/9 4798/9 4798/10
marketing [4] 4737/4 4737/13 4752/9 4780/9
marketplace [1] 4775/18
markets [4] 4760/6 4777/8 4777/22 4779/8
match [2] 4776/20 4776/20
matches [1] 4766/15
matter [8] 4697/19 4703/19 4704/11 4714/9 4732/6 4751/19 4775/6 4805/4
matters [1] 4799/12
Maurer [1] 4680/8
max [2] 4736/14 4736/14
may [20] 4683/11 4683/12 4703/23 4703/24 4714/5 4715/17 4716/18 4736/21 4738/4 4754/15 4769/1 4795/8 4800/1 4800/1 4800/14 4800/15 4802/1 4802/6 4802/13 4802/13
maybe [8] 4732/20 4758/10 4768/23 4769/25 4783/11 4788/8 4792/15 4795/6
me [54] 4685/22 4686/1 4688/24 4693/12 4697/8 4701/21 4703/20 4703/23 4704/22 4705/4 4705/18 4707/10 4708/2 4709/5 4710/12 4713/6 4713/7 4713/23 4713/24 4714/4 4714/7 4714/14 4715/16 4717/10 4721/6 4721/20 4728/7 4730/9 4731/21 4732/4 4734/2 4736/13 4736/22 4739/5 4745/22 4747/6 4749/15 4749/24 4753/5 4753/7 4755/23 4756/19 4758/18 4759/15 4765/13 4769/23 4770/5 4771/8 4778/19 4794/5 4796/24 4797/6 4797/21 4803/3
Meagan [1] 4679/6
meagan.bellshaw [1] 4679/10
mean [24] 4692/6 4697/6 4700/15 4704/20 4704/22 4708/9 4708/23 4709/8 4709/21 4711/5 4715/20 4716/4 4719/11 4719/14 4720/6 4729/12 4739/18 4744/15 4745/16 4781/3 4781/22 4782/10 4784/22 4796/25
meaning [4] 4711/8 4749/7 4752/22 4785/23
meaningful [1] 4769/3
means [8] 4711/6 4745/7 4745/14 4752/16 4768/24 4769/9 4786/2 4787/9
meant [5] 4688/19 4694/11 4699/23 4764/6 4785/8
measure [4] 4768/13 4771/22 4772/20 4780/4
measured [1] 4773/16
measures [2] 4768/16 4771/9
mechanical [1] 4680/21
mechanism [3] 4791/9 4793/20 4793/21
mechanisms [1] 4785/25
medal [2] 4794/15 4795/2
meet [2] 4687/8 4802/11
meeting [3] 4721/21 4786/24 4790/5
meetings [3] 4730/20 4786/22 4786/24
MEHTA [2] 4678/9 4682/3
mention [4] 4712/17 4712/17 4764/8 4798/2
mentioned [3] 4711/22 4730/20 4742/12
mentioning [2] 4710/24 4712/18
mentions [1] 4726/16
Merit [1] 4680/17
metal [1] 4795/2
meter [1] 4794/11
meters [1] 4794/16
method [1] 4763/5
metrics [3] 4695/9 4712/9 4780/13
MICHAEL [1] 4758/3
Microsoft [71] 4693/1 4694/17 4696/6 4699/14 4699/17 4699/19 4700/8 4701/24 4701/24 4702/2 4703/5 4703/12 4708/7 4708/14 4708/21 4709/9 4709/18 4710/7 4716/7 4719/20 4721/22 4722/3 4722/6 4724/16 4724/19 4724/24 4725/1 4725/2 4726/12 4726/17 4726/17 4727/11 4727/21 4727/24 4728/8 4729/25 4730/16 4730/17 4732/13 4732/18 4732/22 4733/22 4735/22 4735/23 4736/18 4736/19 4736/23 4737/20 4737/20 4738/9 4738/13 4738/17 4738/17 4739/6 4739/11 4740/1

M

Microsoft... [15] 4740/6 4745/20 4746/10 4746/11 4747/16 4748/3 4748/10 4749/17 4749/18 4749/21 4750/17 4750/20 4754/13 4754/16 4782/3
Microsoft's [2] 4694/24 4737/23
mid [1] 4693/25
mid-2018 [1] 4693/25
middle [1] 4727/5
might [8] 4703/11 4706/6 4707/20 4727/23 4736/25 4758/19 4765/14 4783/11
migrated [1] 4692/4
migrations [2] 4700/4 4748/16
mind [5] 4697/12 4733/16 4759/6 4766/3 4781/13
minus [2] 4774/19 4774/23
minute [4] 4697/12 4716/17 4721/16 4724/15
minutes [3] 4731/20 4741/2 4781/23
missing [1] 4709/9
mitt [1] 4759/13
mobile [15] 4762/20 4763/1 4768/21 4768/22 4770/12 4770/12 4770/17 4770/20 4773/16 4773/18 4773/21 4773/22 4781/24 4782/3 4783/2
moment [8] 4686/1 4695/7 4705/18 4708/2 4721/3 4738/6 4749/15 4772/12
Momiji [3] 4786/10 4786/11 4786/23
Momoji [1] 4790/23
Monday [3] 4801/21 4802/15 4802/23
Monetization [1] 4769/17
money [7] 4716/5 4737/14 4770/5 4770/7 4770/16 4774/16 4775/10
monopolist [2] 4775/17 4798/12
monopoly [8] 4760/8 4760/9 4760/13 4760/18 4767/19 4774/4 4775/1 4776/2
month [9] 4731/4 4731/8 4742/22 4743/19 4744/1 4783/19 4786/23 4792/17 4792/19
months [3] 4742/24 4744/3 4773/7
more [26] 4687/9 4691/19 4708/9 4722/24 4724/11 4726/17 4726/18 4727/23 4728/4 4728/24 4729/6 4729/8 4729/17 4734/18 4740/3 4740/21 4759/16 4767/3 4770/1 4770/7 4776/21 4791/3 4793/15 4793/25 4796/3 4799/17
morning [11] 4682/4 4682/6 4682/12 4682/12 4682/13 4682/16 4683/19 4693/16 4717/4 4717/5 4740/14
most [12] 4694/7 4694/10 4697/25 4698/4 4714/22 4714/24 4715/23 4716/1 4756/8 4788/19 4788/20 4793/15
mostly [2] 4694/21 4746/18
motion [1] 4766/17
Motorola [1] 4802/8
move [8] 4682/20 4682/22 4685/17 4693/14 4728/23 4754/1 4765/12 4798/15
moving [2] 4744/3 4744/5
Mr [2] 4682/14 4722/10
Mr. [86] 4682/16 4682/21 4683/9 4683/10 4683/19 4689/18 4689/20 4693/23 4701/13 4701/17 4701/23 4702/4 4702/18 4702/18 4703/4 4703/12 4705/15 4706/13 4706/14 4707/25 4708/7 4709/1 4709/25 4710/7 4714/7 4716/20 4717/4 4717/7 4717/10 4717/11 4717/15 4717/22 4718/20 4719/5 4720/11 4720/20 4721/9 4721/16 4722/1 4722/10 4722/17 4722/20 4723/16 4724/7 4724/9 4725/3 4725/10 4726/6 4728/9 4729/9 4729/18 4729/22 4730/4 4730/19 4731/20 4732/2 4734/2 4735/13 4735/18 4738/3 4740/17 4741/5 4741/18 4742/11 4742/11 4745/1 4747/3 4749/15 4752/2 4754/9 4754/25 4755/4 4755/22 4757/13 4757/25 4758/17 4787/12 4787/15 4787/25 4788/1 4799/2 4801/18 4801/23 4802/2 4802/20 4803/18
Mr. Cavanaugh [15] 4683/10 4689/18 4689/20 4716/20 4717/7 4717/22 4719/5 4720/11 4720/20 4722/10 4722/20 4723/16 4724/9 4728/9 4742/11
Mr. Cavanaugh's [6] 4717/11 4717/15 4721/9 4721/16 4722/1 4731/20
Mr. Chang [1] 4682/21
Mr. Cue's [1] 4803/18
Mr. Dintzer [2] 4740/17 4755/22
Mr. Dischler [1] 4801/18
Mr. Higgins [1] 4802/20
Mr. Indacochea [2] 4729/18 4729/22
Mr. Jason [1] 4706/14
Mr. Juda [1] 4787/15
Mr. Kachachi [1] 4730/19
Mr. Kolotouros [2] 4801/23 4802/2
Mr. Krueger [12] 4701/13 4701/23 4702/4 4702/18 4703/4 4703/12 4705/15 4706/13 4707/25 4709/1 4709/25 4710/7
Mr. La Force [1] 4702/18
Mr. Ryan [2] 4701/17 4708/7
Mr. Safty [1] 4788/1
Mr. Safty's [1] 4787/12
Mr. Schliesske [4] 4718/20 4722/17 4725/10 4729/9
Mr. Schmidtlein [2] 4787/25 4799/2
Mr. Severt [2] 4757/25 4758/17
Mr. Varia [27] 4682/16 4683/9 4683/19 4693/23 4714/7 4717/4 4717/10 4724/7 4725/3 4726/6 4730/4 4732/2 4734/2 4735/13 4735/18 4738/3 4741/5 4741/18 4742/11 4745/1 4747/3 4749/15 4752/2 4754/9 4754/25 4755/4 4757/13
Ms. [12] 4693/18 4697/10 4698/2 4698/3 4716/15 4719/8 4725/24 4726/4 4726/11 4727/9 4730/14 4741/15
Ms. Heath [1] 4730/14
Ms. Lin [1] 4697/10
Ms. Sanan [2] 4698/2 4698/3
Ms. Waszmer [4] 4693/18 4716/15 4719/8 4741/15
Ms. Yao [4] 4725/24 4726/4 4726/11 4727/9
much [31] 4685/8 4711/11 4714/18 4737/10 4737/14 4752/24 4757/14 4767/3 4767/25 4769/22 4770/7 4770/15 4771/17 4771/22 4771/25 4772/1 4772/5 4772/15 4772/18 4772/22 4774/16 4782/3 4782/18 4783/17 4784/8 4784/19 4784/19 4786/12 4790/24 4794/10 4803/10
multi [1] 4741/24
multi-year [1] 4741/24
multiple [2] 4745/19 4747/17
must [1] 4798/9
my [47] 4682/20 4686/15 4688/13 4688/23 4690/3 4696/12 4698/5 4698/9 4703/24 4704/11 4707/9 4709/16 4709/17 4710/11 4711/10 4712/6 4712/7 4712/10 4713/7 4717/8 4729/20 4730/11 4730/25 4733/12 4733/14 4733/16 4733/24 4750/3 4756/5 4760/4 4760/10 4760/12 4761/2 4761/10 4764/6 4765/25 4769/22 4771/5 4773/6 4778/12 4779/11 4787/7 4787/23 4792/2 4797/9 4800/21 4803/22
myself [3] 4697/13 4705/19 4712/6
MYX [19] 4691/10 4691/12 4692/2 4692/7 4695/15 4697/5 4697/7 4705/17 4705/25 4706/2 4706/6 4728/9 4728/13 4729/3 4746/5 4746/6 4746/8 4757/7 4757/8

N

name [4] 4686/19 4725/13 4725/23 4729/17
names [1] 4729/10
native [1] 4723/5
navigate [1] 4762/16
navigated [1] 4695/19
Nayak [1] 4769/1
NE [2] 4680/3 4680/5
Neanderthalish [1] 4738/4
Nebraska [1] 4680/2
nebraska.gov [1] 4680/6
necessarily [1] 4692/12
need [14] 4710/8 4710/23 4713/23 4728/5 4728/18 4736/21 4740/6 4748/15 4748/15 4759/13 4766/8 4766/13 4775/4 4802/16
needed [4] 4693/9 4709/10 4719/3 4742/1
needs [3] 4717/8 4759/9 4759/18
negative [1] 4770/3
negotiating [1] 4775/8
negotiation [1] 4693/1
net [3] 4751/23 4774/18 4774/18
network [1] 4726/17
never [1] 4724/20
new [19] 4679/20 4680/14 4684/25 4695/19 4700/20 4720/14 4724/22 4724/23 4725/1 4736/6 4737/4 4741/21 4742/2 4751/22 4751/23 4755/24 4765/15 4766/8 4766/14
news [4] 4699/21 4699/22 4700/14 4720/21
next [30] 4686/23 4691/9 4699/7 4702/13 4702/16 4714/21 4726/23 4742/23 4747/3 4748/17 4760/17 4764/5 4767/4 4767/20 4769/10 4769/19 4770/9 4770/24 4771/7 4774/2 4774/9 4781/12 4781/20 4782/15 4785/4 4785/13 4786/14 4799/9 4800/6 4800/9
nice [2] 4757/20 4757/22
no [30] 4678/4 4688/14 4693/17 4695/5 4695/24 4701/16 4703/2 4703/9 4705/8

N

no... [21] 4708/25 4709/2 4709/17 4724/4 4724/20 4729/14 4740/2 4751/7 4751/7 4751/11 4753/2 4754/2 4755/17 4756/6 4758/24 4775/25 4789/16 4789/17 4798/13 4798/20 4802/25
non [1] 4689/25
non-Google [1] 4689/25
normal [2] 4696/22 4732/24
normalization [1] 4784/3
not [80] 4688/3 4688/4 4691/4 4691/5 4692/12 4693/14 4695/25 4699/9 4699/10 4701/14 4701/16 4702/19 4702/25 4703/9 4708/25 4710/18 4711/18 4713/8 4718/24 4723/3 4723/21 4731/7 4731/24 4732/3 4738/20 4741/5 4748/3 4749/7 4749/11 4750/17 4751/15 4753/23 4755/11 4756/6 4756/11 4756/13 4756/22 4759/10 4759/14 4759/22 4760/11 4766/10 4766/18 4767/3 4767/9 4768/2 4771/6 4774/9 4774/22 4776/2 4776/23 4776/25 4778/9 4784/18 4785/24 4787/21 4788/25 4789/8 4789/15 4789/25 4792/13 4794/4 4794/21 4795/1 4795/6 4795/8 4795/13 4797/13 4799/6 4799/7 4799/14 4799/16 4799/20 4799/22 4800/2 4800/8 4800/11 4800/17 4802/13 4802/14
note [5] 4687/8 4692/25 4694/15 4695/8 4723/3
noted [2] 4701/3 4766/16
notes [2] 4696/12 4726/23
nothing [6] 4716/5 4716/12 4757/12 4803/24 4804/1 4804/2
notice [1] 4704/7
noticing [1] 4750/16
noting [3] 4690/20 4706/13 4706/14
November [11] 4697/23 4700/8 4717/18 4721/1 4721/12 4724/14 4724/16 4725/22 4730/5 4739/15 4743/4
November 26th [1] 4721/1
now [40] 4682/22 4691/9 4700/17 4702/7 4703/3 4704/10 4708/17 4709/1 4711/18 4712/2 4712/2 4712/19 4718/18 4726/3 4726/10 4727/8 4730/4 4730/9 4735/13 4735/18 4736/9 4742/5 4743/7 4743/24 4744/21 4746/12 4747/13 4751/2 4752/9 4755/24 4762/8 4774/2 4774/10 4775/1 4775/25 4776/2 4777/8 4795/23 4798/3 4800/9
number [16] 4686/5 4688/3 4688/4 4691/5 4695/10 4714/23 4745/9 4770/18 4770/19 4771/11 4771/18 4772/14 4772/19 4780/19 4784/10 4798/17
numbers [16] 4688/1 4688/11 4707/21 4710/23 4710/24 4713/24 4723/22 4752/19 4764/19 4768/15 4770/10 4770/21 4772/2 4783/25 4787/22 4798/17
numerator [1] 4779/18
NW [3] 4679/3 4679/8 4680/19
NY [2] 4679/20 4680/14

O

oath [1] 4683/7
object [1] 4699/17
objection [6] 4693/17 4695/24 4705/8 4754/2 4798/20 4802/25
objections [1] 4682/24
obviously [4] 4699/4 4766/21 4802/19 4803/11
occasion [2] 4739/16 4749/10
occasions [1] 4718/24
occur [1] 4763/24
occurred [1] 4728/13
occurs [2] 4795/7 4795/8
October [5] 4678/5 4685/5 4685/12 4720/16 4805/7
off [8] 4702/8 4704/2 4737/11 4771/15 4775/11 4787/13 4787/20 4792/10
offer [5] 4705/6 4734/8 4734/11 4752/23 4766/18
offered [2] 4732/16 4739/18
offers [1] 4706/20
OFFICE [1] 4680/3
Official [1] 4680/18
often [4] 4716/6 4719/1 4735/3 4751/22
oftentimes [4] 4707/19 4731/11 4731/17 4733/7
oh [6] 4707/16 4771/21 4778/8 4778/12 4784/23 4792/13
okay [105] 4684/2 4684/24 4685/4 4685/23 4686/7 4687/7 4687/19 4688/2 4688/4 4690/16 4694/5 4696/20 4697/4 4697/15 4697/22 4698/7 4699/12 4701/7 4702/23 4703/10 4703/15 4703/17 4703/21 4705/21 4708/4 4708/12 4710/10 4710/14 4714/3 4715/6 4716/15 4716/22 4717/16 4717/21 4718/8 4718/12 4720/2 4720/13 4720/19 4721/7 4721/8 4721/14 4722/9 4723/2 4724/6 4724/12 4725/3 4725/9 4725/18 4726/2 4726/9 4727/13 4729/16 4729/21 4730/2 4730/7 4732/1 4735/11 4735/16 4735/25 4736/8 4736/12 4738/2 4739/14 4740/3 4740/10 4740/13 4740/23 4742/4 4742/16 4742/17 4744/12 4744/20 4744/25 4745/3 4746/3 4746/23 4747/2 4747/18 4747/21 4748/21 4748/22 4749/14 4752/2 4752/14 4753/4 4753/12 4754/22 4758/24 4759/1 4763/12 4766/22 4767/16 4772/13 4777/6 4787/1 4788/5 4789/1 4794/4 4794/7 4794/8 4798/21 4800/4 4800/24 4803/15
one [73] 4686/1 4691/19 4694/12 4695/3 4695/7 4697/12 4703/20 4704/1 4704/1 4705/18 4707/24 4708/2 4712/1 4719/14 4721/6 4721/20 4724/15 4727/15 4729/8 4729/17 4730/15 4733/13 4733/21 4734/18 4738/12 4740/3 4740/8 4749/15 4753/8 4753/10 4756/2 4756/7 4756/8 4756/10 4758/13 4758/19 4759/3 4759/6 4760/10 4760/14 4761/18 4764/16 4765/16 4769/7 4772/3 4772/4 4774/12 4775/3 4775/21 4776/8 4777/21 4780/8 4780/14 4782/1 4782/13 4783/4 4783/9 4785/22 4786/10 4786/24 4788/24 4789/16 4790/6 4790/7 4793/4 4793/17 4794/9 4796/7 4798/2 4798/5 4798/5 4800/19 4801/3
one's [1] 4775/25
ones [1] 4748/6
ongoing [1] 4727/1
only [6] 4707/9 4776/8 4789/6 4795/23 4803/11 4803/12
open [8] 4692/14 4692/14 4692/22 4692/22 4697/7 4729/1 4798/18 4803/6
opened [1] 4697/4
operated [2] 4719/2 4751/17
operates [2] 4724/10 4751/20
opinion [6] 4760/3 4760/4 4761/3 4765/13 4766/17 4777/1
opportunity [1] 4802/9
opposed [1] 4738/23
opt [1] 4718/6
optimization [1] 4700/1
optimizing [1] 4687/1
order [5] 4759/8 4771/16 4793/8 4793/19 4795/3
organization [1] 4686/16
organizing [1] 4713/7
other [51] 4687/17 4689/2 4689/3 4690/15 4690/25 4695/3 4699/22 4707/6 4711/6 4712/18 4716/7 4720/22 4722/21 4726/7 4726/12 4732/14 4733/15 4734/15 4735/5 4735/8 4746/9 4746/19 4748/2 4750/7 4751/17 4751/18 4751/25 4752/22 4753/2 4755/15 4759/6 4759/14 4761/23 4775/11 4778/25 4780/11 4780/15 4781/1 4781/1 4781/3 4781/4 4781/8 4783/10 4789/10 4795/8 4798/2 4798/5 4798/11 4798/17 4799/23 4803/4
others [1] 4711/11
otherwise [1] 4798/18
our [58] 4686/14 4687/23 4688/25 4692/3 4692/5 4692/13 4694/6 4694/12 4694/18 4698/24 4698/24 4699/1 4699/6 4699/10 4702/16 4706/2 4706/7 4707/3 4707/6 4707/18 4707/21 4709/9 4709/14 4709/20 4709/21 4719/18 4721/24 4725/4 4728/25 4730/5 4730/20 4730/21 4731/14 4731/15 4731/18 4734/22 4738/23 4738/25 4738/25 4739/2 4739/22 4740/14 4740/23 4742/6 4742/23 4742/25 4743/6 4744/10 4746/18 4746/19 4751/18 4753/9 4757/3 4757/5 4757/9 4771/25 4803/9 4803/18
ours [1] 4692/15
ourselves [2] 4748/11 4751/22
out [24] 4698/15 4716/17 4732/11 4733/5 4733/13 4734/6 4734/9 4735/8 4742/23 4748/19 4749/7 4749/10 4774/22 4783/15 4786/11 4787/2 4788/11 4788/19 4790/13 4793/15 4795/11 4795/20 4801/9 4802/8
outcome [2] 4750/9 4796/13
outlining [1] 4699/1
output [1] 4803/9
outreach [1] 4702/8
outs [1] 4786/20
outside [5] 4690/7 4733/18 4739/17 4739/22 4752/22
over [29] 4692/5 4711/15 4711/24 4716/11 4728/23

O

over... [24] 4729/1 4729/20 4730/12 4732/18 4732/19 4733/13 4733/23 4735/20 4744/10 4762/2 4763/22 4767/21 4768/5 4778/5 4778/5 4779/14 4781/21 4783/9 4784/16 4786/4 4786/22 4790/20 4796/25 4803/6
overall [3] 4732/5 4763/2 4779/12
overcome [1] 4766/8
overlap [1] 4757/5
overseeing [1] 4685/1
overview [1] 4698/1
own [2] 4733/16 4754/16
Ownership [1] 4766/25

P

p.m [2] 4717/23 4804/7
packet [5] 4685/25 4688/10 4690/3 4692/9 4712/10
page [26] 4686/10 4686/10 4686/23 4693/23 4695/10 4699/1 4705/13 4714/14 4714/21 4717/23 4722/15 4722/16 4722/18 4723/4 4727/14 4730/8 4736/10 4736/10 4742/9 4742/18 4745/5 4746/12 4747/4 4748/23 4753/23 4763/13
page 266 [1] 4686/10
pages [6] 4686/4 4735/15 4735/15 4735/20 4747/4 4753/17
painful [4] 4697/25 4698/5 4718/2 4718/19
Pandu [1] 4769/1
Pandu Nayak [1] 4769/1
paragraph [7] 4694/15 4704/15 4704/16 4711/1 4754/25 4755/1 4755/5
paragraphs [2] 4726/3 4726/10
parenthetical [2] 4712/15 4713/11
part [22] 4684/12 4694/23 4707/3 4707/18 4717/23 4729/8 4732/2 4732/3 4733/10 4739/12 4739/13 4746/9 4747/10 4747/10 4748/19 4750/25 4757/3 4757/7 4786/10 4787/6 4787/9 4797/14
Part 1 [1] 4747/10
Part 2 [2] 4747/10 4748/19
participants [3] 4780/23 4781/7 4797/24
participate [1] 4692/16
particular [1] 4686/4
parties [6] 4713/10 4762/11 4802/4 4802/7 4802/18 4803/7
partner [1] 4774/15
partnering [1] 4687/10
partners [1] 4692/21
party [5] 4712/25 4713/2 4713/10 4723/11 4762/14
Pass [1] 4716/13
past [1] 4764/25
paste [5] 4732/17 4732/17 4732/19 4732/22 4733/17
patented [1] 4776/8
PATTERSON [1] 4679/18
pause [1] 4736/1
pay [7] 4774/23 4788/20 4789/16 4789/17 4790/9 4790/11 4793/25
paying [3] 4774/18 4774/24 4790/8
pbwt.com [1] 4679/21
PC [1] 4680/13
PCs [4] 4770/11 4770/12 4770/15 4783/1
Pegasus [1] 4765/1
penny [2] 4790/7 4790/11
people [5] 4735/7 4737/5 4737/7 4737/8 4783/11
per [10] 4737/16 4737/16 4737/19 4770/14 4770/16 4770/19 4779/3 4779/4 4781/24 4782/25
perceived [1] 4749/21
percent [55] 4690/20 4690/21 4690/23 4690/24 4691/11 4691/18 4692/11 4694/2 4694/7 4695/15 4704/21 4704/21 4711/16 4711/17 4711/25 4712/2 4712/3 4712/12 4713/18 4715/8 4715/12 4715/15 4715/25 4715/25 4745/5 4745/11 4761/14 4762/7 4763/2 4772/17 4774/23 4774/23 4778/5 4778/6 4778/9 4778/11 4778/13 4779/14 4779/15 4784/9 4784/15 4784/17 4785/7 4788/25 4789/6 4789/21 4789/22 4790/9 4791/17 4791/17 4791/19 4792/22 4792/22 4795/24 4797/9
percentage [16] 4689/1 4689/7 4689/19 4690/9 4690/10 4691/1 4691/22 4691/23 4695/17 4715/17 4724/1 4772/6 4772/8 4772/9 4774/18 4774/24
perfect [1] 4790/7
performance [3] 4705/16 4705/16 4705/24
perhaps [2] 4740/20 4799/17
period [24] 4692/20 4696/11 4696/23 4697/2 4700/9 4701/21 4708/22 4713/19 4713/25 4714/22 4724/14 4731/4 4731/8 4743/13 4743/24 4750/21 4750/22 4754/14 4763/22 4783/21 4783/22 4783/22 4786/5 4786/22
periodic [1] 4743/1
periods [3] 4697/8 4749/12 4754/12
person [2] 4721/22 4730/16
perspective [1] 4738/5
peruse [1] 4686/1
pharmaceutical [1] 4776/6
phase [1] 4728/16
Philip [1] 4680/8
phone [1] 4763/1
phones [2] 4781/24 4783/2
phrase [1] 4790/6
picked [1] 4780/19
picks [1] 4782/2
picture [1] 4762/16
pie [1] 4744/22
piece [2] 4782/20 4796/1
pieces [5] 4759/19 4761/2 4777/4 4777/19 4782/11
Pipeline [2] 4745/24 4745/25
pivot [1] 4749/15
place [3] 4696/20 4699/3 4743/3
placed [3] 4683/7 4689/22 4690/13
places [1] 4707/6
Plaintiff [4] 4679/11 4680/2 4682/10 4683/3
PLAINTIFF'S [2] 4681/4 4681/13
plaintiffs [7] 4678/4 4679/2 4683/16 4758/3 4800/10 4802/6 4803/25
plaintiffs' [8] 4683/1 4693/20 4705/10 4787/13 4798/23 4800/14 4800/15 4803/5
plan [2] 4699/3 4742/23
planned [1] 4749/7
planning [20] 4693/2 4698/16 4698/24 4699/1 4699/7 4707/22 4742/18 4742/22 4743/12 4743/13 4743/17 4744/1 4744/4 4744/9 4744/10 4744/11 4745/9 4747/9 4747/15 4748/19
Planning-Summary [1] 4743/17
Planning-What [1] 4748/19
plans [1] 4743/6
PLAs [1] 4797/13
platform [13] 4693/4 4693/5 4700/21 4720/15 4724/23 4732/23 4734/10 4734/19 4741/22 4744/8 4748/14 4781/16 4781/19
platform's [1] 4752/9
platforming [1] 4744/7
platforms [4] 4686/19 4734/15 4752/22 4755/15
play [3] 4759/13 4759/15 4775/10
please [6] 4682/4 4683/6 4697/16 4741/13 4800/8 4803/5
plotted [2] 4771/21 4771/24
plus [1] 4686/15
PM [2] 4729/19 4730/12
point [29] 4685/19 4689/13 4691/9 4692/25 4698/11 4701/13 4701/22 4702/25 4712/1 4714/2 4718/5 4718/17 4719/8 4720/21 4727/17 4734/2 4742/13 4749/20 4751/5 4756/20 4757/7 4758/19 4759/16 4769/3 4769/7 4772/5 4782/12 4789/23 4790/7
points [9] 4713/25 4719/6 4727/16 4759/17 4767/8 4769/4 4772/13 4772/16 4788/23
poorly [1] 4788/11
portion [4] 4684/13 4771/12 4787/18 4788/11
portions [1] 4803/20
posi [1] 4785/19
position [3] 4683/24 4684/25 4802/17
possesses [1] 4760/4
possible [2] 4739/24 4776/13
post [2] 4692/13 4701/2
potential [2] 4696/23 4707/12
power [35] 4760/5 4760/8 4760/8 4760/13 4760/14 4760/15 4760/18 4760/20 4763/18 4763/21 4763/24 4767/19 4767/22 4769/18 4769/23 4771/1 4771/5 4774/4 4775/1 4775/13 4775/24 4776/2 4776/2 4776/9 4777/10 4796/17 4796/22 4796/24 4796/25 4797/4 4797/11 4797/16 4798/4 4798/9 4798/10
powerful [2] 4774/14 4774/15
practice [2] 4703/25 4704/11
predicted [1] 4791/11
prepare [1] 4800/2
prepared [4] 4688/10 4696/9 4696/23 4758/11
presentation [3] 4758/11 4760/2 4760/17
president [1] 4769/2
presiding [1] 4682/3
pressure [5] 4788/25 4789/9 4794/25 4796/4 4796/9
pretty [12] 4719/14 4731/5 4733/2 4733/4 4733/6 4735/7 4737/12 4749/13 4752/24 4753/25 4770/15 4774/13
Prettyman [1] 4680/18
previous [3] 4711/2 4711/23 4752/18
previously [4] 4711/23 4729/22 4758/4 4766/17
price [24] 4776/18 4783/5 4783/7 4783/15 4783/20 4783/22 4783/23 4784/13 4784/13 4784/14 4784/15 4784/16

P

price... [12] 4784/24 4784/24 4785/6 4789/11 4789/11 4790/10 4790/20 4791/13 4791/25 4793/22 4796/8 4797/1
priced [1] 4788/12
prices [31] 4782/9 4782/13 4782/22 4782/25 4783/5 4783/9 4783/9 4783/11 4783/12 4784/9 4784/9 4785/1 4785/11 4786/4 4786/12 4786/12 4786/13 4786/25 4787/1 4787/5 4790/2 4790/3 4790/7 4791/5 4791/19 4791/22 4792/9 4792/22 4792/24 4796/6 4797/3
pricing [11] 4785/25 4786/1 4788/13 4788/14 4788/25 4789/9 4790/25 4791/17 4796/4 4796/5 4797/11
primarily [4] 4704/19 4704/20 4704/23 4730/21
primary [2] 4687/24 4711/3
prio [3] 4699/23 4720/22 4722/3
prior [12] 4692/2 4692/13 4694/25 4695/5 4695/10 4698/4 4714/25 4715/4 4729/23 4729/25 4730/20 4743/4
priorities [5] 4694/12 4706/11 4715/21 4715/22 4716/10
prioritization [9] 4698/25 4707/4 4707/18 4721/25 4731/15 4731/18 4742/23 4742/25 4751/25
prioritize [1] 4719/3
prioritizes [1] 4730/20
priority [3] 4699/23 4699/24 4699/25
Privacy [1] 4685/13
privileged [1] 4696/1
proceed [1] 4682/18
proceeding [1] 4700/17
proceedings [4] 4678/9 4680/21 4804/7 4805/4
process [9] 4698/25 4707/4 4707/19 4720/17 4721/25 4731/15 4732/19 4740/9 4742/23
produce [1] 4769/22
produced [1] 4680/21
Producer [3] 4784/14 4784/16 4784/24
produces [1] 4784/23
producing [1] 4748/11
product [39] 4683/24 4683/25 4684/1 4684/7 4684/12 4684/20 4684/20 4684/23 4685/1 4685/2 4685/6 4685/9 4685/13 4686/11 4686/13 4686/15 4686/16 4687/2 4687/4 4687/24 4688/15 4688/16 4688/25 4692/25 4693/25 4700/22 4700/23 4724/17 4725/25 4728/3 4731/13 4734/22 4736/20 4739/22 4744/8 4745/10 4746/16 4746/18 4746/20
products [3] 4687/17 4753/3 4769/20
professor [26] 4740/19 4757/19 4758/10 4760/7 4762/19 4763/3 4763/13 4765/7 4766/24 4769/10 4770/23 4773/11 4775/1 4775/5 4777/8 4778/16 4781/11 4782/7 4784/25 4790/19 4796/12 4798/15 4799/16 4800/5 4801/7 4801/8
Professor Whinston [2] 4775/5 4800/5
profit [7] 4774/12 4774/22 4774/24 4775/12 4775/16 4775/17 4788/18
profitable [1] 4792/25
profiting [1] 4774/22
profits [6] 4773/24 4774/3 4774/6 4775/21 4776/14 4790/16
program [1] 4692/16
project [25] 4684/11 4692/7 4697/5 4700/18 4700/21 4703/1 4705/17 4705/25 4706/6 4724/21 4724/25 4727/1 4727/2 4728/9 4728/13 4729/3 4729/14 4741/21 4744/7 4744/13 4756/9 4757/7 4757/8 4786/10 4786/23
Project MYX [10] 4692/7 4697/5 4705/17 4705/25 4706/6 4728/9 4728/13 4729/3 4757/7 4757/8
promo [2] 4690/3 4712/10
promoted [3] 4684/19 4685/5 4685/12
promotion [4] 4685/15 4696/17 4696/24 4697/2
promotional [4] 4685/24 4685/25 4688/10 4692/9
proper [1] 4798/6
proposal [2] 4697/19 4709/17
proposals [2] 4803/5 4803/5
propose [1] 4803/2
proposed [3] 4703/5 4703/5 4802/5
proposes [1] 4702/7
proposing [1] 4709/1
proposition [1] 4687/2
protected [4] 4760/5 4760/15 4760/21 4777/11
Protection [2] 4679/13 4680/4
provide [6] 4688/19 4698/1 4735/5 4737/22 4751/9 4801/15
provided [4] 4735/22 4761/19 4800/7 4800/12
providing [2] 4688/11 4689/6
PSX1110 [2] 4697/9 4717/14
PSX436 [3] 4685/22 4693/14 4693/20
PSX450 [2] 4710/12 4722/11
PSX462 [1] 4701/6
PSX572 [2] 4725/4 4725/8
PSX668 [2] 4721/3 4721/5
PSX812 [2] 4682/21 4683/1
public [1] 4803/20
publicly [1] 4744/14
pull [1] 4737/10
purposes [1] 4756/9
put [18] 4685/25 4718/20 4722/9 4722/17 4724/5 4725/10 4730/8 4742/9 4750/12 4754/5 4754/24 4755/1 4765/4 4772/10 4773/21 4781/1 4790/16 4793/13
putting [5] 4690/3 4709/20 4710/17 4788/25 4789/8
PX1195 [1] 4704/24
PX3023 [1] 4703/16
PX431 [1] 4707/23

Q

quality [12] 4766/13 4766/15 4767/24 4768/1 4768/10 4768/13 4771/6 4771/13 4772/16 4772/22 4776/19 4776/19
quantify [1] 4704/22
quarter [9] 4713/16 4713/21 4714/25 4715/1 4715/3 4715/4 4715/12 4716/11 4716/11
quarterly [4] 4744/4 4744/5 4744/9 4744/10
quashing [1] 4791/8
queries [17] 4761/19 4761/20 4763/1 4770/12 4770/20 4771/19 4772/9 4772/9 4773/17 4773/19 4773/20 4773/21 4779/5 4783/12 4783/19 4783/21 4791/17
query [13] 4769/25 4770/4 4770/7 4770/14 4770/16 4774/20 4779/1 4779/2 4779/3 4779/4 4781/24 4785/17 4788/21
question [21] 4691/19 4697/16 4698/6 4705/22 4707/9 4708/5 4709/16 4709/17 4712/23 4714/17 4714/22 4732/5 4740/3 4746/13 4776/11 4776/13 4787/17 4788/18 4792/4 4800/19 4803/12
questions [12] 4717/12 4724/9 4724/11 4725/16 4742/14 4743/11 4753/11 4754/8 4755/18 4758/17 4798/13 4800/1
quick [3] 4712/23 4746/13 4756/4
quickly [2] 4733/9 4755/22
quite [6] 4719/1 4727/4 4734/16 4734/22 4768/8 4768/9
quote [1] 4687/1
quotes [1] 4732/8

R

race [2] 4794/11 4796/19
raise [13] 4683/6 4782/8 4785/11 4786/12 4786/12 4786/13 4786/25 4787/1 4787/5 4791/13 4791/19 4791/21 4797/2
raised [2] 4792/9 4792/22
raises [1] 4782/13
raising [5] 4785/1 4790/3 4790/25 4791/5 4792/24
Ralph [1] 4679/14
ran [2] 4692/25 4794/1
random [2] 4794/1 4794/20
randomize [2] 4793/6 4793/7
randomly [2] 4773/21 4794/21
range [2] 4696/25 4768/19
ranged [1] 4779/14
ranges [1] 4778/4
rank [2] 4789/2 4794/3
ranked [3] 4788/16 4788/19 4789/4
ranking [2] 4771/16 4791/12
rapid [1] 4693/2
rate [3] 4695/14 4782/2 4791/11
re [2] 4744/7 4799/20
re-do [1] 4799/20
re-platforming [1] 4744/7
reach [1] 4733/24
reached [1] 4802/8
read [10] 4725/14 4732/3 4778/10 4784/5 4785/9 4786/18 4786/19 4787/7 4787/11 4788/2
ready [5] 4699/6 4701/25 4741/15 4757/18 4757/25
real [5] 4699/13 4722/2 4736/21 4770/6 4796/7
real-world [1] 4736/21
realize [1] 4796/3
really [29] 4709/16 4710/18 4712/8 4751/19 4759/4 4770/6 4772/8 4772/11 4772/20 4775/12 4775/22 4775/22 4777/1 4779/20 4781/5 4783/1 4783/9 4785/14 4788/15 4790/1 4790/1 4790/2 4791/1 4794/9 4794/22 4796/5 4796/8 4796/14 4796/15
Realtime [1] 4680/17
reason [3] 4709/3 4782/16 4793/22
rebuild [1] 4742/1
recall [28] 4694/21 4695/1 4696/5 4696/5 4697/4 4697/8 4700/15 4701/1 4701/22 4710/9 4710/17 4710/17 4711/8 4718/3 4722/5 4722/21 4723/18 4723/22 4727/10 4729/3 4729/5 4744/15 4749/20 4750/9 4750/22 4754/14

R

recall... [2] 4791/1 4791/7
recalling [1] 4700/25
Recap [1] 4742/19
receive [1] 4725/19
received [9] 4683/1 4693/20 4701/23 4704/7 4705/10 4738/10 4754/6 4785/17 4798/23
recency [1] 4759/4
recent [1] 4714/22
recently [2] 4714/24 4789/24
recess [3] 4741/9 4741/10 4804/6
recognition [4] 4765/9 4766/3 4766/7 4785/21
recognize [2] 4744/22 4755/10
recollection [4] 4714/8 4715/11 4726/19 4773/7
reconsider [1] 4708/18
record [8] 4717/17 4721/15 4784/21 4787/13 4787/20 4790/4 4796/1 4805/3
recorded [1] 4680/21
recount [1] 4713/24
RECROSS [1] 4681/12
recruitment [1] 4701/25
red [2] 4761/4 4770/14
redacted [11] 4709/2 4742/13 4742/15 4745/1 4747/13 4748/18 4764/14 4768/14 4770/10 4772/2 4787/6
redactions [4] 4710/22 4801/16 4802/5 4802/10
redesigning [1] 4700/21
REDIRECT [2] 4681/12 4755/20
reduce [2] 4710/1 4771/25
reduced [1] 4772/15
reduction [2] 4774/19 4792/23
refer [11] 4686/11 4695/10 4695/15 4698/18 4719/22 4723/11 4725/3 4748/13 4749/2 4752/17 4755/7
reference [5] 4697/18 4709/2 4711/18 4727/10 4732/7
referenced [1] 4695/10
referred [8] 4695/17 4695/21 4724/22 4737/21 4749/18 4797/8 4797/23 4797/25
referring [27] 4686/4 4687/4 4687/16 4688/16 4688/21 4688/23 4691/12 4696/6 4697/6 4700/7 4700/10 4709/8 4709/13 4709/20 4711/13 4712/9 4712/10 4713/4 4713/5 4713/9 4727/9 4736/18 4742/25 4743/5 4746/21 4765/21 4782/20
refers [3] 4745/25 4752/8 4766/2
reflected [2] 4691/5 4735/19
reflecting [2] 4691/22 4692/4
reflection [1] 4716/4
refresh [3] 4697/13 4714/7 4715/11
refuse [1] 4724/18
refused [1] 4724/20
regarding [5] 4687/9 4705/16 4708/8 4801/4 4801/4
Registered [1] 4680/17
regularly [2] 4694/13 4735/1
relate [1] 4716/2
related [3] 4717/12 4746/1 4747/4
relates [2] 4710/23 4745/2
relating [1] 4748/7
relations [1] 4684/5
relationship [1] 4772/4
relevant [6] 4760/6 4763/17 4782/4 4788/20 4793/13 4798/9
reliable [2] 4762/12 4798/5
relied [2] 4761/2 4778/22
relies [2] 4744/9 4759/8
rely [4] 4761/16 4777/20 4778/21 4779/16
relying [5] 4704/3 4704/9 4780/6 4780/22 4781/19
remarketing [2] 4758/18 4759/7
remember [14] 4693/7 4696/25 4697/2 4730/15 4749/23 4754/17 4772/12 4773/4 4773/6 4789/24 4794/6 4794/9 4802/1 4802/7
remembering [1] 4684/22
remind [1] 4760/3
reminded [1] 4693/13
renamed [1] 4684/16
repeat [2] 4705/22 4733/7
replaced [1] 4711/6
replacing [1] 4738/21
replatforming [1] 4700/23
reply [1] 4702/7
report [4] 4701/13 4701/21 4753/20 4792/2
reported [3] 4701/15 4701/20 4702/18
reporter [5] 4680/16 4680/17 4680/17 4680/18 4740/24
reporting [2] 4686/25 4718/6
reports [1] 4765/25
represent [3] 4690/5 4690/6 4755/5
representing [2] 4687/25 4688/6
represents [1] 4712/12
reputation [1] 4769/11
request [7] 4692/23 4706/2 4718/18 4738/19 4739/7 4739/15 4804/3
requested [3] 4687/25 4710/22 4721/22
requests [7] 4699/25 4716/2 4716/6 4720/22 4722/4 4722/7 4724/17
requirements [3] 4684/13 4687/9 4702/20
Research [1] 4780/15
residual [1] 4781/6
resource [2] 4709/3 4719/2
resources [6] 4709/14 4709/18 4709/20 4709/21 4731/16 4742/1
respect [2] 4689/21 4766/18
respond [4] 4703/9 4703/12 4708/7 4782/18
responded [2] 4761/20 4761/21
response [9] 4698/5 4698/5 4698/8 4698/9 4703/5 4730/13 4749/25 4775/20 4795/5
responses [1] 4717/24
responsibilities [3] 4684/11 4685/10 4685/19
responsible [5] 4684/4 4684/12 4684/25 4685/13 4686/14
responsive [3] 4720/8 4726/16 4736/2
responsiveness [11] 4770/24 4770/25 4771/4 4771/9 4776/16 4776/22 4782/8 4782/21 4791/25 4792/5 4798/1
rest [1] 4797/14
restricted [1] 4687/9
restriction [1] 4687/13
result [1] 4706/15
resulted [1] 4692/7
results [3] 4706/8 4768/21 4773/22
resume [2] 4740/15 4757/18
RESUMED [1] 4758/4
retailer [1] 4734/21
retain [1] 4768/2
return [1] 4800/6
revenue [21] 4688/7 4765/5 4770/2 4770/3 4770/13 4770/19 4772/7 4774/18 4774/18 4774/19 4774/25 4778/24 4779/3 4779/4 4779/4 4779/19 4780/10 4781/24 4791/16 4792/10 4792/22
review [5] 4799/14 4799/22 4800/12 4802/9 4803/18
reviewed [1] 4802/17
reviewing [2] 4799/7 4803/9
rGSP [4] 4793/6 4794/1 4794/24 4795/14
right [80] 4682/15 4682/23 4683/6 4683/9 4686/5 4688/9 4698/10 4698/17 4699/2 4699/4 4699/17 4699/23 4700/5 4700/9 4700/14 4700/18 4702/5 4702/11 4702/13 4702/21 4703/24 4704/5 4704/18 4706/4 4706/12 4706/18 4708/14 4708/17 4709/23 4710/19 4712/16 4713/5 4713/12 4713/15 4715/4 4715/10 4716/3 4718/15 4719/6 4720/21 4740/14 4741/15 4745/4 4750/23 4751/2 4751/2 4753/13 4755/25 4756/3 4756/10 4757/7 4757/13 4757/17 4757/24 4758/21 4763/19 4764/11 4764/21 4773/15 4773/16 4774/9 4776/1 4777/3 4778/12 4789/13 4790/8 4795/9 4795/12 4798/21 4799/1 4800/5 4801/2 4801/17 4801/22 4801/25 4802/3 4802/12 4802/21 4803/16 4803/17
right-hand [2] 4686/5 4753/13
rise [4] 4682/2 4741/8 4741/11 4804/5
rises [1] 4762/8
risk [3] 4699/14 4699/18 4722/2
risks [1] 4695/20
rivals [9] 4767/21 4768/1 4768/2 4768/6 4769/21 4770/8 4772/23 4775/9 4781/22
RMR [2] 4805/2 4805/8
road [4] 4742/14 4779/25 4780/1 4780/21
roadmap [19] 4686/14 4697/19 4698/19 4702/9 4702/16 4702/19 4707/7 4707/21 4731/2 4731/3 4731/7 4731/24 4743/19 4746/6 4747/9 4748/19 4749/7 4749/8 4749/11
ROAS [1] 4736/15
robust [1] 4733/4
role [3] 4686/11 4729/25 4730/15
roles [1] 4685/16
roll [1] 4787/1
ROSATI [1] 4680/13
roughly [3] 4692/10 4774/13 4778/6
round [1] 4799/9
rows [2] 4736/14 4740/5
RPM [1] 4791/16
RSA [5] 4698/12 4719/6 4720/5 4720/8 4720/14
rubber [3] 4779/24 4780/1 4780/21
rules [6] 4716/9 4785/11 4796/20 4796/20 4799/4 4800/6
run [6] 4695/14 4737/4 4737/6 4781/18 4794/13 4794/17
runner [6] 4788/24 4789/3 4789/3 4789/5 4794/6 4794/7
runner-up [1] 4789/3
runner-up's [1] 4789/5
runners [1] 4794/20
running [8] 4733/14 4736/25 4737/1 4737/3 4794/22 4794/22 4794/22 4796/19
runs [3] 4785/16 4785/18 4786/4
Ryan [6] 4701/12 4701/14 4701/17 4708/1 4708/7 4710/5
Ryan Krueger [1]

R

Ryan Krueger... [1] 4708/1

S

SA [2] 4710/25 4738/18
SA3 [6] 4716/5 4728/12 4738/17 4738/22 4745/18 4750/13
SA360 [100] 4684/17 4684/20 4685/1 4685/1 4685/6 4685/20 4686/11 4686/21 4687/5 4687/14 4687/17 4690/10 4690/15 4690/21 4690/24 4691/2 4691/14 4691/15 4691/17 4691/23 4692/1 4692/8 4694/24 4695/8 4697/19 4698/19 4700/12 4700/20 4702/2 4706/3 4706/15 4707/13 4710/15 4711/1 4711/6 4711/14 4711/16 4711/24 4712/12 4713/17 4714/18 4715/13 4715/19 4718/23 4718/23 4718/25 4720/10 4722/12 4723/3 4723/24 4724/22 4724/23 4730/18 4730/20 4730/22 4730/23 4731/22 4732/22 4733/11 4733/18 4733/19 4733/19 4734/3 4734/6 4734/8 4734/9 4734/13 4734/14 4735/4 4735/8 4735/23 4736/6 4738/18 4739/3 4739/10 4739/25 4740/6 4741/21 4742/18 4743/19 4743/25 4743/25 4746/15 4746/17 4746/22 4751/3 4751/5 4751/9 4751/13 4751/15 4752/22 4754/19 4754/20 4755/11 4755/14 4755/15 4755/24 4756/3 4756/20 4757/9
SA360's [5] 4687/9 4689/21 4723/8 4739/2 4742/2
Safe [1] 4757/16
Safty [1] 4788/1
Safty's [1] 4787/12
said [25] 4694/19 4696/8 4699/15 4702/12 4702/22 4704/17 4710/1 4711/24 4713/20 4716/6 4719/10 4733/17 4756/14 4763/4 4769/3 4769/6 4773/17 4778/8 4779/23 4785/9 4788/10 4790/4 4793/22 4799/17 4800/3
sales [1] 4718/18
Sallet [1] 4679/12
same [10] 4694/15 4721/11 4732/13 4735/14 4762/16 4767/12 4770/16 4781/14 4792/18 4795/24
Samsung [2] 4801/12 4802/7
Sanan [2] 4698/2 4698/3
Sandbox [1] 4685/14
saw [2] 4750/13 4776/15
say [50] 4688/6 4688/14 4699/13 4700/16 4706/24 4707/14 4708/14 4709/2 4709/17 4709/19 4710/25 4711/15 4712/11 4712/12 4712/14 4713/1 4715/7 4724/2 4733/12 4733/22 4737/15 4739/1 4748/24 4749/4 4752/11 4757/21 4762/9 4767/3 4768/14 4768/20 4768/25 4769/21 4770/10 4770/18 4771/22 4772/2 4772/18 4772/25 4774/9 4775/20 4783/3 4783/25 4784/3 4784/4 4787/22 4790/3 4793/18 4795/20 4798/18 4801/12
saying [15] 4702/15 4707/11 4712/1 4715/14 4732/16 4743/16 4745/11 4756/17 4772/12 4775/25 4788/6 4789/5 4789/20 4790/10 4791/16
says [16] 4687/3 4702/3 4718/6 4718/18 4718/22 4719/6 4720/4 4720/21 4727/21 4743/18 4747/9 4752/15 4753/14 4786/24 4788/24 4790/6
scale [7] 4766/10 4766/11 4766/12 4766/13 4766/15 4766/18 4766/19
Schliesske [4] 4718/20 4722/17 4725/10 4729/9
Schmidtlein [4] 4680/7 4682/11 4787/25 4799/2
scope [1] 4702/20
score [12] 4768/16 4768/18 4771/23 4772/1 4772/5 4772/13 4772/16 4773/2 4773/12 4788/25 4789/7 4793/23
score is [1] 4789/7
scores [3] 4768/13 4768/20 4773/15
screen [2] 4725/11 4755/4
screenshot [1] 4698/25
sealed [1] 4789/25
search [80] 4684/5 4684/9 4684/14 4684/16 4687/21 4687/23 4687/23 4689/14 4694/1 4711/4 4711/7 4719/16 4720/8 4724/18 4726/1 4726/16 4726/18 4730/12 4736/2 4736/2 4737/10 4739/16 4748/1 4750/24 4753/14 4753/17 4759/9 4759/9 4759/11 4760/19 4760/22 4761/7 4761/14 4761/23 4763/18 4764/2 4764/17 4764/18 4765/2 4765/5 4765/15 4767/8 4767/21 4767/24 4768/6 4768/10 4768/21 4769/2 4769/24 4772/5 4772/7 4777/11 4777/14 4777/24 4778/3 4778/17 4778/20 4778/23 4778/25 4779/7 4779/13 4779/19 4779/21 4779/22 4780/6 4780/10 4780/10 4780/23 4781/4 4781/4 4781/21 4783/1 4785/7 4785/8 4796/23 4797/2 4797/4 4797/7 4797/10 4797/12
Search Ads 360 [1] 4726/1
searches [1] 4768/20
seat [1] 4683/5
seated [2] 4682/5 4741/13
second [46] 4689/13 4698/11 4703/20 4705/13 4707/24 4710/25 4713/16 4713/21 4715/1 4715/3 4715/12 4721/6 4721/10 4721/20 4722/16 4723/4 4727/14 4735/14 4741/22 4743/15 4758/14 4760/3 4760/4 4760/15 4763/14 4764/17 4765/7 4766/2 4775/3 4782/16 4782/19 4782/19 4783/25 4787/6 4787/8 4788/22 4789/4 4789/10 4789/14 4789/19 4791/10 4791/11 4793/9 4793/22 4793/24 4796/1
section [2] 4679/13 4710/1
secured [1] 4694/16
securing [1] 4695/1
see [68] 4686/8 4703/3 4706/16 4707/16 4709/5 4713/23 4714/7 4715/18 4717/8 4717/19 4717/25 4718/5 4719/7 4720/23 4721/11 4722/25 4726/6 4726/14 4727/19 4731/12 4736/3 4743/9 4743/18 4743/23 4747/7 4747/8 4747/11 4747/17 4748/23 4749/3 4750/4 4753/13 4755/12 4757/17 4760/24 4761/1 4761/10 4762/4 4762/6 4762/7 4762/23 4764/1 4764/4 4764/10 4764/14 4766/5 4770/15 4771/17 4772/3 4775/11 4776/15 4776/22 4777/19 4778/2 4779/13 4782/14 4782/22 4784/11 4785/3 4785/4 4785/21 4790/22 4792/9 4795/15 4797/1 4797/24 4798/8 4801/9
seeing [5] 4750/19 4786/17 4786/17 4786/19 4795/25
seen [4] 4784/25 4785/10 4790/19 4795/14
segment [2] 4717/23 4797/12
select [1] 4692/21
selling [2] 4797/13 4797/17
SEM [30] 4688/16 4689/2 4689/8 4689/12 4689/21 4689/22 4689/25 4690/15 4690/22 4691/1 4691/5 4711/1 4711/6 4711/16 4712/11 4712/12 4712/16 4712/18 4712/24 4713/2 4713/10 4713/14 4722/21 4723/11 4723/12 4723/12 4723/25 4724/1 4734/6 4755/9
send [2] 4739/10 4803/5
sending [2] 4739/16 4740/1
sends [1] 4708/11
senior [4] 4684/19 4684/22 4684/23 4685/9
sense [12] 4715/22 4735/10 4759/10 4765/6 4768/4 4769/5 4769/8 4769/15 4774/11 4777/5 4781/6 4793/11
sensitive [1] 4694/17
sent [4] 4698/3 4702/5 4709/24 4710/9
sentence [3] 4710/6 4730/19 4782/11
separate [2] 4740/8 4776/12
separately [3] 4738/14 4740/7 4770/11
September [2] 4692/8 4696/9
serve [1] 4770/4
served [3] 4711/1 4768/22 4773/17
server [1] 4770/1
servers [1] 4770/1
service [1] 4781/16
services [11] 4760/19 4760/22 4761/7 4761/14 4763/18 4764/2 4764/17 4765/2 4767/24 4768/10 4769/24
serving [2] 4769/25 4774/20
session [3] 4741/12 4798/18 4801/16
set [9] 4704/2 4716/10 4726/7 4726/22 4728/21 4732/12 4743/20 4746/17 4754/8
setting [6] 4703/25 4704/3 4737/22 4776/18 4796/20 4796/20
settings [1] 4704/9
several [2] 4735/20 4751/11
Severt [4] 4679/6 4757/25 4758/1 4758/17
share [23] 4688/20 4689/8 4689/10 4689/21 4690/6 4690/20 4711/18 4713/25 4723/17 4761/11 4761/12 4762/2 4762/7 4762/20 4762/24 4762/25

S

share... [7] 4763/2 4764/20 4772/15 4772/17 4778/3 4779/12 4780/3
shared [2] 4702/9 4711/11
shares [16] 4761/5 4761/6 4761/16 4762/1 4763/4 4763/10 4763/10 4777/21 4777/22 4778/16 4778/21 4779/1 4779/2 4779/8 4779/17 4781/8
sharing [4] 4738/7 4739/5 4739/7 4739/9
she [5] 4725/25 4726/16 4726/23 4730/15 4730/16
sheet [2] 4707/7 4707/21
Shibani [1] 4698/3
shift [2] 4749/18 4749/22
shipped [1] 4744/10
Shirley [1] 4730/13
shoe [4] 4736/25 4737/3 4737/4 4758/22
shortened [2] 4740/20 4741/2
shorter [1] 4803/10
should [11] 4701/3 4702/15 4762/9 4768/20 4771/22 4776/15 4786/12 4789/21 4792/16 4799/6 4799/7
show [6] 4726/5 4727/15 4758/22 4769/19 4782/14 4784/7
showed [3] 4773/1 4781/23 4791/24
showing [12] 4685/24 4743/3 4764/18 4768/18 4768/19 4770/11 4770/13 4772/24 4782/24 4785/10 4790/17 4792/2
shown [3] 4740/5 4784/1 4785/19
shrink [1] 4767/5
shy [1] 4763/1
side [8] 4686/18 4686/21 4693/4 4693/5 4709/9 4745/4 4745/23 4750/15
sides [1] 4682/24
sign [4] 4737/5 4737/7 4737/15 4737/16
sign-up [1] 4737/16
significant [9] 4765/23 4767/21 4768/9 4769/4 4772/13 4773/13 4781/21 4782/5 4797/14
significantly [2] 4782/9 4782/14
signing [1] 4737/9
similar [5] 4711/22 4712/9 4728/15 4747/8 4769/11
similarly [1] 4767/9
simple [2] 4732/10 4733/11
simplify [1] 4732/19
simply [1] 4696/2
since [5] 4683/22 4687/14 4707/6 4713/6 4798/17
single [4] 4691/10 4691/17 4692/10 4694/7
sir [5] 4686/9 4687/25 4707/9 4711/19 4757/14
site [2] 4719/16 4752/19
situation [2] 4760/9 4776/17
six [9] 4731/4 4731/8 4742/22 4742/24 4744/1 4744/3 4792/13 4792/16 4792/19
six months [1] 4744/3
six-month [5] 4731/4 4731/8 4742/22 4744/1 4792/19
six-week [1] 4792/13
size [5] 4775/21 4775/22 4780/16 4780/23 4781/15
skinnier [1] 4753/10
skip [1] 4729/20
slide [47] 4743/7 4743/15 4744/21 4758/10 4760/2 4760/17 4761/1 4761/4 4761/10 4762/4 4762/23 4764/5 4764/8 4764/14 4765/8 4767/19 4768/7 4769/20 4770/9 4770/9 4770/24 4771/7 4773/23 4777/9 4777/19 4777/25 4778/11 4779/11 4781/12 4782/15 4782/23 4785/4 4785/13 4785/13 4786/14 4786/15 4786/18 4786/19 4787/6 4790/17 4790/22 4790/23 4791/20 4792/1 4798/16 4798/22 4800/13
Slide 49 [1] 4762/23
Slide 52 [1] 4764/14
Slide 53 [1] 4765/8
Slide 54 [1] 4767/19
Slide 55 [1] 4768/7
Slide 56 [1] 4770/9
Slide 57 [1] 4770/24
Slide 65 [1] 4782/23
Slide 67 [1] 4785/13
Slide 69 [1] 4790/22
slides [6] 4742/12 4742/15 4743/5 4747/16 4748/17 4785/20
slightly [2] 4751/17 4790/23
slip [1] 4796/15
slots [1] 4785/20
small [2] 4761/23 4784/19
smaller [1] 4766/15
so [313]
So I think [4] 4690/11 4784/15 4786/9 4801/19
so it's [4] 4741/2 4759/21 4772/2 4773/19
So this email [1] 4721/21
so this is [4] 4692/6 4745/11 4780/1 4783/23
So this percentage [1] 4690/9
software [1] 4752/12
solid [1] 4770/12
Solved [1] 4687/8
some [62] 4697/1 4707/15 4709/8 4709/12 4710/22 4711/10 4712/7 4712/18 4713/13 4713/14 4713/25 4714/2 4714/20 4716/17 4717/11 4717/12 4717/24 4718/2 4722/23 4723/15 4723/17 4724/9 4724/11 4725/15 4728/19 4729/9 4730/9 4731/1 4731/2 4731/6 4731/17 4742/12 4742/13 4743/18 4745/1 4745/4 4747/22 4747/24 4748/7 4748/13 4751/20 4752/18 4753/11 4753/14 4754/18 4759/10 4765/17 4768/4 4768/24 4769/24 4771/16 4774/7 4776/7 4776/7 4776/19 4780/21 4781/5 4792/23 4793/11 4794/20 4799/10 4802/6
somebody [4] 4719/15 4730/1 4737/14 4752/18
someone [4] 4752/15 4759/7 4759/18 4795/22
something [25] 4690/24 4694/13 4700/23 4710/17 4713/8 4732/18 4737/15 4753/25 4756/17 4765/22 4766/7 4769/6 4770/1 4770/5 4772/23 4772/24 4773/8 4773/8 4776/11 4779/23 4780/11 4780/12 4797/3 4801/12 4803/12
sometime [4] 4697/1 4727/5 4744/16 4750/25
sometimes [6] 4699/7 4732/25 4745/17 4793/13 4794/11 4796/15
somewhat [3] 4747/4 4748/18 4778/5
somewhere [2] 4734/6 4754/21
sonic [1] 4700/4
SONSINI [1] 4680/12
soon [1] 4801/9
sophisticated [1] 4733/5
sorry [24] 4684/22 4689/15 4691/19 4696/7 4697/16 4699/21 4702/14 4705/22 4706/16 4707/24 4708/5 4712/20 4712/23 4713/19 4713/22 4718/11 4721/20 4757/21 4759/24 4762/13 4764/6 4765/12 4775/15 4801/6
sort [1] 4761/25
sound [1] 4738/4
source [4] 4763/6 4764/12 4780/8 4780/9
sources [1] 4780/14
space [9] 4688/15 4688/16 4711/17 4711/25 4712/1 4712/3 4712/16 4713/12 4773/7
spans [1] 4735/15
speak [2] 4800/14 4800/15
speaking [3] 4759/21 4788/13 4788/15
specialized [1] 4781/4
specific [10] 4696/13 4696/25 4702/20 4706/1 4710/23 4710/24 4713/24 4748/3 4748/9 4786/7
specifically [5] 4695/2 4711/8 4753/24 4765/24 4799/6
specifics [3] 4693/8 4700/15 4710/18
speculating [1] 4715/20
spend [24] 4688/25 4689/8 4689/10 4689/25 4690/7 4690/10 4690/14 4690/21 4690/22 4690/25 4691/4 4694/2 4713/17 4714/1 4714/17 4715/12 4724/1 4724/2 4737/14 4749/18 4749/21 4750/7 4750/16 4750/17
spending [2] 4716/5 4737/10
spends [1] 4713/25
spent [2] 4688/22 4774/5
spill [1] 4699/7
spoke [2] 4789/25 4793/7
spoken [1] 4791/2
spot [3] 4793/8 4793/13 4795/2
squashing [4] 4791/7 4791/18 4793/5 4793/21
stable [2] 4750/17 4750/19
stage [2] 4728/3 4728/19
stages [1] 4728/13
stand [4] 4695/14 4712/24 4758/4 4799/9
standard [2] 4774/19 4780/8
standing [1] 4682/24
stands [6] 4693/3 4712/25 4720/8 4720/9 4741/8 4804/5
start [13] 4686/10 4692/16 4697/1 4701/11 4701/25 4728/1 4733/14 4741/3 4777/24 4783/11 4795/24 4799/9 4803/9
started [9] 4684/3 4692/17 4697/3 4702/19 4727/5 4728/15 4729/5 4792/12 4803/8
starting [3] 4792/1 4792/6 4794/20
starts [2] 4758/17 4795/22
StatCounter [6] 4761/22 4762/5 4762/10 4762/13 4762/16 4762/25
state [10] 4679/12 4680/2 4680/4 4686/13 4687/23 4693/25 4699/20 4704/10 4704/19 4722/2
stated [2] 4701/25 4772/7
statements [1] 4712/7
states [10] 4678/1 4678/3 4678/10 4682/7

S

states... [6] 4682/10 4683/3 4695/22 4743/19 4755/8 4758/1
States' [2] 4754/25 4755/5
static [1] 4761/25
Statistics [1] 4784/23
stenography [1] 4680/21
step [4] 4724/7 4757/1 4801/8 4801/9
stick [1] 4792/11
stickage [1] 4792/21
sticky [1] 4755/9
still [8] 4702/19 4727/6 4746/6 4746/7 4746/7 4765/23 4793/25 4803/6
stood [1] 4686/18
stool [1] 4724/1
stop [1] 4755/11
story [1] 4792/3
strategies [16] 4691/15 4692/1 4692/3 4700/12 4706/3 4706/20 4716/9 4738/6 4738/13 4738/17 4738/18 4738/18 4739/3 4750/14 4757/2 4757/9
strategy [15] 4684/13 4686/14 4693/1 4706/9 4710/15 4722/12 4732/12 4732/13 4733/12 4736/19 4736/23 4737/20 4737/23 4738/21 4738/22
Street [2] 4679/3 4679/8
striking [1] 4794/9
string [1] 4788/3
strong [3] 4759/22 4765/8 4766/6
structure [1] 4732/24
structures [1] 4733/2
studied [1] 4786/5
studying [1] 4787/5
stuff [1] 4690/1
sub [3] 4771/12 4788/22 4789/19
sub-bullet [2] 4788/22 4789/19
subject [6] 4682/23 4697/19 4726/5 4726/6 4732/5 4799/12
submitted [1] 4703/18
subsequent [1] 4749/11
substance [1] 4723/20
substantial [8] 4760/5 4760/8 4760/14 4760/20 4763/17 4773/24 4777/10 4797/16
substantive [5] 4704/11 4707/1 4707/5 4707/8 4707/11
substitutes [2] 4759/22 4798/11
such [1] 4739/11
suddenly [1] 4795/22
sufficient [1] 4798/11
suggestion [2] 4710/5 4710/11
suite [3] 4679/15 4679/20 4726/12
sum [1] 4723/20
Summary [1] 4743/17
sunk [2] 4764/9 4764/12
super [1] 4794/7
support [9] 4694/18 4719/24 4735/6 4751/5 4752/1 4756/18 4757/5 4757/6 4760/24
supported [11] 4735/23 4751/14 4756/2 4756/6 4756/10 4756/11 4756/13 4757/2 4757/3 4757/10 4760/13
supporting [2] 4722/24 4755/11
supports [2] 4736/19 4751/20
suppose [1] 4794/13
supposed [1] 4732/15
sure [25] 4686/2 4688/5 4688/11 4689/17 4691/21 4697/14 4697/17 4703/24 4705/20 4705/23 4708/3 4717/13 4743/12 4758/15 4758/25 4764/7 4767/6 4773/14 4775/4 4778/9 4786/8 4793/8 4794/16 4795/23 4803/15
surprise [1] 4716/1
surveys [1] 4766/5
sustainable [1] 4763/22
SW [1] 4680/9
swell [1] 4763/7
switch [1] 4755/14
switched [1] 4795/11
switching [4] 4755/8 4755/8 4784/18 4793/19
SWORN [2] 4683/16 4758/4
syndicators [1] 4761/20

T

TAC [1] 4772/7
take [23] 4721/3 4729/4 4730/3 4731/14 4733/12 4733/22 4734/5 4734/6 4734/9 4735/7 4736/22 4738/8 4740/4 4740/14 4749/14 4750/1 4755/4 4765/13 4767/23 4772/14 4783/15 4787/4 4791/10
takes [1] 4781/16
taking [4] 4730/23 4757/1 4776/18 4776/19
talk [9] 4711/12 4738/5 4766/11 4767/9 4769/20 4773/5 4776/17 4799/21 4800/23
talked [9] 4759/2 4763/11 4771/2 4776/23 4780/25 4781/15 4787/14 4791/8 4797/18
talking [19] 4706/19 4722/5 4728/7 4739/23 4748/8 4753/24 4759/3 4767/4 4769/12 4774/8 4776/2 4779/21 4785/5 4790/24 4791/15 4791/20 4798/3 4799/6 4800/16
target [7] 4736/14 4736/15 4736/22 4737/1 4737/18 4737/21 4737/25
team [18] 4684/12 4686/15 4687/11 4701/1 4702/18 4718/19 4718/23 4729/15 4730/23 4731/23 4744/3 4745/25 4750/3 4750/6 4750/12 4750/22 4757/17 4763/4
teams [8] 4693/2 4709/10 4726/24 4727/9 4727/10 4744/10 4746/19 4748/15
technical [2] 4684/3 4751/16
technologies [1] 4751/21
technology [5] 4738/20 4752/12 4752/13 4756/23 4765/14
tell [10] 4720/5 4763/9 4774/3 4792/3 4796/22 4797/3 4797/17 4797/17 4797/20 4800/22
telling [3] 4775/12 4779/19 4794/21
tells [1] 4796/24
ten [1] 4794/20
tens [2] 4731/10 4754/21
term [5] 4745/14 4745/15 4752/4 4792/19 4796/25
terms [7] 4685/9 4687/16 4691/16 4750/21 4771/23 4782/22 4789/25
terrific [1] 4803/16
test [2] 4708/15 4709/4
testified [6] 4728/10 4731/19 4741/23 4749/9 4758/4 4789/24
testify [1] 4769/1
testifying [1] 4715/3
testimony [26] 4692/6 4734/5 4740/19 4740/22 4741/6 4741/21 4749/16 4757/14 4763/3 4773/14 4784/25 4785/4 4786/18 4789/25 4798/16 4799/7 4799/8 4799/10 4800/7 4800/12 4800/16 4800/17 4800/18 4801/15 4802/6 4802/20
testing [19] 4692/19 4692/20 4692/23 4697/5 4700/2 4700/7 4700/7 4702/1 4703/1 4708/8 4727/18 4727/21 4728/1 4728/2 4728/13 4728/21 4728/25 4754/13 4754/15
text [17] 4753/14 4759/10 4759/11 4777/11 4777/24 4778/3 4778/20 4778/23 4782/8 4782/13 4782/22 4783/1 4785/8 4791/3 4796/23 4797/3 4797/7
than [21] 4711/16 4711/25 4712/2 4734/18 4763/2 4763/10 4765/3 4768/1 4768/2 4769/23 4770/8 4770/20 4772/23 4778/25 4782/3 4788/24 4790/7 4790/9 4794/8 4794/10 4799/17
thank [35] 4682/25 4683/8 4683/14 4690/17 4691/7 4693/18 4697/15 4703/21 4705/21 4716/13 4716/14 4716/16 4717/6 4718/21 4719/25 4720/2 4724/5 4733/25 4740/10 4741/4 4741/7 4741/13 4741/16 4746/24 4754/3 4755/17 4757/11 4757/14 4757/15 4757/23 4778/13 4800/24 4800/25 4804/3 4804/4
Thank you [30] 4682/25 4683/8 4683/14 4690/17 4691/7 4693/18 4697/15 4703/21 4716/13 4716/14 4716/16 4717/6 4718/21 4719/25 4720/2 4724/5 4733/25 4740/10 4741/4 4741/7 4741/16 4746/24 4754/3 4755/17 4757/11 4757/23 4778/13 4800/24 4800/25 4804/3
thank you very much [1] 4757/14
Thanks [2] 4800/24 4801/10
that [581]
that's [55] 4687/3 4695/16 4696/4 4698/19 4698/22 4699/9 4702/3 4702/22 4707/9 4709/25 4712/3 4732/2 4733/18 4735/1 4735/19 4736/15 4737/21 4746/9 4760/11 4765/19 4765/22 4766/7 4766/21 4767/14 4768/21 4770/5 4774/24 4776/3 4777/25 4778/14 4780/20 4781/19 4782/5 4783/22 4783/24 4784/3 4787/3 4787/5 4788/9 4788/10 4790/12 4790/12 4790/17 4791/20 4792/25 4793/17 4794/24 4795/4 4795/19 4796/2 4796/7 4796/14 4797/12 4799/25 4803/22
their [40] 4706/9 4715/21 4715/22 4716/5 4716/10 4718/16 4722/6 4731/23 4732/11 4732/12 4734/9 4734/14 4734/23 4734/25 4735/4 4735/22 4736/19 4738/23 4739/11 4748/11 4750/16 4750/17 4754/16 4761/19 4770/19 4771/16 4771/20 4772/3 4772/17 4772/22 4773/5 4778/23 4779/1 4779/2 4779/3 4779/19 4785/21 4790/9 4802/10 4802/19
them [31] 4702/8 4702/9 4702/13 4702/16 4706/8 4718/15 4721/24 4723/15 4733/6 4739/24 4743/2

T

them... [20] 4745/18 4748/7 4752/24 4759/3 4761/21 4771/23 4775/10 4791/21 4791/23 4791/24 4792/25 4793/15 4800/16 4800/18 4802/8 4802/8 4802/10 4802/15 4802/22 4802/23
themselves [2] 4771/17 4795/19
then [71] 4684/4 4685/12 4687/25 4688/19 4692/16 4692/21 4692/22 4695/7 4695/9 4695/15 4695/19 4698/1 4699/6 4701/1 4702/4 4702/18 4708/20 4711/15 4712/15 4713/10 4713/11 4714/20 4714/24 4717/11 4726/23 4728/23 4729/1 4729/2 4734/23 4734/24 4735/8 4737/9 4737/18 4737/20 4737/21 4737/23 4737/25 4740/3 4746/18 4747/25 4748/19 4749/11 4750/17 4751/24 4753/10 4756/5 4759/10 4761/22 4763/21 4764/17 4767/7 4769/10 4769/17 4770/23 4771/21 4771/24 4773/23 4777/9 4778/5 4778/25 4779/7 4780/18 4781/11 4781/20 4782/7 4784/25 4788/22 4790/19 4792/15 4792/18 4797/15
there [77] 4683/22 4687/4 4687/15 4689/25 4690/7 4691/4 4691/12 4691/18 4697/6 4699/13 4699/20 4701/1 4709/3 4709/17 4714/15 4718/17 4722/2 4724/21 4724/23 4730/1 4731/2 4731/22 4733/7 4735/3 4738/12 4739/16 4744/16 4746/18 4747/16 4747/22 4747/24 4747/25 4749/10 4749/25 4751/11 4751/11 4751/14 4753/2 4753/7 4754/15 4756/6 4756/11 4756/17 4758/19 4759/19 4759/23 4762/22 4763/10 4764/10 4765/23 4766/3 4767/20 4769/24 4771/8 4773/1 4776/11 4776/19 4777/16 4778/1 4778/19 4781/13 4782/11 4783/10 4785/8 4786/2 4786/22 4787/18 4787/23 4789/20 4789/21 4791/24 4792/4 4792/23 4793/5 4796/16 4798/17 4799/10
there's [44] 4697/24 4701/11 4709/2 4714/20 4717/22 4718/17 4721/11 4722/2 4722/23 4723/3 4727/16 4727/17 4729/11 4730/13 4732/2 4732/7 4734/21 4735/15 4742/12 4743/18 4745/1 4745/4 4745/23 4746/9 4747/4 4748/24 4749/3 4751/23 4753/2 4753/13 4759/6 4765/17 4775/12 4775/19 4776/1 4776/3 4785/16 4788/22 4789/22 4792/2 4792/21 4793/17 4798/2 4801/3
these [48] 4690/8 4699/16 4706/21 4722/20 4726/19 4726/21 4727/12 4733/1 4733/2 4733/9 4736/18 4737/12 4740/5 4740/7 4740/8 4746/15 4747/13 4747/16 4748/13 4748/18 4749/6 4749/8 4758/20 4761/16 4764/19 4765/6 4767/12 4771/11 4771/14 4773/3 4773/6 4774/12 4774/22 4778/21 4779/16 4780/5 4780/14 4780/20 4784/2 4788/17 4791/23 4793/11 4796/4 4796/5 4796/6 4798/10 4799/12 4802/18
they [118] 4715/18 4715/23 4719/23 4720/16 4720/17 4720/17 4721/22 4731/11 4731/12 4732/13 4733/5 4733/21 4733/22 4734/12 4734/19 4734/22 4734/25 4735/1 4735/2 4735/5 4735/6 4736/7 4738/13 4739/21 4739/22 4745/20 4749/21 4749/23 4750/2 4750/2 4750/3 4750/8 4750/14 4756/21 4759/19 4759/22 4761/19 4769/7 4769/18 4770/20 4771/15 4771/15 4771/17 4771/19 4771/20 4771/22 4771/24 4771/24 4772/5 4772/9 4772/18 4773/3 4773/4 4773/7 4773/8 4775/13 4776/8 4776/10 4782/16 4782/17 4782/17 4785/6 4785/6 4785/22 4785/23 4785/25 4790/15 4790/24 4791/5 4791/6 4791/9 4791/9 4791/18 4791/21 4791/23 4792/6 4792/8 4792/8 4792/9 4792/11 4792/12 4792/12 4792/13 4792/15 4792/16 4792/17 4792/18 4792/19 4792/20 4792/21 4792/22 4792/25 4793/5 4793/6 4793/7 4793/16 4793/23 4793/25 4794/21 4794/25 4795/1 4795/1 4795/8 4795/10 4795/18 4795/20 4795/21 4795/24 4796/3 4796/8 4796/9 4796/24 4797/13 4798/8 4802/13 4802/14 4802/19 4803/12
they'd [2] 4702/12 4795/2
they're [24] 4715/17 4742/13 4747/5 4759/10 4759/14 4759/14 4759/15 4768/9 4770/16 4776/8 4784/19 4788/13 4788/13 4788/15 4789/5 4789/15 4790/12 4790/15 4791/2 4791/15 4792/13 4793/14 4795/14 4796/2
they've [1] 4776/1
thing [24] 4737/12 4759/6 4763/20 4764/8 4767/12 4770/2 4770/6 4775/7 4777/1 4780/4 4781/19 4783/24 4783/25 4785/14 4787/3 4788/10 4788/17 4791/6 4792/18 4793/5 4793/23 4795/19 4796/18 4798/2
things [27] 4693/8 4696/22 4713/1 4716/9 4719/16 4731/16 4748/16 4759/3 4759/22 4765/25 4768/25 4771/2 4775/19 4783/3 4783/8 4783/8 4790/3 4791/16 4793/4 4793/4 4793/11 4794/10 4798/11 4798/17 4799/10 4799/24 4803/22
think [97] 4684/23 4687/15 4687/15 4689/19 4690/11 4690/11 4690/16 4691/6 4691/7 4696/6 4696/8 4696/15 4699/18 4702/15 4703/2 4708/11 4708/17 4711/9 4713/13 4716/20 4718/2 4718/20 4719/5 4720/11 4720/17 4722/17 4723/20 4724/5 4724/22 4727/5 4730/3 4735/9 4736/21 4740/11 4741/23 4742/11 4743/11 4743/15 4744/2 4744/16 4745/13 4746/12 4749/9 4749/14 4750/2 4751/2 4752/8 4756/17 4759/12 4761/4 4763/4 4764/20 4764/21 4765/8 4765/9 4765/23 4767/17 4768/12 4768/23 4769/1 4769/6 4770/23 4772/8 4772/10 4773/12 4773/17 4774/16 4776/25 4777/25 4778/9 4779/20 4779/24 4780/23 4784/15 4785/7 4786/9 4786/10 4786/15 4786/24 4787/8 4788/7 4788/8 4788/11 4789/23 4796/7 4796/14 4797/8 4799/17 4799/22 4799/25 4801/3 4801/14 4801/19 4801/19 4802/11 4802/16 4802/18
thinking [6] 4710/2 4710/3 4774/7 4776/6 4780/2 4795/4
thinks [2] 4780/16 4796/2
third [14] 4712/25 4713/2 4713/10 4713/10 4723/11 4735/14 4762/14 4766/10 4781/20 4789/23 4802/4 4802/7 4802/18 4803/7
third-party [4] 4713/2 4713/10 4723/11 4762/14
this [239]
This is Civil [1] 4682/7
those [29] 4692/2 4692/4 4698/14 4698/15 4704/6 4707/21 4716/9 4717/7 4720/5 4723/5 4723/12 4726/22 4733/17 4736/5 4736/17 4738/8 4745/17 4745/19 4748/4 4770/21 4777/17 4784/16 4784/18 4791/6 4791/15 4796/21 4803/8 4803/9 4803/19
though [2] 4699/8 4776/9
thought [5] 4699/16 4700/14 4702/12 4758/19 4796/15
thoughts [3] 4711/10 4712/6 4713/7
thousand [3] 4770/20 4779/5 4791/16
thousands [4] 4731/10 4733/3 4733/3 4754/21
thread [3] 4698/4 4703/7 4708/10
three [9] 4729/6 4735/15 4754/12 4768/8 4780/11 4780/14 4788/22 4792/17 4793/9
three quite [1] 4768/8
three-month [1] 4792/17
through [30] 4688/11 4688/25 4689/1 4689/3 4689/8 4689/11 4689/12 4689/22 4689/25 4690/8 4690/10 4690/15 4690/21 4690/22 4690/24 4691/1 4691/2 4691/5 4691/17 4692/19 4702/20 4706/22 4713/17 4714/18 4715/13 4734/11 4739/23 4741/20 4767/8 4786/18
throughout [2] 4724/25 4788/17
time [105] 4686/18 4687/15 4690/23 4691/10 4691/13 4691/17 4691/20 4691/24 4691/25 4692/5 4692/8 4694/6 4694/9 4694/9 4694/11 4694/24 4695/2 4695/6 4695/16 4696/20 4696/23 4700/1 4700/6 4700/8 4700/11 4700/12 4700/15 4700/17 4700/19

T

time... [76] 4701/18 4701/18 4702/1 4702/25 4704/21 4704/21 4708/8 4713/19 4716/11 4716/19 4720/10 4720/18 4723/7 4723/10 4724/14 4724/16 4724/21 4724/23 4725/25 4727/4 4727/22 4728/8 4728/10 4728/11 4729/19 4730/11 4738/7 4738/9 4738/14 4738/15 4738/19 4738/20 4738/21 4738/23 4739/11 4739/15 4739/25 4742/22 4743/3 4743/13 4743/24 4744/6 4749/12 4749/19 4749/20 4750/15 4750/21 4750/22 4750/23 4751/2 4751/8 4754/12 4754/13 4754/14 4754/16 4754/19 4755/14 4756/5 4756/24 4757/4 4757/6 4757/9 4757/14 4762/2 4762/5 4763/22 4767/4 4774/2 4774/5 4774/9 4783/9 4785/17 4795/24 4798/14 4798/15 4800/6

times [3] 4731/22 4770/19 4793/9

title [4] 4742/18 4747/8 4748/18 4753/20

titled [3] 4722/12 4743/17 4805/4

titles [1] 4747/8

today [10] 4740/19 4741/23 4766/11 4766/20 4767/10 4799/12 4800/7 4802/10 4803/14 4803/21

together [5] 4685/25 4690/3 4709/20 4750/12 4791/18

tokens [1] 4723/5

told [2] 4779/22 4779/22

tonight [1] 4800/21

too [7] 4697/7 4708/11 4737/14 4751/16 4783/17 4788/14 4788/15

tool [14] 4711/14 4711/16 4711/25 4712/1 4712/3 4712/11 4712/16 4719/11 4719/14 4723/25 4724/10 4734/6 4734/20 4739/25

tools [29] 4688/17 4689/2 4689/4 4689/8 4689/12 4689/21 4689/22 4690/1 4690/8 4690/15 4690/22 4691/1 4691/5 4711/2 4711/6 4711/21 4712/13 4712/18 4713/2 4713/10 4713/14 4722/21 4723/12 4723/12 4723/12 4734/24 4735/5 4735/8 4755/9

top [20] 4686/25 4694/12 4697/10 4701/11 4718/18 4725/21 4727/16 4730/8 4748/23 4753/13 4786/21 4793/8 4793/13 4793/16 4793/18 4794/25 4795/2 4795/5 4795/6 4796/4

topic [2] 4728/9 4752/2

total [7] 4765/5 4780/10 4780/16 4781/7 4783/20 4784/15 4797/9

tough [1] 4766/9

track [1] 4711/3

tracking [13] 4719/15 4751/9 4751/9 4751/15 4751/18 4752/10 4752/11 4752/23 4752/25 4753/3 4756/22 4757/3 4757/10

tradeoff [1] 4793/17

traffic [6] 4759/9 4767/14 4771/12 4771/18 4772/1 4772/5

transcript [8] 4678/9 4680/21 4799/8 4799/14 4801/5 4801/11 4803/18 4805/3

transcription [1] 4680/21

transcripts [2] 4803/8 4803/19

transferring [1] 4685/16

transparent [1] 4795/13

travels [1] 4757/16

treated [1] 4688/1

trial [5] 4678/9 4734/4 4741/20 4765/10 4785/1

trip [1] 4804/4

trust [1] 4706/15

try [4] 4740/21 4783/14 4802/8 4802/11

trying [11] 4689/20 4706/16 4707/17 4711/10 4728/17 4737/19 4737/25 4740/19 4786/11 4788/2 4790/12

turn [30] 4685/22 4686/23 4687/20 4692/24 4693/12 4695/8 4697/9 4701/6 4703/16 4704/24 4704/24 4705/13 4707/23 4710/12 4714/14 4714/21 4717/14 4722/11 4735/14 4743/15 4746/12 4747/3 4752/2 4770/9 4771/7 4771/15 4775/1 4775/14 4777/8 4782/15

turning [3] 4770/23 4779/7 4781/11

twice [1] 4732/16

two [17] 4726/3 4726/10 4747/4 4748/17 4754/12 4759/3 4760/13 4761/17 4768/25 4770/21 4775/19 4780/15 4782/11 4783/8 4784/18 4786/20 4800/18

two call-outs [1] 4786/20

TYLER [1] 4679/19

type [8] 4706/21 4738/1 4751/10 4751/10 4751/14 4751/17 4751/20 4777/17

types [12] 4718/16 4735/5 4736/19 4745/19 4748/4 4751/18 4751/23 4753/2 4756/18 4756/23 4757/2 4757/10

typical [2] 4703/25 4743/25

typically [2] 4704/23 4746/1

U

U.S [4] 4679/2 4679/7 4760/21 4780/10

Uh [2] 4723/23 4756/1

Uh-huh [2] 4723/23 4756/1

ultimately [3] 4684/16 4731/14 4739/20

under [9] 4683/7 4687/8 4689/14 4695/8 4698/11 4712/11 4719/2 4762/8 4790/7

underneath [3] 4699/13 4699/20 4718/17

understand [16] 4682/15 4689/6 4690/17 4691/6 4706/8 4707/10 4707/17 4727/23 4728/17 4739/6 4740/25 4750/4 4787/8 4795/6 4796/8 4796/9

understanding [11] 4688/24 4696/3 4720/4 4738/5 4738/8 4740/6 4749/25 4750/5 4760/11 4760/12 4787/7

understood [2] 4738/15 4738/16

undertaken [1] 4695/21

undoubtedly [1] 4776/9

unexpected [1] 4695/20

Unfortunately [1] 4697/7

unique [1] 4753/1

Unit [1] 4679/13

UNITED [5] 4678/1 4678/3 4678/10 4682/7 4758/1

United States [1] 4758/1

United States of [1] 4682/7

unknown [1] 4728/5

unless [2] 4794/15 4794/16

unlikely [1] 4755/10

unsealing [1] 4787/18

until [5] 4702/8 4724/17 4800/6 4801/20 4802/23

up [46] 4690/19 4706/17 4707/15 4718/20 4721/9 4721/17 4721/21 4722/18 4725/10 4730/8 4737/5 4737/7 4737/9 4737/15 4737/16 4740/19 4742/9 4744/24 4750/2 4750/3 4750/8 4752/3 4754/24 4755/1 4758/23 4762/4 4762/23 4764/5 4767/17 4768/7 4776/6 4780/13 4780/15 4782/2 4783/6 4783/10 4783/11 4784/9 4784/11 4784/14 4784/15 4784/16 4789/3 4790/22 4792/23 4804/4

up's [1] 4789/5

upcoming [2] 4800/15 4800/17

upon [3] 4761/16 4778/21 4779/16

UPXD102 [2] 4798/16 4798/23

us [19] 4699/6 4706/20 4728/2 4728/4 4729/6 4731/5 4735/22 4738/13 4750/4 4767/18 4779/19 4792/11 4797/17 4800/7 4801/15 4801/20 4802/10 4802/11 4804/1

Usain [1] 4794/6

usdoj.gov [3] 4679/5 4679/10 4679/10

use [16] 4686/5 4687/16 4688/3 4688/4 4703/13 4704/19 4711/14 4734/14 4734/15 4734/22 4734/24 4736/25 4738/22 4743/2 4745/15 4786/1

used [9] 4687/24 4695/2 4703/11 4756/15 4756/21 4763/5 4779/2 4779/24 4780/17

usefully [1] 4787/8

uses [2] 4768/13 4780/11

using [16] 4689/4 4690/3 4692/2 4692/3 4692/4 4692/5 4704/23 4711/20 4734/18 4734/19 4738/23 4744/8 4745/5 4750/13 4751/21 4755/11

usually [1] 4699/6

utilization [1] 4691/23

utilize [1] 4711/7

V

value [7] 4687/2 4715/24 4759/11 4784/2 4784/4 4785/22 4796/21

values [1] 4785/23

Varia [30] 4682/16 4683/4 4683/9 4683/16 4683/19 4693/23 4714/7 4717/4 4717/10 4724/7 4725/3 4726/6 4729/11 4730/4 4732/2 4734/2 4735/13 4735/18 4738/3 4741/5 4741/18 4742/11 4745/1 4747/3 4749/15 4752/2 4754/9 4754/25 4755/4 4757/13

Varian [1] 4763/3

variety [8] 4689/25 4690/7 4693/8 4716/6 4721/22 4734/11 4745/21 4748/16

various [5] 4743/11 4759/19 4771/20 4786/3 4802/4

vastly [2] 4770/18 4770/18

verb [2] 4766/4 4769/16

Verizon [1] 4801/20

version [1] 4752/9

versus [4] 4682/8 4735/23 4775/17 4789/16

V

very [32] 4725/12 4728/3 4728/15 4728/21 4733/8 4735/1 4743/19 4755/22 4757/14 4761/23 4762/11 4764/19 4764/20 4765/23 4766/6 4769/4 4772/13 4772/18 4774/14 4774/15 4774/15 4775/23 4776/24 4779/2 4781/18 4782/18 4783/18 4784/19 4786/4 4786/5 4786/5 4787/4
via [1] 4704/12
vice [1] 4769/2
view [1] 4713/17
vision [1] 4686/14
VR [1] 4734/23
vs [1] 4678/5

W

W.H [1] 4680/12
waiting [3] 4737/5 4737/7 4737/9
wallet [3] 4688/20 4688/21 4723/17
want [28] 4695/25 4711/14 4715/18 4719/21 4720/25 4721/16 4724/14 4729/17 4732/13 4736/9 4737/4 4737/5 4737/6 4737/8 4737/14 4737/16 4741/22 4752/2 4755/7 4765/18 4774/16 4784/6 4784/8 4784/12 4785/22 4785/23 4786/25 4790/10
wanted [4] 4696/20 4739/21 4773/13 4794/13
wants [1] 4799/23
was [252]
Washington [5] 4678/5 4679/3 4679/8 4680/9 4680/19
wasn't [6] 4685/15 4708/24 4709/16 4740/2 4773/8 4794/15
Waszmer [6] 4680/12 4693/17 4693/18 4716/15 4719/8 4741/15
water [1] 4683/13
way [21] 4695/3 4713/1 4729/13 4733/14 4733/23 4784/1 4784/14 4786/3 4786/4 4786/6 4788/9 4790/6 4794/8 4794/13 4794/17 4795/16 4796/20 4798/5 4798/5 4798/6 4803/7
ways [4] 4734/11 4786/3 4787/4 4795/20
wc.com [2] 4680/10 4680/11
we [209]
we will [1] 4800/2
we'd [3] 4682/21 4728/24 4751/24
we'll [13] 4682/23 4716/17 4725/10 4740/15 4741/2 4766/21 4774/1 4782/14 4782/21 4791/19 4801/4 4801/9 4803/13
we're [31] 4682/15 4693/23 4698/18 4700/10 4706/1 4708/18 4711/25 4728/3 4731/16 4734/3 4755/1 4766/10 4766/20 4767/4 4767/9 4767/9 4774/8 4776/2 4776/16 4776/23 4777/9 4787/21 4788/18 4789/8 4792/15 4798/3 4799/13 4799/20 4801/6 4802/17 4803/21
we've [10] 4692/6 4724/13 4726/11 4730/19 4740/23 4743/3 4751/8 4765/9 4802/16 4803/13
weathered [1] 4695/8
web [2] 4765/18 4766/25
WEBB [1] 4679/19
website [3] 4758/22 4759/7 4759/8
week [3] 4702/13 4702/16 4792/13
weeks [2] 4773/7 4792/16
welcome [3] 4683/9 4741/18 4757/19
well [39] 4692/17 4707/12 4709/24 4711/24 4712/11 4715/17 4716/7 4740/23 4747/20 4747/24 4761/20 4762/5 4766/4 4766/5 4766/13 4767/23 4771/2 4771/25 4772/15 4773/17 4774/17 4777/16 4781/23 4782/11 4783/18 4785/25 4787/16 4787/17 4789/20 4791/18 4792/15 4792/18 4793/4 4794/14 4796/8 4796/15 4800/13 4801/19 4803/2
Wendy [2] 4680/12 4693/17
Wendy Waszmer [1] 4693/17
went [10] 4688/11 4690/10 4713/18 4715/13 4715/13 4784/11 4784/14 4784/15 4784/16 4786/18
were [129]
weren't [3] 4709/20 4773/3 4802/19
wfcavanaugh [1] 4679/21
what [214]
what's [12] 4686/17 4721/18 4732/21 4742/5 4747/19 4753/5 4760/7 4785/7 4787/10 4795/4 4795/16 4795/17
whatever [2] 4724/1 4774/21
when [57] 4685/8 4688/10 4690/23 4696/11 4697/2 4697/4 4698/18 4707/11 4707/11 4711/12 4713/4 4713/9 4715/17 4719/22 4720/4 4724/16 4724/23 4726/21 4727/7 4727/9 4729/5 4730/17 4731/22 4738/9 4739/1 4739/16 4741/15 4743/25 4744/3 4744/13 4744/13 4745/15 4750/2 4750/2 4750/12 4750/14 4752/11 4753/7 4757/25 4764/13 4770/4 4773/11 4775/11 4775/22 4779/24 4780/2 4780/21 4782/15 4783/4 4783/6 4783/13 4783/15 4795/7 4795/16 4795/17 4800/16 4800/21
where [30] 4692/14 4692/20 4692/22 4697/8 4699/1 4704/14 4706/10 4706/16 4715/23 4717/24 4721/22 4722/2 4728/3 4728/16 4728/19 4728/23 4728/24 4731/22 4737/5 4737/21 4743/20 4760/10 4773/8 4776/17 4780/1 4793/6 4793/7 4794/21 4799/23 4799/25
whether [16] 4695/3 4703/4 4750/6 4751/20 4759/22 4763/17 4772/25 4776/3 4776/11 4778/9 4788/13 4788/18 4789/24 4791/1 4791/8 4794/2
which [39] 4686/19 4697/2 4697/24 4700/22 4701/24 4703/3 4709/2 4709/9 4710/12 4711/2 4711/3 4711/7 4714/22 4719/3 4721/2 4724/22 4725/4 4728/9 4730/4 4743/13 4750/22 4753/8 4753/9 4753/9 4754/12 4754/14 4755/9 4759/7 4761/19 4766/8 4782/2 4783/15 4785/18 4795/7 4797/14 4798/3 4798/3 4798/16 4803/3
while [3] 4687/14 4723/24 4734/3
Whinston [5] 4757/17 4757/19 4758/3 4775/5 4800/5
Whinston's [1] 4740/19
who [13] 4692/2 4692/4 4692/23 4725/24 4729/13 4729/18 4750/13 4754/15 4781/1 4789/23 4791/10 4791/10 4795/22
who's [5] 4730/10 4730/14 4789/1 4789/1 4789/3
whole [1] 4785/14
why [13] 4698/22 4719/11 4731/6 4744/5 4751/13 4767/22 4769/18 4770/25 4775/6 4788/11 4789/20 4791/13 4796/2
wide [1] 4719/14
widgets [1] 4769/22
wife [1] 4800/21
will [19] 4693/19 4705/9 4736/1 4754/4 4755/10 4755/22 4763/24 4763/24 4766/8 4782/4 4790/15 4798/22 4800/2 4800/5 4803/9 4803/19 4803/20 4803/20 4804/3
William [5] 4679/18 4680/16 4682/10 4805/2 4805/8
WILLIAMS [1] 4680/8
willing [3] 4789/16 4789/17 4793/14
willingness [3] 4788/20 4790/9 4790/11
WILSON [1] 4680/12
win [7] 4793/16 4794/2 4794/4 4794/12 4794/23 4795/16 4795/17
winner [2] 4793/7 4794/3
winning [3] 4795/22 4795/23 4795/23
Winston [3] 4758/10 4801/7 4801/8
Winston's [1] 4798/15
within [19] 4686/21 4687/17 4687/18 4689/4 4690/4 4691/23 4692/1 4700/12 4701/15 4711/21 4732/12 4733/18 4733/20 4736/19 4737/12 4757/4 4764/21 4798/7 4798/7
without [6] 4695/24 4715/20 4748/6 4751/16 4774/13 4783/17
witness [10] 4681/10 4683/7 4683/16 4695/23 4695/25 4696/15 4716/13 4758/3 4799/4 4801/15
WITNESSES [1] 4681/12
won [1] 4793/25
won't [6] 4768/14 4770/10 4772/2 4784/2 4790/3 4800/2
words [4] 4690/25 4789/10 4795/8 4803/4
wordsmithing [1] 4712/6
work [17] 4709/10 4709/11 4719/23 4729/23 4730/22 4732/16 4732/17 4745/10 4746/18 4750/23 4751/19 4751/23 4751/24 4756/23 4756/24 4757/4 4791/18
worked [7] 4686/19 4701/17 4716/8 4731/22 4738/25 4739/2 4757/1
working [11] 4698/22 4702/19 4702/20 4712/1 4726/21 4727/6 4731/16 4734/13 4745/12 4746/1 4752/21
world [1] 4736/21
worried [2] 4794/3 4795/1
worse [3] 4771/13 4771/17 4771/23
worsened [1] 4773/2
would [139]
wouldn't [9] 4690/5 4690/5 4716/1 4724/4 4731/3 4756/23 4761/24 4772/18 4775/9
wraps [1] 4767/17
writing [1] 4690/23
wrong [1] 4795/6

W

wrote [2] 4697/24 4712/5
wsgr.com [1] 4680/15
wwaszmer [1] 4680/15

X

X percent [9] 4690/20 4691/11 4691/18 4692/11 4694/2 4694/7 4695/15 4711/16 4712/2

Y

Yahoo [2] 4719/20 4745/20
Yao [5] 4725/23 4725/24 4726/4 4726/11 4727/9
yards [1] 4794/20
yeah [83] 4683/23 4687/6 4688/18 4689/10 4691/3 4691/6 4691/15 4694/11 4695/18 4696/5 4696/14 4698/3 4699/10 4699/18 4700/13 4700/21 4704/3 4706/9 4706/18 4707/14 4708/23 4708/23 4709/19 4710/11 4712/17 4713/13 4715/5 4715/5 4715/14 4715/14 4715/15 4715/20 4718/4 4719/1 4719/13 4720/1 4720/7 4724/25 4726/8 4726/21 4726/22 4727/7 4727/12 4728/14 4730/25 4731/5 4731/9 4734/11 4734/16 4734/21 4736/24 4737/2 4739/8 4741/19 4741/25 4742/3 4742/21 4743/5 4744/19 4745/8 4745/17 4746/4 4746/21 4746/22 4748/5 4749/5 4749/8 4749/13 4750/2 4750/8 4750/19 4750/25 4751/1 4752/17 4752/24 4753/24 4756/17 4758/12 4758/25 4762/15 4764/6 4785/9 4803/11
year [10] 4692/10 4699/7 4741/24 4743/4 4764/21 4769/7 4770/13 4779/5 4780/13 4780/18
years [6] 4727/1 4727/7 4729/6 4773/9 4779/14 4784/16
yellow [1] 4746/9
Yep [3] 4686/24 4704/25 4751/4
yes [118] 4682/17 4683/21 4684/1 4684/6 4684/8 4684/10 4684/15 4684/18 4684/21 4684/23 4685/3 4685/7 4685/18 4685/21 4686/3 4686/9 4686/22 4687/3 4687/6 4687/12 4687/22 4688/8 4688/13 4688/18 4689/10 4691/15 4691/25 4693/24 4694/4 4694/8 4694/19 4694/22 4695/12 4697/12 4697/21 4698/9 4698/13 4698/21 4699/15 4699/24 4700/4 4700/19 4701/19 4702/3 4702/6 4702/10 4702/22 4703/8 4703/22 4704/9 4704/17 4705/4 4705/14 4706/25 4708/5 4710/5 4710/21 4712/14 4713/21 4713/25 4714/10 4714/13 4714/15 4715/2 4715/9 4716/11 4717/20 4718/1 4718/7 4718/22 4720/12 4720/24 4721/13 4722/8 4722/14 4722/22 4723/1 4723/9 4723/15 4723/19 4725/17 4726/15 4727/3 4727/20 4729/24 4730/6 4731/25 4735/17 4736/4 4736/7 4736/11 4738/11 4740/8 4743/10 4743/22 4746/7 4746/11 4747/12 4747/17 4747/20 4747/24 4748/25 4749/23 4750/11 4752/6 4753/16 4753/19 4754/17 4755/13 4755/16 4756/13 4756/16 4757/18 4769/13 4778/13 4778/15 4785/9 4792/23
yesterday [12] 4682/21 4758/16 4758/17 4759/2 4771/3 4771/8 4779/20 4780/25 4797/18 4797/21 4800/8 4801/19
yet [1] 4702/19
York [2] 4679/20 4680/14
you [623]
you have [1] 4769/25
you know [7] 4737/12 4739/21 4750/18 4762/16 4765/22 4775/22 4776/16
you'd [2] 4732/17 4733/9
you'll [9] 4758/22 4761/1 4761/10 4762/4 4762/23 4764/14 4777/19 4785/4 4790/22
you're [27] 4683/20 4683/24 4686/13 4687/4 4688/16 4690/20 4691/12 4691/22 4703/7 4705/15 4705/24 4707/11 4712/1 4713/4 4713/4 4713/9 4715/3 4737/4 4737/10 4739/1 4751/3 4765/21 4783/4 4786/17 4786/19 4793/12 4794/2
you've [6] 4683/22 4768/12 4786/9 4800/18 4803/3 4803/4
your [147]
your Honor [68] 4682/6 4682/19 4682/25 4683/3 4693/13 4693/16 4696/3 4696/12 4701/3 4701/8 4705/6 4709/6 4710/13 4714/5 4716/12 4716/16 4716/18 4716/19 4721/4 4725/5 4740/12 4740/18 4742/7 4746/24 4754/1 4754/3 4754/24 4755/17 4755/22 4757/12 4757/18 4758/16 4762/10 4763/20 4764/15 4766/16 4768/12 4768/24 4769/20 4770/11 4771/8 4773/19 4774/5 4775/6 4778/2 4779/11 4779/21 4781/23 4782/19 4782/23 4783/5 4786/2 4786/9 4786/15 4787/10 4787/23 4788/6 4791/1 4791/24 4797/8 4797/21 4798/14 4799/3 4800/1 4801/1 4801/20 4804/1 4804/2
yourself [3] 4762/15 4762/17 4772/14

Z

Zaremba [3] 4680/16 4805/2 4805/8