IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

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UNITED STATES OF AMERICA, ET AL., )
        Plaintiffs, )
        ) CV No. 20-3010
        VS.
GOOGLE LLC,
    Defendant.
) Washington, D.C.
) October 10, 2023
                                ) Day }1
                                ) Morning Session
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TRANSCRIPT OF BENCH TRIAL PROCEEDINGS
BEFORE THE HONORABLE AMIT P. MEHTA
UNITED STATES DISTRICT JUDGE

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session
seated


COURTROOM DEPUTY: All rise. This court is now in The Honorable Amit $P$. Mehta presiding. THE COURT: Good morning, everyone. Please be

COURTROOM DEPUTY: Good morning, Your Honor. This is Civil Action 20-2010, United States of America, et al., versus Google LLC.

Kenneth Dintzer for the DOJ.

Jonathan Sallet and William Cavanaugh for Plaintiff States.

And John Schmidtlein on behalf of Google.

THE COURT: All right, Counsel. Good morning again, everyone.

All right. So, Counsel, anything preliminarily we need to discuss, or are you just ready to call your next witness?

MR. HOFFMAN: I think we're ready, Your Honor. Good morning. My name is Ian Hoffman for the United States of America. And the United States calls Tracy-Ann Lim.

THE COURT: Okay.

MR. HOFFMAN: And, Your Honor, if I may approach? THE COURT: Sure.

COURTROOM DEPUTY: Before you have seat, please
raise your right hand.
(Witness is placed under oath.)

COURTROOM DEPUTY: Thank you. Please have a seat.
THE COURT: All right. Ms. Lim, welcome.
Thank you for being with us.

MR. HOFFMAN: May I proceed, Your Honor?

THE COURT: You may.
MR. HOFFMAN: Okay. Thank you.

TRACY-ANN LIM, WITNESS FOR THE PLAINTIFFS, SWORN

DIRECT EXAMINATION

BY MR. HOFFMAN:

Q Good morning, Ms. Lim.

My name is Ian Hoffman and I represent the United States in this case.

We met virtually at your deposition, so it's nice to make your acquaintance in person today.

A Good morning.
Q Good morning.
Could you please state your name for the Court and then spell your name for the court reporter?

A Tracy-Ann Lim.

That's $\mathrm{T}-\mathrm{r}-\mathrm{a}-\mathrm{c}-\mathrm{y}-\mathrm{A}-\mathrm{n}-\mathrm{n}$. Lim, L-i-m.
Q And, Ms. Lim, where are you employed?
A JPMorgan Chase.

Q And what is your current position at JPMorgan?
A Managing director, chief media officer.
Q And for how long have you held that role?
A I've been at the firm since 2019, but I've had this role since 2020.

Q And as the managing director and chief media officer, what are your job responsibilities?

A As chief media officer, I run the paid media practice for the firm, which is the lion's share of all paid media advertising.

Q And more generally, how long have you been involved in media planning and buying?

A My entire career, so forever.
Q And for how long has your career spanned?
A I think I'm coming up on nearly 20 years now.
Q Okay. Congratulations.
In previous positions you've held working on ad purchasing, have you worked for any nationwide accounts?

A I've worked on big accounts throughout my career. For example, Amazon, Hasbro, E-Trade, those kinds of accounts.

Q Okay. Thank you.
And now today at JPMorgan, do you oversee the work of other people?

A Yes.

Q And roughly how many?
A More than when we last spoke. We're closer to 120 people in my team today.

Q And do you also oversee the work of different departments?

A My team is made up of a variety of departments, yep.

Q And what are those departments' names?
A So my department is different today than it was when we -- the departments, I should say, are different today than when we last spoke.

Q Okay.
A So which version?
Q Well, like the current conversion?
THE COURT: Counsel, excuse me, can $I$ just ask a question of clarification, maybe you'll get to this.

THE WITNESS: Yeah.
THE COURT: When you say you're the chief media officer in charge of sort of paid media activity for JPMorgan, is that just for JPMorgan or also JPMorgan's clients?

THE WITNESS: So just for our company. THE COURT: Just for your company.

THE WITNESS: We think of our company as having three brands. We've got the Chase brand, the JPMorgan
brand, and the JPMorgan Chase brand.
So it's just --

THE COURT: I see.

THE WITNESS: -- for our products and services.

THE COURT: This would include Chase credit --

THE WITNESS: Credit cards, exactly, yeah.

Sorry, which version of my team?
BY MR. HOFFMAN:

Q The current version of the departments that you oversee.

A Sure.
Today we have three digital execution departments. So paid social, search, which is made up of SEM, which is paid search; SEO, which is organic search; and programmatic, which is programmatic buying team. So those are the three digital execution departments that $I$ have.

We have media insights and strategy department.
We have what is now called integrated media management. It may have been called channel planning when we last spoke.

Q Okay.
Well, let's talk about the search department a little bit.

Can you tell us more about what the search department does that you're in charge of?

A So two departments within that department, if you like, or two disciplines within that department.

Paid search is obviously the largest part of that team, and we manage all paid search for the firm or the bulk thereof.

And the SEO department is all about creating articles so that we can show up in Google or Bing in an organic capacity, whereas the paid search team is all about buying text ads so we can show up in a paid capacity in Google or Bing.

Q And for those who are not familiar, SEO stands for what?

A Search engine optimization.
Q And you also mentioned the paid social media department; is that right?

A Yeah.

Q And can you explain to the Court what the paid social media department does?

A The paid social team manages all of our advertising campaigns on paid social channels.

Also working with the agency that we employ to support us with that work.

Q And what would examples of paid social media channels be?

A Facebook, Instagram, LinkedIn, Pinterest,
et cetera.

Q Got it. Thank you.

And is there a way that you distinguish what the search department tries to do from what the paid social media department tries to do?

A Paid search is our demand channel. So it exists to drive acquisition for JPMorgan Chase, whereas paid social, that's -- those are channels that we use to do a variety of different things, mainly awareness, engagement, and, in some instances, acquisition where we can.

But it has a distinctly different role at our firm than paid search.

Q All right.
You mentioned two terms, and I think we'll talk more about them later, but just briefly, let's get on the record what they mean.

You talked about a demand channel. When you say that, what does that mean to you?

A Did I say demand capture for paid capture?

Q I'm sorry if $I$ said it wrong.

A No worries.

So the paid search is where -- it's an always-on channel so we call it like an evergreen media channel, where we capture demand year-round, whereas others channels, like paid social, operate on a campaign timetable so a campaign
has a beginning, a middle, and an end.
And although, in some instances, it has the ability to drive acquisition, it's not its sole purpose.

Q And you used that term again, "driving acquisition." Can you explain to the Court what it means to drive acquisition?

A We define acquisition at JPMorgan Chase as a new account or an enrollment or a lead, typically.

Q Okay.
Thinking about JPMorgan's ad buying, are there particular products or lines of business which stand out to you as the company's major offerings?

A Can you -- sorry, can you repeat the question for me?

Q Sure.
Well, you mentioned credit cards earlier. Are there other lines of business along with credit cards that are major lines of business for JPMorgan?

A So I'll answer it the two ways.
So consumer bank and credit card, the credit card portfolio are certainly the two biggest paid media spenders at our firm, and that is mirrored in the weight that goes against those two businesses in paid search for sure. So they are huge on both sides of the fence.

But all businesses participate in paid search,
whereas not all businesses invest in other paid media channels every year.

Q Okay.
So you talked about consumer credit cards, and you said that's the Chase card; is that right?

A So you can think of that as Freedom credit cards, Sapphire credit card, Ink credit card, the Chase credit card portfolio, whereas consumer bank is really about our retail offerings, so like checking accounts and such.

Q Okay. Thank you.
And before we go further, you mentioned programmatic buying. I'm going to make sure we get a definition of programmatic buying as well?

A Programmatic is a methodology in the paid advertising space. So it's a means of using auction-time bidding to purchase digital banner ads around the Internet.

Q So we've talked about the major products that JPMorgan offers. You mentioned consumer credit cards and consumer banking.

Now thinking about the different types of advertising that JPMorgan buys, do you divide the advertising that you buy into different categories or channels?

A We certainly can look at our paid media by channel.

We have our paid media campaigns, which are set aside from always-on paid search.

We tend to analyze those things together, though, when we're having one conversation with the line of business.

And then another way to think about our media investments is the way we set budgets for investment and paid media. So we have a mature business model and a nascent business model that really guides our thinking.

Q Okay. And you said you can think about your advertising in channels. Do you divide those -- do you give those channels different names of advertising?

A Do you mean like TV versus --
Q Exactly.

A Sure.

Q And what are the different channels that you think about when you think about the advertising that JPMorgan buys?

A So we have digital, which a huge portion of it we manage internally through my programmatic team that $I$ just mentioned.

Q Okay.
A TV, search, social, audio, which is mainly radio, print and out-of-home.

Q Okay. Thank you.

And let's go through each of those quickly so we can understand what they are.

You mentioned digital. What is the digital channel of advertising?

A It's an all encompassing way in which we view it, because it can capture anything from a digital audio ad to a digital out-of-home ad, because you can buy so many different formats programmatically today.

But for the most part, banner ads on web pages.
Q Okay.

And we talked about search as well, which I understand is also a digital type of advertising.

So when we talk about digital, the rest of the day today, can $I$ call that digital display?

A Sure.

Q So it's not confused with search advertising?
A Yeah.

MR. HOFFMAN: Now, I'll ask Ms. Cassidy to put on the screen a demonstrative that we've prepared, which is labeled UPXD013.

And, Your Honor, if $I$ may approach?

THE COURT: You may.
BY MR. HOFFMAN:

Q So you'll see that exhibit on the screen and you also have the paper copy, whichever you prefer to use.

Do you see this exhibit, UPXD013?
A Yes.

Q And can you tell us what that is?
A It looks like a screenshot from Google after somebody has typed in "best bank."

Q And below "sponsored," do you see where it says "Chase Bank"?

A Yes.

Q And is this the type of digital search ad that your team might buy?

A We do buy, yes.

Q Okay.

And more specifically, is this a search text ad?

A Yes.

Q All right.

As you mentioned, the query here appears to be "best bank."

Is that a good time for you that Chase shows up under the best bank keywords?

A If by good sign you mean that our bid strategy is working, then, yes.

Q Okay.
And are you familiar with the terms "branded" and "non-branded" search text ads?

A Yes, this is an example of non-branded.

Q Okay.
And why is this a non-branded search ad?
A It doesn't contain -- the keyword search in the search bar up top does not contain any of our owned and operated terms such as Chase.

Q And an example of a branded search ad would be what?

A Chase Freedom Credit Card.
Q Okay.
And do you buy both branded and non-branded search ads?

A We do.
Q And why is it that you need to buy branded search ads if someone's already searching for Chase?

A It's to better guarantee that we will show up early in the screen.

We hope that our organic strategy will get us there as well, but it's very important that we cover it all through paid search.

Q Now with respect to ads that are served to customers as a result of searches that they run, is there also something called a product listing ad or a shopping ad?

A Yes.
Q Can you describe for the Court what those types of ads are?

A They typically contain, you know, imagery, if somebody's like shopping for clothing or something, for like a tangible product. It's not something that we engage in at JPMorgan Chase.

Q And why does JPMorgan Chase not buy product listing ads or shopping ads?

A We, for the most part, represent intangible products and services.

Q So is it the case that the only search-related ads that JPMorgan buys are search text ads?

A Yes.

Q And those are like the kind that we see on the screen now?

A Yes.

Q All right. Thank you. And you can put aside that demonstrative.

Now, we talked about search text ads and then we talked about the digital display ads. Could you remind us again what digital display ads are?

A The easiest descriptor would be sort of like a rectangle with video or imagery and text running at the top of your web page.

Q Okay.
Now, thinking about the different advertising channels that you've just described, do they serve different
purposes?
A Each media channel typically has its designated purpose, yes.

Q And specifically we've talked about search text ads. What purpose do search text ads serve?

A We think of search as an always-on acquisition driver for the firm.

Q And when you say always on, what does that mean?
A Every day of every week of every month year-round.
Q And how do you distinguish always-on type of advertising from other types of advertising?

A Other media channels that we use are the makeup of a media campaign, which sees us working with creative agencies to develop creative for each of those channels that we've decided to use for the campaign. For example, a TV commercial, as well as a print ad, as well as, you know, the digital banner ads. They will be produced over a period of some months and then we will put it into market.

Then we're typically constrained by a budget and that will sort of dictate how long you can be in market for. Call it eight weeks or so, ten weeks, 12 weeks, whatever the flight might be.

And then that campaign will end.
Whereas, in the background, paid search is always on.

Q Okay. Thank you. Now, I'll ask Ms. Cassidy to display UPX0441. You'll see that on the screen. You also have the paper copy there.

A Yeah.

Q And this is an email chain. I'll ask you, who is Gil Fishman who's on the chain?

A Gil Fishman is our head of paid search within the search department, reporting into Maggie Bellew whose name is also here.

Q And who is Maggie Bellew?

A She runs our ad, the search department in its entirety, so both $S E M$ and $S E O$ report into Maggie.

Q Okay. Thank you.

And in this email exchange and the email at the bottom of the page, Maggie Bellew references a paid search deep dive that's attached to this email.

Do you see that?

A I see the subject line "Paid search deep dive with Leslie."

Q Right.

Now I'll ask Ms. Cassidy to display the second page ending in Bates number 802 that's labeled "Paid search."

Do you see that second page?

A Yes.

Q And are you familiar with this document?

A I don't remember it offhand, but it certainly looks like a document my team would be responsible for creating.

Q Okay.

Do you see the definition of the top of the page that says, "Search ads"?

A Yep.

Q And in the context of JPMorgan's purchasing, does a search ad refer more specifically to a search text ad?

A Yes.

Q And could you read for us the definition of search ad out loud?

THE COURT: Before you do that, is there any objection to this document being admitted?

MR. SAFTY: No objection, Your Honor.

THE COURT: So UPX441 will be admitted.
(Plaintiffs' Exhibit UPX441 received into evidence.)

THE WITNESS: "Search ads appear at the top of search engines (i.e., Google, Bing) and allow advertisers to promote their products and services alongside the organic results within a search engine results page."

BY MR. HOFFMAN:

Q And do you agree with that definition?

A I can't come up with a better one off the top of my head, so, yeah, I think that's pretty good.

Q Okay. Very good.
And then below the definition, it says, "Core search."

Do you see that?

A Core benefits?

Q Yeah, excuse me, core benefits, right.
A Yep.
Q And then the first bullet point says that "Search is a consumer demand driven media channel"?

A Yes.

Q And I think you may have touched on that, but what does it mean to be a consumer demand driven media channel?

A You show up in search results pages only after somebody has initiated a query, which we interpret as some form of intent or demand. So it's consumer initiated and it's our job to appear in the most relevant way in response to that query, if the query contains keywords that we care about as a firm.

Whereas on other channels we are hoping to intercept you while you are engaging with content that we believe is relevant to our business messages.

Q And of all the ad channels that you described, is search the primary consumer demand driven channel?

A It's the only channel that we consider demand channel at JPMorgan Chase.

Q Okay. Thank you.
A As exclusively demand channel.
Q And then in the next bullet, it says that "Search can drive acquisition based on some of the strongest intent signals made available."

Do you see that bullet?
A Yes.

Q Okay.
So my first question is: What does it mean that search text ads can drive acquisition?

A What does it mean for a search text ad to drive acquisition?

It means that in response to a search query, be it branded or non-branded, through our paid search response, so the message that we show, we deliver or we try to deliver a seamless journey from that search query to the product or service that you need through to completion.

Just as a reminder, we define acquisition as a net new account or a lead or an enrollment.

So that's what we mean when we say drive acquisition.

So we've produced a really good ad that took somebody on a simple journey through to a form to fill out or -- and that new account.

Q All right.
And then the second part of the sentence is, it says that "Search is one of the strongest intent signals." What does it mean that search is one of the strongest intent signals?

A Again, because we are not intercepting you whilst you're enjoying your $T V$ show or whatever it is that you may be doing on another channel, you have come to Google or Bing as a consumer and typed in your query. We're responding to that query, which is unique to paid search.

Q Okay. Thank you.
You've talked about the consumer credit cards and consumer banking. For those -- both of those lines of business, is there a primary demand channel that drives acquisitions?

A In the paid media space, it is paid search.
Q Okay.

Now I'll ask you to flip the page here.
THE COURT: I'm sorry.
Just to be clear, what you're saying is that paid search is the primary driver of acquisition among the different channels that you just described?

THE WITNESS: Yes, in paid media.

I want to make that distinction because we obviously have our own channels like chase.com and email and direct mail, which is not within my remit.

So within paid advertising, it is the biggest acquisition driving channel, yes.

THE COURT: Okay. Thank you.

BY MR. HOFFMAN:

Q Okay.
So flipping to the page that ends in 803.

MR. HOFFMAN: And I'll ask Ms. Cassidy to put that on the screen. BY MR. HOFFMAN:

Q Do you see the top bullet on the screen that's labeled "Drive acquisitions"?

A Yes.

Q Okay.
And for context, are we still talking about search text advertising here?

A Yes, I believe so.

Q Okay.

The bullet says in 2019 , that search supported a number of programs, many of which are now evergreen.

And you talked about evergreen before, but evergreen means what exactly?

A Always on.

Q And why is that important to be always on?

A We oftentimes, if it's a nascent business and we're trying something for the first time in paid search, we won't really understand the degree to which it will drive success in that channel, success being acquisition.

Once we've proven that, we work with the CFO within that business to business-case a year-round budget to support that success that we've seen and continue to iterate on what those success drivers are.

So we don't re-litigate the channel often. So if you're a net new business, we will set up a paid search test, prove out the business outcomes, and then work to unlock an annual budget to support that going forward. That's typically what we mean by evergreen.

Q Okay. Thank you.
And you can put that document aside.

Now, shifting away from search text ads that we've talked about, let's talk about some of the other advertising channels that JPMorgan buys.

You talked about digital display ads. Are those used differently from search text ads?

A Yes.

Q And in what way are they different?
A For starters, it's completely different format.

So text ads are just words that click straight through to a chase.com or a JPMorgan URL.

A digital display ad is often, as I said, like a video or a series of images with text overlay that render on a web page as you are scrolling or clicking around.

Q Okay.

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

A No.

Q And why is that?
A Paid search budgets are for paid search only.

Where we have investment mobility would be if you think about just digital or just a programmatic investment for a campaign, we could optimize to or from various different websites within that campaign. But it is not transferable between a programmatic buy across web pages and paid search. They are distinct and different and separate.

Q And distinct in what way?

A They are not fungible.

So the paid search team is managing the paid search budget and only the paid search budget year-round.

The programmatic team, for example, in my group is managing the programmatically purchased digital display ads and have the latitude to optimize across different websites,
pull off of certain websites, go on to certain websites, spend more or less on certain websites in order to drive the goals set for that campaign.

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

A They exist for a different reason. So paid search is an acquisition driver. So it is squered [phon.] functioning to drive business outcomes in that regard.

Whereas, a digital ad may be trying to drive awareness or, you know, increase demand for something or drive time with a video that we've created and we want you to spend time with it, for example, that kind of thing. So various different objectives happening in the digital space, singular objective in paid search.

Q Okay. That makes sense. Thank you.
THE COURT: Counsel, could I interrupt and just ask a follow-up question.

So you've described how JPMorgan Chase approaches these different channels of advertising. Would you agree that your, that is, your firm's approach, is consistent with how the, at least the financial services industry approaches these advertising channels as a whole?

THE WITNESS: As a whole, I don't think it's
unfair to say that that's likely true. I think the -- if you specifically talk about the credit card industry, I think there are credit cards that are, you know, working really hard in other digital channels to make it more hardworking from an acquisition standpoint. Certainly we're trying as well.

But for the most part, I think it's common that financial institutions use paid search to drive acquisition year-round, yes.

THE COURT: And what other channels do other firms perhaps emphasize more than JPMorgan Chase when it comes to acquisition?

THE WITNESS: I'm not sure.

I think digital and paid social both offer acquisition characteristics. And so JP Morgan Chase, for example, we try where we can do drive acquisition through those channels. It's just not their only reason for being. So we believe in advertising where we need to drive awareness, where we need you to consider us or grow brand love, those types of things. So it's multidimensional.

And we are a large institution with a cross-section of products and services; whereas, other financial institutions may have fewer and can focus their acquisition efforts a little bit differently than us.

THE COURT: Thank you.

BY MR. HOFFMAN:
Q And then another channel you talked about was social advertising.

On what platforms does JPMorgan Chase buy social ads?

A Pinterest, LinkedIn, Snapchat.
Are we talking about present time? Sorry. I should have clarified that at the beginning.

Q Yes, right now.
A I would add Facebook, Instagram. I think that's it.

TikTok. We just recently started dabbling in
TikTok.
Q Okay.
And do social ads -- do you use social ads in the same way that you use search text ads?

A No.
Q And how are social ads used differently from search text ads?

A We use paid search -- paid social, rather, to drive across a number of objectives. So awareness consideration and exploring more and more acquisition.

And what $I$ mean by "acquisition" is not too dissimilar to paid search, which is the idea of a new account or an enrollment or lead.

It's just incomparable in size and scale today to our paid search efforts, but we are trying.

So, yes, it's -- we use paid social across a number of campaign objectives.

Q And when you said that the two are incomparable in size and scope, was that --

A Scale.

Q Scale?

A Scale.
Q Scale and scope?
A Size and scale.

Q Okay. Sorry.
When you said social ads are incomparable to the search text ads in the scale, can you -- I guess I'm going to ask you, can you compare in any way the scale, the relative scales?

A The only scale difference $I$ was pointing to across both was regarding acquisition. Paid social is a large-scale channel where we can reach large-scale numbers of known Chase customers, as well as prospects. So it has scale. Just for us, not yet acquisition scale as comparable to paid search.

Q And is there a way to quantify the difference?
A We spend three times as much in paid search as we do paid social. Does that help?

Q Sure.
And all of the spend in paid search is designed to drive acquisitions; is that right?

A Correct.
Q But that's not the case for social?
A Correct.

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

A No.
Q And why is that?
A For the same reasons that I explained when we were talking about digital.

Q Okay.
And then I'll ask you the same question about the other channels you talked about, TV, out-of-home audio, and print.

Do you use those channels in the same way you use paid search text ads?

A No.
Q And do you typically shift ad spend between TV, out-of-home audio, and print if the relative costs change?

A No.
Sorry. I wanted to make sure I got that correct.

So would I be able to move money between TV and print and out of home?

Q I asked that in a bad way. Let me try it again. Thinking of TV, out-of-home audio, and print sort of together as one type of advertising, would you typically move money between those four over to paid search if the relative cost of the $T V$, out-of-home audio, or print changed versus paid search costs?

A So I'm going to play it back to you a little bit differently to see if I'm understanding you correctly.

Q Sure.
A So our paid search budgets are generated through two key ingredients, keyword search volume, you know, how many searches are happening for the things that we want to pay to play against, and what business are we driving off the back of that conversion. So net present value is one common way that the finance team looks at value. Return on investment is another. That can vary by line of business.

But it's pretty known. I spend this; I get this. And then we experiment with, I spend more; do I get more? And so on. And that's how paid search budgets are developed.

Budgets for other channels are typically built around audience, the audience that you're trying to reach and how often you want to reach them over what period of
time.

So if for some reason your campaign and those offline channels that you described wasn't working, could you, in theory, take money from offline channels and put it into a digital channel or into a paid search channel?

I mean, in theory, you can do that, of course. But, ordinarily, we know what we need to spend in paid search, and it kind of exists in its own right and is not typically influenced by budgets from other channels.

Q Okay.
A Does that answer your question?
Q I think it does.

In theory, you could shift the money from one to another; but in practice, that's not something you do; is that correct?

A Yeah.

I mean, $I$ think it's something pretty catastrophic would have to happen in a campaign for us to think about moving it from offline into paid search.

Paid search is well funded. And so in that instance, I imagine the money would be, you know, returned to the CFO and put to use elsewhere.

Q Okay. Thank you.
Now I'd like to shift gears for a second and talk about a tool that Google makes available to search text
advertisers.
Are you familiar with something called a search terms report or a search query report?

A I think you're talking about performance reporting that we get from Google at the keyword level? Yeah.

Q Right. Exactly.
And what do you call -- so I have it right, what do you call these types of reports?

A I think we just call them paid search performance reports.

Q Paid search performance reports. Okay.
And what type of information do these paid search performance reports contain?

A Typically it would contain costs per acquisition at the keyword level, impression, impression share, that kind of thing.

Q And how do you use these reports to do your job?
A My team would use them to inform how when keyword or keyword set is performing relative to another; we would use it to understand which keywords are driving the most value for the firm; we would use it to inform whether or not we need to increase or decrease budgets against certain keywords.

Q Okay.
And when you talk about keywords, can you give us
an example of what keywords are and how you use them?

A So you showed best bank earlier as non-branded. We referenced, I think, Chase Freedom Credit Card as an example of a branded version. So that would be the headline keyword and then you've got your text underneath.

Q So these reports tell you how different keywords perform; is that right?

A Yes.

Q Okay.

And in the last few years, thinking about these reports we've been talking about, has there been a change in the amount of information made available to you?

A I think you might be referring to a time when we went from a small percentage of keywords being bundled together and, you know, I think it was like roughly 5 percent of our keywords were not visible, our keyword performance was not visible at the keyword level. So smaller, more nominal performance sort of bundled together. And I believe there was a point in time when that shifted from 5 percent to roughly 20 percent of the keyword report.

Q Okay. Well, let's break this down a little bit. You said 5 percent of your keywords were not visible. What does that -- in sort of the more layperson parlance, what does that mean?

A I think -- so for a long time, the long tail of
the paid search performance, you know, in the smaller performance details bundled together not something that we needed to look at line by line. I don't think we could. Together, made up about 5 percent. So it's about 5 percent of everything that we were doing at the keyword level was not available at the keyword level, which I think was totally fine because nominal performance related to those 5 percent.

Q And then after this change happened, what happened to the amount of words that you had visibility to?

A I think roughly 20 percent or so became bundled in that way.

Q Okay.
So prior to the change, 5 percent of keywords were bundled in a way that you didn't have visibility into, is that what you said?

A At the keyword level, yes.
Q And just so I'm clear, what does it mean, you didn't have visibility into that?

A I believe 5 percent was just -- of the smaller, lower performing tail end of our paid search performance was sort of rolled up into one line, which represented about 5 percent of our performance.

Q Okay.
And then the amount that was bundled together
became 20 percent; is that right?
A To the best of my knowledge, yeah.

Q And so that meant the amount of keywords that you didn't have visibility into quadrupled; is that right?

A It grew, yes.
Q Okay.

Did that change in visibility into keywords affect how you were able to do your job?

A It just gave my team less information to work with.

Q Okay.
And one of the things you talked about was cost per acquisition. Can you tell us what that means?

A It's the cost per acquired acquisition defined as, like, an account or a lead or enrollment. So the cost of that action. How we set -- when we're setting up our paid search campaigns, you can set ranges that you're comfortable spending on a CPA, like, from the lower end to the higher end within the system.

Q And when we were talking about the shift from 5 percent to 20 percent, was that 5 percent of words that you had visibility into that went to 20 percent or was that 5 percent of your spend that you had visibility into?

A It's a good question.
I thought it was words. I'm not sure.

Q Okay.
So when the change from 5 percent to 20 percent took place, did you shift spending from Google to Bing based on that change?

A No.
Q And why is that?
A Google represents the vast majority of the keyword search interest, the volume in the marketplace. So our budget with Google is -- sort of mirrors their market share of the words that we care to purchase, search interest volume. So the split is roughly 90/10. So Bing doesn't have an equivalent volume so we would be unable to move budgets between those two partners.

THE COURT: When you say $90 / 10$, that means distribution between Google and Bing in terms of search advertising budget?

THE WITNESS: So our budgets mirrors roughly, I think, the market share that those two players have in the paid search space.

It may be different than that, it might be like 95/5 or something. But for us, it ends up being 90/10ish dollar split between the two partners, which is driven by the search volume that we see in both. BY MR. HOFFMAN:

Q With a loss of visibility into keywords in the

Google Search text ads, that didn't result in any greater spending on Bing search text ads?

A No.
Q Okay.
Did the loss in visibility in Google Search text ads result in spending in a different advertising channel rather than search text ads?

A No.
Q And why is that?
A It's distinctly different than the other channels as we've discussed.

Q Okay.
All right.
So we've talked a lot about --
THE COURT: Can I ask one more follow-up question?
MR. HOFFMAN: Sure.
THE COURT: Just about the keywords.
We've heard testimony about maximum pricing that an advertiser is prepared to place on a particular ad or for particular keywords.

So do I understand you correctly to say that, for example, for branded keywords -- let me ask this: Would your average willingness to spend be greater on a branded keyword than a non-branded keyword?

THE WITNESS: We would spend more on the
non-branded keywords, because they're more competitive. THE COURT: I see. THE WITNESS: As you can imagine, we wouldn't be the only ones looking to show up for best credit card. THE COURT: Right. THE WITNESS: So that's quite expensive. Or can get expense -- can get competitive and thus that would drive costs. Less so for our branded terms.

So our tolerance is really driven by the feedback we receive by the finance teams within each business whom inform us of, on the ROI or the MPD that they're seeing, they tell us how much stretch we have between the lower end of a CPA and the higher end of a CPA.

So that's sort of our container within which we can operate for that particular keyword. So we know if we bid within this range we know we're going to be profitable. THE COURT: And is it fair to say that the range is higher --

THE WITNESS: For non-branded.

THE COURT: Right.

But also the range would be higher for a keyword that provides greater -- is just better at acquiring customers.

THE WITNESS: True and not true.

So there are really high-performing keywords that
are not as expensive as others. I think there's a great degree of variability by business.

THE COURT: Okay.

THE WITNESS: We would see a great degree of variability if we were talking about a wealth management product versus a credit card versus a checking account if that makes sense.

THE COURT: It may depend upon the consumer and what the profile is?

THE WITNESS: And the volume of search interest, yes.

And so we think it's really important to show up both organically and in a paid capacity.

THE COURT: Right.

So you might pay more for someone who types in wealth management versus credit card?

THE WITNESS: Or less, if it's a branded keyword and somebody's already locked in, like, "I want Chase wealth advisor tool," it may be actually quite cost efficient to pull that person from their query all the way through to reaching a wealth advisor.

THE COURT: Okay. Thank you.
BY MR. HOFFMAN:

Q And we've talked about -- a lot about buying search text ads and we've talked about buying them from

Google, and we've talked about buying them from Bing. Are there other search engines that JPMorgan Chase uses to buy search text ads?

A We -- since somewhere in the first half of 2021 , we began spending in the Apple App Store, just with experimenting in a search capacity there as well when people are searching for apps.

Q And what percent of search text ads that JPMorgan Chase buys, what percent of that spending is in the Apple App Store?

A Zero point zero something. It's in the tens of thousands as opposed to the many millions.

Q Okay. Thank you.

I'll ask you to look at document UPX0441 one more time. And at the page marked 803.

And do you see in the middle of the page there's a chart that says "Key partners"?

A Yes.

Q And there's Google and Microsoft?

A Yes.

Q Okay.
When you add the spending on search text ads that JPMorgan Chase invests in Google and invests in Microsoft collectively, what percent of the search text ads spending is that?

A Well, it says here that Microsoft is getting 10 percent. So this would -- are you asking if the $76 / 9$ is representative of the $90 / 10$ that we talked about earlier.

Q Well, right.

I guess I'm saying that, I see two other -- under partner, $I$ see two other names. ISpionage?

A Sorry, those are not companies that we buy paid search text ads with. Those are tech partners.

Q Okay.

So collectively, Google and Microsoft equal
99.99 percent of your search text ads?

A Yes.

Q Okay. Thank you.
A This document looks like it's from 2019 so Apple App Store wouldn't have been on our radar quite yet, so that would be 100 percent.

Q Okay. Very good.
And then in the commentary section under Google, it says that "Google is a core partner in search due to overwhelming market share."

Do you see that?
A Yes.

Q And do you agree that Google is a core partner?
A Yes.

Q And what does "overwhelming market share" mean in
this context?

A Over 90 percent.

Q Okay. Now, your job as an ad buying do you ever talk about the return on investment that you receive from search text ads?

A We obsess about return on investment with paid search ads.

Q Okay.
Well, why is it then that you obsess about the ROI on paid search ads?

A It exists to drive ROI in the form of acquisition.
Q All right.

And we've talked a lot about the personal credit card line of business. How would you define ROI for paid search text ads when it comes to the personal credit card line of business?

A New credit card accounts.
Q Okay.
If you learned that the ROI on Bing search text ads was greater than the ROI on Google Search text ads, could you switch all of your search text ads spending to Bing?

A No.

Our spend with Bing maxes out where their volume ends regarding the keyword search volume against the terms
that we care about as a firm.

So once we max out there, which is roughly
10 percent of our paid search budget, there's no where else to go.

MR. HOFFMAN: Okay. Thank you. I have no further questions.

THE COURT: Okay. Mr. Cavanaugh, Mr. Sallet, any questions?

MR. CAVANAUGH: No questions, Your Honor.
THE COURT: All right.
MR. SAFTY: Good morning, Your Honor.
Graham Safty, Williams \& Connolly, on behalf of Google.
May I approach the witness with a binder?
THE COURT: You may.
MR. SAFTY: Thank you. - - -CROSS-EXAMINATION

BY MR. SAFTY:

Q Good morning, Ms. Lim.

A Good morning.
Q Do you recall Mr. Hoffman asked you some questions a few minutes ago about the search ads that JPMC purchases through Google Search Ads Auction?

A I don't know that we -- did we talk about the auction?

Q Well, a good portion of his questioning focused on the advertisements that JPMC purchases for display on Google's search results page, right?

A Yes.

Q And the amount that JPMC invests in search ads is informed by the outcomes they deliver for JPMC, right?

A As well as search volume, yep.
Q And you sometimes referred to those outcomes that search ads can deliver as acquisitions; is that correct?

A Yes.

Q And so depending on the line of business at issue, an acquisition could be a customer opening a checking account or applying for a credit card, for example?

A Yes.

Q And when comparing the amount that JPMC spends on search ads with the value of the acquisitions generated, your experience has been that JPMC observes a positive return on its investment from search ads, right?

A Yes.

And sometimes an economic factor, such as recent rate environment, for example, would change that and we would change our paid search strategies accordingly.

Q And certain lines of business at JPMC are actually required to show that their investments in search ads are ROI positive in order to sustain their spend on search ads
from one period to another, right?

A Yes.

Q Could you turn to tab DX659 in the binder in front of you there.

And, Ms. Lim, some of these documents are redacted, and so we don't want to say anything that's under the redactions. So we'll show on the screen the redacted versions, but you have the full version in front of you there in case you need it for context. So please feel free to look either at the screen or at your binder at your convenience.

Looking at the top of DX659, you see a July 23rd, 2020 email to you from Gil Fishman?

A Yes.

Q And I believe you mentioned he's a member of JPMC's paid search team at the time?

A He runs paid search.
Q Okay. Very good.
MR. SAFTY: And, Your Honor, I'd move to admit DX659.

MR. HOFFMAN: No objection, Your Honor.

THE COURT: All right. It will be admitted.
(Defendant's Exhibit DX659 received into evidence.)

BY MR. SAFTY:

Q And, Ms. Lim, if you turn to page 2 of that document, the final bullet point of Mr. Fishman's email begins "In total."

Do you see where I'm looking there?
A Yes. Sorry. It took me a second.
Q Oh, no problem.
And if we sort of read this without the redacted portions, it says, "In total, barring unforeseen circumstances, costs were forecasted to come down, while clicks would rise, yielding a net increase in production and a decrease in CPA."

Does that look correct to omitting the redacted portions. Do you see on the screen here?

A I have no reason to doubt the content.

Q And CPA in this context is a reference to this concept you were discussing with Mr. Hoffman of cost per acquisition or cost per action?

A Yes.

Q And so this is indicating that the average amount that JPMC was spending to acquire a card customer through search ads was forecast to decline in 2020 by the amount indicated here?

A I don't think that Gil is speaking for the entirety of the paid search program.

Q This is in the context of cards, right, as opposed to other lines of business?

A Give me one second.

Q Oh, sure. Please. Take your time.

A We have on the previous page card, Ink. Ink is a business credit card.

So, yes, I think you're correct. This is just in reference to the credit card businesses.

Q So within the line of business or lines of business that Mr. Fishman is discussing here, your understanding is that the average amount that JPMC was spending to acquire a customer through search ads was forecast to decrease in 2020 by the amount in this bullet point; is that an accurate characterization?

A That would appear to be the case, yes.
Q If you flip behind the blue sheet after the email to the first page of the attachment and look at the bottom right corner of that first page, do you see there's a sentence that begins "In April 2020, marketing decisions to pull back"?

A Yes.

Q Okay.
And is this passage referencing a decision by JPMC to decrease its paid search investment due to the spread of COVID-19 across the U.S. in the spring of $2020 ?$

A There is no reference in this bullet point to COVID.

Q Based on your recollection of having worked for JPMC at the time, do you believe that the decrease being described here in this slide has to do with external factors such as COVID-19?

A Yes.

So, typically, earlier when $I$ referenced the only real volatility that we would see relative to our paid search budgets is macroeconomic factors.

So the timing here would suggest that COVID is a factor at play here.

Q And without revealing the specific numbers in this passage we're looking at, is it fair to say that JPMC significantly reduced its search ads investment in April 2020?

A The percentage on the page here is high, so, yes.
Q And JPMC was able to swiftly implement that pullback by no longer bidding on keywords that it believed would no longer satisfy its business objectives, right?

A Changes in paid search can be executed quickly.
Q And as far as you know, there were no contracts or other constraints on JPMC's ability to reduce its investment in search ads in this manner?

A I don't know that it would have been considered
any kind of permanent reduction, but, rather, a moment in time for reassessment.

I remember at the time for a card in particular, our benefits were sort of incongruent with the current environment. So card benefits for customers being travel and dining related, which seemed inappropriate in a pandemic. So we had to reconfigure, and then we went back out with like grocery and gas benefits.

So this appears to be the moment in time where we took a beat to reassess our benefits for customers and then went back live when our benefits were more in line with customer needs at that time.

Does that help answer your question? Yes.
Q Yes. Thank you.

And one of the characteristics of paid search, in your experience, is that it has no commitments and can be one of the fastest channels to both shut down and ramp up as there are changes in the marketplace, right?

A We have commitments in place with Google. I don't know how rigid the terms are. But we -- I think we have a joint business plan with Google. JBP we refer to it as.

Q If you turn to the document that Mr. Hoffman showed you marked UPX0441, it's kind of this loose piece of paper here.

A Am I staying within this section?

Q Oh, no, it's not in your binder. It's this loose paper that Mr. Hoffman gave you.

A Oh, I'm sorry.
Yep.
Q I'm looking at the page ending 802.
A Yep.
Q And Mr. Hoffman was asking you about the core benefits section of that document at the top of the page.

A Yes.

Q And the last bullet point reads, "Paid search has no commitments and can be one of the fastest channels to both shut down and ramp up as there are changes in the marketplace."

And that's consistent with your experience with paid search with Google, right?

A Yeah.

I think that's making reference to, like, commitments that are subject to penalty. Like we would have with our upfront TV broadcast buys which have noncancelable terms. So I think that that's the type of reference being made there.

Q And those kinds of non-cancelable terms are not a condition of participating in, say, Google Search Ads Auction, correct?

A Correct, to the best of my knowledge, yep.

Q Apologies for jumping back and north between sets of paper. Could you go back to the binder --

A Sure.
Q -- and take a look at DX663.
And starting at the very bottom of the first page of this document, it looks like there's an email from you to Leslie Gillin --

A Yes.
Q -- that addresses Google relationship with JPMC paid media.

Do you see that?
A Yes.
Q And at the time this email was written, Ms. Gillin was your boss; is that right?

A Yes.
Q And if you look further up page 1, am I correct that Ms. Gillin passed along your email to JPMC's CEO in advance of a conversation he was having with Google's CEO?

A Yes.
MR. SAFTY: Your Honor, I move to admit DX663.
MR. HOFFMAN: No objection.
THE COURT: Okay. It will be admitted.
(Defendant's Exhibit DX663 received into evidence.)

BY MR. SAFTY:

Q Ms. Lim, turning back to your email at the very bottom of page 1, the first sentence under the heading we looked at a moment ago reads, "From a paid media perspective, the overall health of the Google relationship is strong."

Do you see that?

A Yes.

Q And you believed that to be true when you wrote it?

A Yes.

I mean, every significant strategic partnership has opportunities for improvement. But on the whole, it looks like I'm expressing at that time that it was strong.

Q And this document actually lays out some successes and some opportunities for improvement, right?

A May I have a look?
Q Yes, please, take your time.
A Yes, it summarizes some of what we were experiencing at the time, yes.

Q If you turn to the second page under the heading "Successes" --

A Yes.

Q -- do you see this first bullet point, followed by a first sub-bullet point that starts, "Despite significantly
reduced"?
Do you see where I'm looking there?
A Yes.
Q And, again, there's some redactions to the numbers here. So I'm not going to read those. But if we omit those redactions, does that sentence of your email indicate that "Despite significantly reduced paid search investment, resulting account production only decreased by," a redacted number, "netting more efficient cost per acquired accounts"?

A Yes.
Q And in other words, you're looking backwards here as of October 2020 and seeing that the average amount that JPMC was paying to acquire customer accounts through Google Search ads was declining, right?

A Yes.
I don't know what lines of businesses were rolled up into this map but, yes, on the face of it, that's what it seems to be saying.

Q And if we compare that to the email from Mr. Fishman that we looked at a moment ago, was Defendant's Exhibit 659, that sort of downward trajectory in cost per acquisition matches what Mr. Fishman was sort of forecasting before external circumstances changed due to COVID, right?

A Yes.

Q And moving forward to 2021 and 2022, has the amount that JPMC invested in search ads increased relative to 2020?

A Yes, significantly.

Q And that's because search ads delivered the results that JPMC was seeking at a cost that the business considers profitable, right?

A That's a good all-up summary with variance across lines of businesses, and depending on the macroeconomic environment that each business faces. So you can imagine that was true one day for auto and not true the next. Home lending, same thing.

But relatively speaking versus this moment in time, we have more than doubled our investment in paid search.

Q And sort of in the aggregate, you know, sort of setting aside those kind of keyword-by-keyword or business-unit-by-business-unit distinctions, that increase in investment reflects the fact that the search ads are delivering the results that JPMC is seeking at a cost that the business collectively considers profitable, right?

A Correct.
Q Now, Mr. Hoffman asked you a series of questions about a change to certain keyword reporting that JPMC receives from Google.

Do you recall that line of inquiry?
A Yes.

Q And just to be clear on the details, I believe you testified that, as a consequence of the change, JPMC had less visibility into the performance of certain keywords that sort of individually uncommon but together add up to about 20 percent of the keywords on which it might bid.

Is that an accurate summary of your testimony?

A Yes. I believe it went from roughly 5 percent at the keyword level to 20 percent at the keyword level.

Q And your understanding is that those changes were due to the implementation of certain user privacy measures on Google's part, right?

A That's my understanding, yes.
Q And those keyword reporting changes did not cause JPMC to need to spend more with Google, right?

A Can you rephrase the question?
Q Sure.
Did the keyword reporting changes that you
described in response to Mr. Hoffman's questions cause JPMC to need to spend more with Google?

A I think that's the same phrasing so I'm trying to understand what you mean.

Q Sure.
As a consequence of those changes to keyword
reporting, was JPMC required to spend more of its investment on Google Search ads?

A So we had less visibility into what was working and not working because that's kind of a big jump, from 5 percent to 20 percent.

But by the same token, the feedback loop that we had with the line of business, each line of business, determines how much we can invest in paid search relative to its performance. So if there was a growth in investment, it was because we had a perceived projection that there would be growth in outcomes.

So I don't know that any budgetary changes were as a consequence of that reporting change.

Q During your time in the digital media business over the last approximately 20 years, have you encountered a range of views about how to deliver relevant and effective digital ads while also protecting user privacy?

A That is a tough question to answer.
I think there are a lot of opinions across the ad industry about effectiveness on privacy.

Q And if we were to collect a dozen ad industry executives like yourself and ask them all for their perspective, you would expect to hear different perspectives; is that fair?

A I think it's very category driven.

So I think --

THE COURT: It's what driven?

THE WITNESS: Category.
So I work for a heavily regulated company. So we have, you know, very clear governance constructs that guide our decision-making, and privacy is obviously very, very important to us as a firm.

Whereas a nonregulated company may have different governance and different ways of making decisions. BY MR. SAFTY:

Q Understood.
And so if I'm understanding you correctly, and without sort of divulging any confidential information about your practices, is it accurate to say that JPMC has developed policies that govern how customer data can be used in its digital marketing efforts?

A Yes.

Q And those policies are evaluated and updated as needed in an effort to ensure that user privacy is protected and also deliver compelling and relevant advertisements; is that right?

A Yes.
Q And you would expect that JPMC's marketing partners would also evaluate and update their policies as needed to ensure that they're both facilitating the
effective display of advertisements and also respecting their users' privies?

A We expect all partners to adhere to whatever terms and conditions we've put in place with them, as well as adhering to expectations that we are held to as a regulated company •

Q And you understand that those partners also need to develop their own internal policies with respect to the use of user data to deliver relevant and effective advertisements, right?

A Yes.

Q Mr. Hoffman asked you some questions that sort of went beyond paid search and related to sort of the various paid media channels in which JPMC invests.

Do you generally remember that line of inquiry?

A Yes.

Q During your career in digital media, have you encountered a concept of a marketing funnel that's sometimes invoked as a mental model of a customer journey towards a purchase?

A Yes, it's a commonly used turn of phrase, yep.
Q And even though it's commonly used, you'd agree that it's sort of less and less attuned to the times today?

A Yes.

Q And you've encountered sort of differing views in
your career about where particular channels fall within that conceptual funnel, right?

THE COURT: Sorry, can you repeat the question? BY MR. SAFTY:

Q Sure.

So with respect to this sort of conceptual marketing funnel, have you encountered in your career differing conceptions about where a particular channel, such as paid social, or digital display, might fall within that funnel?

A I think there's a lot of common ground. I haven't heard of anybody ever thinking of TV as a lower funnel channel, for example.

And then $I$ think there's a lot of variance as well, depending on the category that you operate within.

So, for example, if you're a direct consumer, fashion brand, you may consider paid social lower in the funnel than a bank.

So, again, $I$ think there's a lot of common ground across advertisers and then the variance, which $I$ think is most often category driven.

Q And so you've observed that different advertisers use the various paid media channels available in different ways, right?

A Some channels, yes.

Q And in your experience with JPMC in particular, you've observed that customers sort of take a multitude of different paths to discovering and acquiring JPMC products and services, rather than a sort of linear walk through the channels; is that fair?

A Yes.
Q Could you turn to DX660 in your binder.
THE COURT: Before you do that, could I ask you a follow-up, which is you said you thought that the funnel today, you agreed that the funnel was less and less attuned to times today in your earlier testimony.

Can you explain why you have that view?
THE WITNESS: Yes.
I think there's -- the funnel is a really helpful framework because it's so easy to understand so it can be great -- it can be a great tool to help organize work and to organize thinking and to organize budgets, for example.

But human behavior is not so linear.
One of the reasons why we enjoy the combination of an always-on channel, like paid search, versus the in-and-out strategy of campaigns across other channels is so that you can have that air cover year-round, because you really couldn't possibly predict when somebody is going to be looking for your product or service.

You are in control of when you have a net new
message that you want to share, like $I$ have a new thing that

I want people to know about, you control when you go out into market to share that new news, but you may not control when somebody is interested or looking for something, and the means with which they will go from Point $A$ to Point $B, B$ being joining JPMorgan Chase as a customer.

So, for example, many advertisers like JPMorgan Chase use pretty sophisticated models, we call them like multi-touch attribution. And it's our attempt to try to assign credits to different channels, like how good was TV in helping drive that outcome, how good was my radio ad in helping drive that outcome, because all of what you're doing is ultimately influencing people and driving demand, you know.

And more often than not, more often than not, it's a combination of everything that you're doing that's driving that outcome. So we use various different tools to try to analyze the effects across each channel.

THE COURT: All right. Thank you.
BY MR. SAFTY:

Q If I may, Your Honor, I think --

Ms. Lim, do you have Defendant's Exhibit 660 up in your binder?

A Yes.
Q And this is an August 18th, 2020, email sent by

Shimah Okrami to a media leadership team alias at JPMC; is that right?

A Yes.

Q What was Ms. Okrami's role at JPMC in August of 2020?

A I think she had an operations role.

Q Within your media group?

A Yes.

Q And you're familiar with the media leadership team alias referenced in the "to" line of this email, right?

A Yes.

Q And the first two sentences of this email to the media leadership team alias read: "As we get now hires to come in, attached find an updated onboarding kit we are sending out. This is also uploaded to the team SharePoint site under how-to guides."

Do you see that?

A Yes.

Q And the attachment to this email, which is behind the blue sheet in your binder, is a presentation called Digital Media 101, dated January 10th, 2020; is that right?

A Yes.

MR. SAFTY: Your Honor, move to admit DX660.

MR. HOFFMAN: No objection.

THE COURT: DX660 is admitted.
(Defendant's Exhibit DX660 received into evidence.)

BY MR. SAFTY:
Q And, Ms. Lim, if you turn to page 14 of that attachment, there's a column called "Campaign Goal," where the box in the bottom row reads, "Account Generation."

Do you see that?
A So page 12?
Q Page 14. I'm sorry.
A Yes, I see it.
Q And in the next column over, which is titled "Media Channels," the corresponding box reads, "Display Social Search." Do you see that?

A Yes.
Q And then the third column, the corresponding box says, "Lowest funnel site activity, online account generation." Do you see that?

A Yes.
Q And your understanding is this particular chart conveys that Display Social and Search are each among the media channels that might be used to achieve the goal of account generation as measured by lowest funnel site activity; is that right?

A Yes.

I see display and social as an awareness channel, traffic-driving channel, as well as account generation channel on this page.

Q Got it.

So in this chart, display and social serve multiple functions, one of which is account generation as measured by lowest funnel site activity; is that fair?

A Yes.

Q Could you turn to page 10 of that document that we have up, which is DX660. It has the heading, "What digital means for Chase."

A You don't want to do the "Media Lingo" on page 12?
Q We certainly can. You're going to have to do more of the leading if we do that, though, because there's only so much I can do with the lingo.

A Sorry. Which direction am I going?
Q So you're going back, from 14 to 10.
A Got it.

Q And it's called "What digital means for Chase."

A Yes.

Q And then under the heading "1," there's the phrase "target customers, not channels."

Do you see that?

A Yes.

Q And then under that heading, there's a statement, "Most successful brands have moved from a channel-centric approach to one that's audience-driven."

Do you see that?
A Yes.
Q And the channels that are referenced here, as you understand it, are the ones you were talking about with Mr. Hoffman like paid search and social media and digital display and TV and so on, right?

A Yes.
Q And so an audience-driven approach, as opposed to a sort of channel-driven one, generally speaking, would refer to, you know, attempt to deliver a relevant ad to a consumer wherever they may be in the digital world?

Is that accurate?
A I wouldn't say it's exclusive to the digital world, but, yes.

Q And is it correct that last year, JPMC sort of assembled a marketing technology team to work on identifying ways to more effectively transition from a channel-centric approach to an audience-driven one?

A We do in fact have a team whose job it is to try to help bridge the gap between our own channels and our paid channels, yes.

Q And in your observation, is this topic of shifting
from a channel-centric approach to an audience-driven one been sort of in vogue throughout the digital media industry recently?

A I believe everyone who is -- who has any sort of significant paid media budget is considering what this looks like for them, especially in light of, you know, cookieless on the horizon.

Q In other words, this idea of an audience-driven approach as opposed to a channel-centric one is a sort of goal or objective of some of the large media buyers that you encounter in your work; is that right?

A Yes.
It's out of the vision board, if you like. It's something that we hope to achieve.

This is phrased as "Most successful brands have moved," as though it has been accomplished. But I would challenge that and say that it's something that brands are aspiring to achieve.

Many media campaigns are still informed today by the performance of a given channel, especially those that are offline. So, for example, TV, print, out of home.

But, yes, speaking on behalf of JPMorgan Chase, I would tell you that we are doing everything we can internally to have the right data and technology and governance constructs to enable us to reach audiences in a
more nimble manner.

But today, that is not the case.

THE COURT: Can you tell me, what does that shift look like? I mean, if you were to project and achieve an audience-driven approach, how does that differ than a channel-centric approach.

THE WITNESS: So the channel approach is really us determining that we are going to be on all of these channels, let's say. My audience is on YouTube and they are on Facebook and they are here and they are there. They're on Spotify. So you're sort of like painting a picture through media of where your target audience is and then opting to be on all of those channels.

An audience-centric approach may mean you're on fewer channels for one audience, more on another. Maybe you could be more singular versus having to be everywhere. And so it's more, you know, behavioral led than it is, you know, being in the channel where you know your target audience is consuming content.

So for now we don't feel very comfortable, with the exception of the more mature businesses where we have a lot of really good data that informs our decisions. We -for our more nascent businesses at least where we're still sort of learning, we are not yet comfortable eliminating any one channel. We want to be where our target audience is, if
that make sense.

THE COURT: It does. Thank you.

THE WITNESS: Can I go back to your earlier
question about the funnel? I don't know that I --

THE COURT: About the?

THE WITNESS: The funnel.

THE COURT: Yes.

THE WITNESS: I don't know that $I$ answered it completely, and it was in the back of my mind. Is that okay with you?

BY MR. SAFTY:

Q Oh, of course. Yes, please.
A I think the main point $I$ was trying to make -- I'm not sure how articulate $I$ was being -- is that there is no -- not anymore, although there can be, a singular like "I saw this ad; then $I$ took this action, you know, and I became a Chase customer."

It could be that you saw an ad and then you didn't do anything for two weeks or then you saw another ad and then you spoke to a friend or then maybe you went into a branch and then maybe you went onto Google. So there are just so many different ways in which people might turn up at your door that, you know, an inverted triangle, it doesn't really represent that complexity.

Is that a better answer to your question?

THE COURT: It is, yes. Thank you.
THE WITNESS: Sorry.
BY MR. SAFTY:

Q No. Thank you for that, Ms. Lim.

If there is anything else you feel you need to clarify, especially in response to Your Honor's questions, please do.

Could you turn to DX657 in your binder.

THE COURT: Counsel, before we -- how much longer do you have, do you think?

MR. SAFTY: Ten more minutes probably.
THE COURT: Okay. Why don't we just take our morning break. I'd like to give our court reporter a short break.

So it's ten after 11:00 now. So we'll take 15 minutes, and we will resume at 11:25.

Ms. Lim, I'll just ask you please not to discuss your testimony with anyone during the break.

Thank you.
COURTROOM DEPUTY: All rise.

This Court stands in recess.
(Recess from 11:08 a.m. to 11:26 a.m.)
COURTROOM DEPUTY: All rise.

All rise. This Honorable Court is now in session.
THE COURT: Thank you, everyone. Please be
seated.
Counsel, ready when you are.
MR. SAFTY: Thank you, Your Honor.
BY MR. SAFTY:
Q And, Ms. Lim, just to resituate us, I think you answered some questions from Mr. Hoffman about JPMC's investments in Facebook and Instagram and other social media platforms. And I'd ask you to turn to DX657 in your binder.

Do you have that up?
A Yes.
Q And it looks like this is an email that was sent to you by a JPMC employee on June 25th, 2020, attaching a presentation entitled, "2020 Marketing Performance Report and May Update."

Is that right?
A Yes.
MR. SAFTY: Your Honor, I'd move to admit DX657 at this time.

MR. HOFFMAN: No objection, Your Honor.
THE COURT: Okay. It will be admitted.
(Defendant's Exhibit DX657 received into evidence.)

BY MR. SAFTY:
Q Ms. Lim, if you could turn to page 22 of this document using the page numbers in the bottom center of the
page there. And this is a slide with the heading "Paid Media Testing \& Measure."

Is that right?
A Yes.

Q And the first full sentence near the top of the page begins, "Two incrementality tests on Facebook showed significant lift in account production."

Do you see that?

A Yes.

Q And near the bottom left under the heading "So what?" the first bullet indicates that "Facebook continues to prove success as a card acquisition driver."

Do you see that?

A Yes.

Q And the incrementality tests referenced in this document are examples of instances where JPMC has observed that advertising on Facebook can be used to successfully drive acquisitions in a profitable manner, right?

A Sorry. Can you repeat that?

Q Sure.
So the incrementality tests that are being discussed in this document would be examples of times where JPMC has observed that advertising on Facebook can be used to successfully drive acquisitions in a profitable manner?

A It doesn't talk about profitability, but certainly
this is a moment in time where we experimented from a zero base. So meaning from nothing to something, testing whether or not we could pivot from only using these social channels for awareness and consideration, which is typically the case, to can it also drive card acquisition.

Q And so this moment in time -- we're talking about May or June of 2020 -- was when JPMC started experimenting with using Facebook to drive acquisition; is that right?

A Yes.
We were able to experiment for a time, and then we could no longer do that on Facebook and Instagram.

Q And turning --
THE COURT: I'm sorry. You couldn't do what?
THE WITNESS: Advertise lending products, such as credit cards, on Facebook and Instagram.

THE COURT: And why did that -- why was that?
THE WITNESS: Meta were having challenges for regulated companies in the lending space pertaining to targeting. So we were not alone in our pausing of lending advertising on that platform.

THE COURT: Okay.
And did it then resume at some point?
THE WITNESS: I believe they settled with the government in the summer of last year. So sometime thereafter, three months or so later, we began advertising
again, so sort of like September-ish of last year.
THE COURT: Okay.
And was that advertising -- what was the mix of advertising of awareness advertising versus acquisition advertising, if one can even make that distinction?

THE WITNESS: When we went back -- when we began advertising again late last year?

THE COURT: Yes.
THE WITNESS: None of it was considered acquisition.

THE COURT: Okay.
And what would the difference look like -- and sorry for hijacking this, Counsel -- but what would the difference look like on a Facebook between an acquisition ad or an acquisition purposed ad versus an awareness ad?

THE WITNESS: An awareness ad will talk more about the benefits of something relative to a target audience.

An acquisition ad tends to be more hard hitting with the click here, find out more, enroll now, that kind of thing.

THE COURT: I see.
THE WITNESS: And the more hard hitting would feature earlier in the ad versus an awareness ad, the call to action might be the last thing you see if you were to watch the entirety of the ad.

THE COURT: Got you. Okay. Thank you. THE WITNESS: No problem.

THE COURT: That's helpful.
BY MR. SAFTY:

Q And a couple more questions about this sort of timeline, Ms. Lim, because I think it's important.

If you could turn to DX656 in your binder.
A Yes.

Q And this is an email and an attachment sent to you by a colleague at JPMC in June 2020; is that right?

A Yes.

Q And the attachment, which is behind the blue slip sheet, if you want to take a look at it, is titled, "Social media update, partner business review."

Do you see that?

A Yes.

MR. SAFTY: And, Your Honor, I'd move to admit
DX656 into evidence.

MR. HOFFMAN: No objection, Your Honor.

THE COURT: Okay. It will be admitted.
(Defendant's Exhibit DX656 received into evidence.)

BY MR. SAFTY:

Q And, Ms. Lim, this is a native file, there's no pagination, it's a bit tricky, but if you flip to the ninth
page of the attachment, there's a presentation with the heading, "Facebook update: Can we run paid media campaigns?"

Do you see that?
A Yes.
Q And so to situate the timeline, you were saying that JPMC had been doing some experimentation with acquisition-drive advertising on Facebook, but then had to pause that experimentation; is that right?

A Yes, to the best of my knowledge, yes.
Q But that early experimentation had shown that Facebook was successful as a card acquisition driver, correct?

A We had seen some success.
Q If you look at the middle of the page, there's a heading, "Campaigns that cannot run on Facebook." Do you see that?

A Yes.
Q And there's a bullet point that reads, "Any campaign that targets prospects and features a product, even just an experience related to a product, is prohibited." Do you see that?

A Yes.
Q And that's what you were referring to earlier about JPMC not being able to conduct acquisition-drive
advertising on Facebook and Instagram; is that right?
A I'm just going to read the first piece of this page, if that's okay.

Q Yes, sure.

And I will note that portions of it are redacted so please just read it to yourself. And if there's any portion that gives you context or you want to clarify, that's totally fine.

A Yeah, the first paragraph is helpful context. So, yes, to what you were saying, yes.

Q And just to be clear, the limitations that JPMC is encountering in advertising on Facebook and Instagram, are a consequence of the regulatory environment applicable to certain financial institutions as opposed to generally applicable shortcomings in the ad campaigns offered by Facebook and Instagram, right?

A I believe the challenges prominently affected lending advertisers whom are governed by regulation.

I am unsure, I can't speak to impact to advertisers in other categories. I don't know that it was exclusive to finance.

Q I see.

So the challenges that JPMC is encountering in advertising on Facebook and Instagram have to do with regulations applicable to consumer lending products?

A Not.

Q Not your kinds of products, correct?

A Correct.

Q And would you agree that targeting prospects on Facebook and Instagram is a key component of executing an acquisition-drive marketing strategy on those platforms?

A Yes, there's two ways to think about targeting on Facebook and Instagram. Reaching existing customers, in the hopes of introducing them to something new, or targeting prospects, so an unknown person but matches the criteria of the target audience that we believe would most benefit from a product or service and reaching them with a new message.

Q And due to the lending-related regulatory matters that you referenced, JPMC has been sort of limited in its ability to take advantage of the full level of sophistication that Facebook and Instagram offer advertisers when it comes to targeting new prospects; is that right?

A I would actually say it differently.
I would say that we reverted back more to business as usual during that time, which was to leverage Facebook and Instagram as an awareness and engagement channel.

Q And there have been profitable opportunities for this sort of acquisition-drive advertising on Facebook and Instagram that JPMC has identified but has not been able to pursue; is that fair?

A Until fall of last year, yes.
Q Understood.

So for portions of your tenure at JPMC, there were profitable opportunities for sort of acquisition-drive marketing on Facebook and Instagram that could not be pursued due to the sort of regulatory environment applicable to certain lending products?

A Yes.

Q Thinking back more broadly on your career in digital media, is it your understanding that many brands have successfully executed acquisition-drive marketing strategies on Facebook and Instagram?

A Sorry to interrupt you. There's something happening on the scene here.

COURTROOM DEPUTY: The Zoom call dropped off.

THE COURT: Sorry, we just have a technical glitch.

THE WITNESS: That's okay. BY MR. SAFTY:

Q I'm happy to repeat my question.
A Please, yeah.

Q Thinking back more broadly on your career, not limited to your time at JPMC, is it your understanding that many brands have successfully executed acquisition-drive marketing strategies on Facebook and Instagram?

A Yes, I think can there are plenty of examples of advertisers who leverage paid social in a full funnel manner, if we reference the funnel earlier, using it for awareness consideration and acquisition.

Q And could you turn to DX658 in your binder, please.

A Yes.
Q And starting at the top of page 1, it looks like this is an email you forwarded to a member of your team at JPMC in July 2020?

A Yes.

Q And the email you're forwarding here is one that was sent to the CEO of JPMC by Leslie Gillin, who I believe you said was your boss at the time?

A Yes.

MR. SAFTY: Your Honor, I'd move to admit DX658.
MR. HOFFMAN: No objection, Your Honor.
THE COURT: It will be admitted.
(Defendant's Exhibit DX658 received into evidence.)

BY MR. SAFTY:

Q And at the end of the first paragraph of the email that you forwarded, it looks like the final phrase says, "Social channels, especially Facebook, are quite effective for both above the line advertising for awareness and brand
health, as well as below the line direct to consumer targeting driving volume at bottom of funnel, which makes social a very attractive channel win your campaign channel mix."

Do you see that?
A Yes.
Q Do you agree with that statement?
A On behalf of JPMorgan Chase or just in general?

Q Individually on behalf of Ms. Tracy-Ann Lim.
A No, sorry, I mean, is your question referencing Facebook for JPMorgan Chase or statewide?

Q So that's a good question and let me ask you a follow-up that might clarify things.

Do you understand that this email here to be setting out how Facebook generally is conceived of amongst digital marketing professionals such as yourself without reference to any particular company?

A Yeah, that seems to be the case.
Q And the statement that we just read, you would agree is accurate with respect to how Facebook is perceived of generally in your experience?

A Yes.
Q If you turn to page 2, next to the number 2, there's a passage that begins in bold text, "Ability to target."

Do you see that?
A Yes.

Q And that reads, "Due to its wealth of data, FB offers the most sophisticated targeting capabilities in the digital media landscape. Advertisers can target based on interests, geography, demographics, also using triggers to be super timely with a message."

Do you see that?

A Yes.

Q And, again, sort of situating this in the context of how you understand advertisers generally to conceive of advertising on Facebook, do you agree with that statement?

A Yes.

MR. SAFTY: If I may have just one moment, Your Honor.

No further questions from Google, Your Honor.
And, Ms. Lim, thank you very much for your time.

THE COURT: Thank you, Counsel.
All right. Any redirect?

MR. HOFFMAN: Yes, Your Honor.

## REDIRECT EXAMINATION

THE WITNESS: Would you like me to close the binder? BY MR. HOFFMAN:

Q Yes, go ahead.
Ms. Lim, how does JPMorgan use Facebook in its advertising?

A Present day, Facebook and Instagram is used to message existing Chase customers. It is used to support corporate impact, corporate responsibility messages about the firm and our efforts within communities.

It is used to promote products and services to make people aware of them, generate demand.

We make a lot of video content, so we distribute a lot of our video content across these platforms.

And more recently, we are beginning to try to understand how it might help drive acquisition, but we are limited in the friction that exists today in that customer journey. It's not easy to go from your feed in Facebook to chase.com.

Q Is the primary purpose of Facebook the way JPMorgan uses it to drive acquisition?

A Sorry. Can you repeat the question?
Q Is the primary way that JPMorgan uses Facebook to
drive acquisition?
A No.
Q We talked about the change in keyword visibility with the reports that Google provides you.

Do you remember that?
A Yes.
Q And I think you told me that the visibility that you didn't have went from 5 percent to 20 percent; is that right?

A Something in that range.
Q Right.
Did that affect the -- your ability to be efficient in your ad spend?

A It gives us a blind spot as to where efficiency opportunities may or may not have existed. So it's kind of hard to give you a definitive -- we continue to spend. And as I referenced earlier, our budget has more than doubled, you know, in the last two years. And so we've been able to drive effective outcomes in absence of that level of detail.

Would we be more efficient if we had that detail? I'm not sure, but we have a blind spot in our reporting.

Q Okay. Thank you.
And now Mr. Safty asked you about DX --
THE COURT: Can I interrupt you?
MR. HOFFMAN: Oh, yeah.

THE COURT: You said the spend has doubled. Over what period of time?

THE WITNESS: So I think the year that we were -I'm trying not to let a whole number slip out.

THE COURT: A range is fine.
THE WITNESS: But I think we were talking in 2020, 2021 time frame.

THE COURT: Okay.

THE WITNESS: And if you flash-forward to this year, those numbers have doubled.

THE COURT: I see.

And can you, at a general level, explain the rationale for that increase? I mean, at least to a non-business, non-marketing person, that seems like a pretty dramatic increase in spend for a particular channel of advertising.

THE WITNESS: It is significant. So a few different reasons.

If the volume of search interest against the keywords that you care about goes up and you know you can profitably match that level of demand, we do that, so that will drive our budgets up.

We may have products and services that are more competitive at the time, allowing us to be in turn more competitive with the cost per acquisitions that we're
willing to pay. So that's getting after the ROI piece that we talked about earlier.

Then new businesses coming online. So you heard me talk earlier about mature businesses versus nascent businesses.

Once a nascent business has a footing, an understanding what paid search can do for its business, it will unlock a full year's worth of budgets. And oftentimes those budgets increase as performance matures.

So we've had, yeah, that quagmire of new businesses coming on board, both businesses moving from nascent to a greater level of maturity, introducing new nascent businesses, increased volume of search interest, as well as greater profitability that allows us to invest more.

I hope that helps.
THE COURT: It does. Thank you.

THE WITNESS: Sort of a combination of all of those things. BY MR. HOFFMAN:

Q Okay.

And Mr. Safty asked you about DX660. And I'm going to ask to pull up page 14 of that exhibit on the screen, and you can look in your book or look on the screen.

This is the chart with four columns starting with campaign goal and then going to media channels.

Do you see that?
A Yes.

Q Okay.

And the campaign goals listed here are three; is
that correct? Awareness, foot traffic, and account generation?

A Yes.

And I would caveat by saying that this is a really
a blunt tool designed to be like a 101. I don't think any of us would agree that it's just these three. But, yes.

Q Okay.

And then looking at the awareness row, the media channels that can be used to drive awareness include display, video, audio, social, social content;
is that right?

A Yes.

Q Okay.
A Video is meant to include there -- just for your reference, it's anywhere you can put a video, so that would include TV.

Q Okay.
And is search in the awareness column?
A No.

Q Okay.
And then looking at the foot traffic row, there's
mobile geo-based display.
Are those ads that -- well, let me ask you. What are mobile geo-based display ads?

A Ads that render on your smartphone that have been geo targeted but could be a display ad. It's interchangeable with the idea of display.

And social is another channel that you can geographically manage.

Q So the mobile geo, is that the idea of you're walking past a McDonald's and you might get an ad for a Big Mac, something like that?

A Yes.
Q Okay.
And is search in the foot traffic media channel box?

A No.
Q Okay.
But social and display are?
A Yes.

Q Okay.
And then, finally, in the account generation row, there's display, social, and search.

Is that right?
A Yes.
Q And in this whole column of media channels, is
account generation the only row where search appears?
A Yes.

Q Okay. Thank you.
And you can put that aside. Thank you.

The last thing I want to ask you about is the idea of evergreen, and $I$ know we talked about that a little bit.

Did you say that there's only one advertising channel that is evergreen?

MR. SAFTY: Your Honor, objection. This goes beyond the scope of the cross.

THE COURT: She wasn't asked questions about evergreen. I think that's a fair objection, unless you're trying to get to something else that she was asked about.

MR. HOFFMAN: No. I think that's fine.

I have no further questions. Thank you.
THE COURT: I actually have one more.

With respect to social and the objective of acquisition, would you agree that the extent to which social may be used for acquisition purposes may depend on the nature of the product?

THE WITNESS: Product and customer journey, I think, are really key.

So it's not uncommon to see what we call DTC, like direct-to-consumer brands, advertising in an acquisition capacity on social media.

And one of the reasons why I think that that's successful for companies like that is because the -- it's a frictional -- frictionless journey for somebody; whereas, for JPMorgan Chase, if we stick with the example of Meta, like Facebook and Instagram, it's not as -- it's not as native; it's not as frictionless.

So you would be kicked from your Facebook feed, for example, to a Chrome or Safari browser, where you will see a splash page on how to go get more information to redirect you to then hopefully take an extra step after that to go to chase.com, which is why it's really hard to make it work as an acquisition channel today.

Now, that is not true of all social media
channels. Pinterest, for example, we have a more frictionless customer journey, LinkedIn, and so forth. So it's not the same for us for each individual partner.

But for many companies that were built to drive acquisition via social media, they have a very native experience for a user to make it super simple in-feed, where you can click on something and move through the stages of purchase in a native way.

Does that help?

THE COURT: Yes.

THE WITNESS: So it's both the journey and the product category.

THE COURT: And when you -- what would you include in the direct-to-consumer category of goods?

THE WITNESS: Like my Away luggage suitcase that I brought with me to D.C. is a great example of a direct-to-consumer product.

THE COURT: Okay. All right. Thank you.

Any follow-up on those questions?

MR. HOFFMAN: Not from the United States,

Your Honor.

THE COURT: Okay. All right.

Ms. Lim, thank you very much for your time and your testimony. Thank you for being here. Safe travels home.

THE WITNESS: Thank you.

MR. SEVERT: Good morning, Your Honor.

THE COURT: Good morning.

MR. SEVERT: Adam Severt for the United States.

The United States at this time calls Joan Braddi.

COURTROOM DEPUTY: Before you have a seat, please raise your right hand.
(Witness is placed under oath.)

COURTROOM DEPUTY: Thank you.

THE COURT: All right. Ms. Braddi, welcome.

Thank you for being with us.

THE WITNESS: Thank you for having me.

MR. SEVERT: May I proceed?
THE COURT: You may.

JOAN BRADDI, WITNESS FOR THE PLAINTIFFS, SWORN DIRECT EXAMINATION

BY MR. SEVERT:

Q Good morning, Ms. Braddi.
A Good morning.
Q Can you please state and spell your name.
A Joan Braddi, B-r-a-d-d-i.
Q And my name is Adam Severt. I'm a lawyer representing the United States, and I'm going to be asking you some questions today.

And, first, where are you employed?
A I'm employed for Google.
Q And what's your current title?
A I'm a partner advisor for global partnerships.
Q And -- Sorry.
COURT REPORTER: Say it again.
A I'm a partner advisor under global partnerships.
Q And that's your title, partner advisor?
A Yes.
THE COURT: I'm sorry, Counsel.
And, Ms. Braddi, could I ask you to keep your voice up. That's a mic. But if you can keep your voice up,
that would be appreciated.
THE WITNESS: Sure.
THE COURT: Thank you.
BY MR. SEVERT:
Q How long have you worked at Google?
A A little over 24 years.
Q And you started in 1999 or so?
A Correct.
Q And am I right that you were the company's 15th employee?

A Correct.
Q And you've had a number of different roles and responsibilities over the years; is that right?

A Yes.
Q And largely in the partnerships area?
A Yes.
Q And was there a time where you ran search distribution for Google?

A Yes.

Q When was that?
A Probably early on. 2000 onwards.
Q And until around when?
A Till around probably 2015.
THE COURT: So for 15 years?
THE WITNESS: Roughly, 12 to 15 years, yes.

BY MR. SEVERT:

Q And when you were running search distribution, what was your -- what were your responsibilities at that time?

A Well, early on was finding websites that would take our services. And after that, after we build a product that could also monetize those services, it was also finding websites that also wanted to take those services along with the ads.

So we had what's called a syndication side of the business and a distribution side of the business.

Q And turning to today, who do you report to today?

A I report to Don Harrison.
Q And am I right that Mr. Harrison runs search distribution today?

A He has people running -- it falls under him, yes.
Q And in your role today, do you manage Google's relationship with a small group of partners?

A Yes.

Q And who are those partners that you manage?
A It's Amazon, Apple, Microsoft, Meta, Oracle, and Yandex.

THE COURT: I'm sorry, could you state those one more time.

THE WITNESS: Sure.

Amazon, Apple, Microsoft, Meta, Oracle, and Yandex.

BY MR. SEVERT:

Q What's your role today with respect to those partners?

A It's more of a partner advisor, both coming inbound and outbound. So some of these companies want to talk to Google about a certain product or issue, they don't know who to talk to, they come in through me. Or if they have an issue, and vice versa. If we want to do something with some of these partners, they don't know who to contact there or what want some advice, then they come to me.

Q So you would typically be their first call?

A Yes.

Q And the six companies you listed, are those considered top partners at Google?

A They're under the umbrella of top partners. There's quite a few under there.

Q And what does the top partner umbrella, what does that indicate?

A It indicates companies that have many different touchpoints within Google, and so we try to understand all the things that they're doing with Google, as opposed to them trying to navigate across a very large company.

Q And let's start with Amazon, and I think you said that you're the -- managing the relationship with Amazon?

A The partner advisor, yes.
Q And am I right -- so it would be fair to say that you have at least some familiarity with Amazon's business?

A Yes.

Q And am I right then that Amazon is not a search site, right?

A They started -- they have a search product and they have an ad search product, yes.

Q Let's take a look at a document. Let me hand out some binders.

MR. SEVERT: Your Honor, may I approach?
BY MR. SEVERT:

Q Ms. Braddi, I've handed you a binder. It has a number of documents we're going to look at today.

I want to start with what's marked as UPX911.
That should be in your binder. And it will also be up on the screen, if that's easier for you.

And, Your Honor, UPX911 is already in evidence.

A Uh-huh.

Q And if we look at UPX911, Ms. Braddi, the top email is one that you wrote; is that right?

A It looks that way, yes.
Q And I want to direct your attention to just the
very first paragraph of your email. This is from September of 2019 ; is that right?

A Yes.

Q Okay.
And you write, "Tim passed along your request. Since I look after Amazon, Apple and MSFT from a top partner perspective, I'm happy to participate in your exercise but do have a question or two."

Do you see that?

A Yes.

Q And this is sort of what we talked about before, that you're the -- you look after the partner advisor for these three companies, Amazon, Apple, Microsoft, among others; is that right?

A Yes.

Q When you say you look after Amazon, Apple, and Microsoft, you meant that you're the partner advisor for them, right?

A Correct.

Q And in the next paragraph, you continued: "Is this around Assistant services or Google Search services as Amazon is not considered a search site."

Do you see that?

A I do.

Q And then $I$ want to call your attention to the last

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paragraph that starts, "As you know."
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Do you see that?
A I do.
Q And you write, "As you know, we are the default search engine in Apple's browser (Safari)."

Do you see that?
A I do.
Q And that's a reference to Google's search distribution agreement with Apple; is that right?

A Correct.
Q And that's called the Information Services Agreement; is that right?

A That's correct.
Q And so sometimes referred to as the ISA?
A Yes.

Q And am I right that, as part of the ISA, Google pays Apple a revenue share, as you say in this email, to be the default search engine in Apple's Safari browser?

A Correct.

Q And we'll talk more about the ISA shortly, I just wanted to focus on that.

So let's go to the next sentence where you write, "Forcing a choice screen on Apple will likely not be good for us."

Do you see that?

A I do.

Q And by "us," you meant Google?

A Yes.

Q And you can put that document aside.

Let's shift our focus to Apple.

Am I right that you've managed Google's
relationship with Apple for many years?

A Yes.

Q And since when?

A Since 2002.

Q And you're Apple's primary point of contact at Google; is that right?

A Yes.

Q And you have been throughout that time?

A Yes.

Q And does that mean that you would typically be involved in direct communications between Google and Apple?

A Not all the time. They have other relationships around the company. It's only if they need my help in navigating something with Apple, or Apple needs help in navigating something around Google.

Q But often you would be involved yourself?

A No, not necessarily.

Q Okay.

And, in fact, you've negotiated deals with Apple
in the past?

A I have, yes.

Q And you've been involved in nearly all of the search distribution negotiations with Apple; is that right?

A Yes.

Q And, in fact, you've led some of those negotiations, right?

A I've led some and I've participated in others.

Q And that would include the very first ISA agreement in 2002; is that right?

A Yes.

Q And you, in fact, led that negotiation on the Google side?

A Yes. It was just a phone call actually.

Q And am I right that the ISA has been extended or amended a number of times over the past 20 or so years?

A Yes, it has.

Q And from time to time, there have been periods of negotiation; is that right?

A Yes, correct.

Q And one example was that 2014 Joint Cooperation Agreement; is that right?

A That's one of the negotiating agreements, yes.

Q And that's sometimes referred to as the JCA?

A Yes.

Q And you're generally familiar with the JCA?
A Parts of it, yes.
Q And am I right that the JCA amended the original 2002 ISA?

A I don't think it amended it in that it extended the term.

Q Let's just take a quick look at that 2014 JC. And you'll find that in your binder at JX24.

This is already in evidence.
And, Ms. Braddi, I'm going to caution you of a fair amount of this document is redacted and you'll see that both on the screen and then the red boxes in your binder.

The red boxes indicate that the portion is sealed, so I'm not going to read that directly to you or ask you not to volunteer, but we'll try to work around them.

Does that sound okay?
A That sounds okay.
Q Great.
And just looking at JX24, we see at the top, this is, indeed, the JCA; is that right?

A Uh-huh.
Q And if we look at the last page just quickly, page 4, we see that it was indeed signed, this is the executed version signed by Mr. Page and Mr. Cook?

A Correct.

Q In 2014?
A Correct.
Q Let's take a quick look at Section 1 where it says, if we go back to the first page, "Commercial deal."

Do you see that Section 1, "Commercial deal" on the first page?

A Yes.
Q So I'm not going to read the provisions into the record, but you see there's a number 4?

A Yes.
Q Okay.
And the heading above 4, among -- above 1, 2, 3 and 4, in fact, it says, "Search rev share"; is that right?

A Yes.
Q So 1 through 4 relate to the revenue share between Google and Apple; is that fair, at a high level?

A High level terms related in the commercial agreement, yes.

Q And focusing on No. 4, what that provision contemplates, just at a high level, is that Apple can ask Google to exclude individual countries from the agreement if certain conditions are met. Is that fair?

A Yes.
Q And the condition that Apple and Google agreed upon is a measure of market share in a general search market

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by country; is that right?
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A Yes.

Q And that's the yardstick that Google and Apple chose, right?

A That's what the agreement.

Q We can take down JX24.

I think one thing we discussed earlier is that the ISA provides that Google is the default search in the Safari browser, right?

A Yes.

Q And that default is valuable to Google because it drives more queries to Google Search, right?

A Yes.

Q And Google monetizes some fraction of those queries through search ads, right?

A Correct.

Q That's essentially the business model, right?

A Yes.

Q And aside from the ad revenue, queries are also valuable to Google because they help Google improve its search engine over time; is that right?

A I'm not an expert on the search part.

Q And in return, Google splits the ad revenue it generates with Apple; is that right?

A Yes.

Q And the revenue share -- and I'm not going to be specific here. But the revenue share that Google pays to Apple, it's a significant amount of money even to Apple; is that fair?

A Wasn't always.
Q Today?
A But today, yes.
Q I'd like you to turn, Ms. Braddi, to exhibit UPX1110 in your binder.

And that's already in evidence. And this is a -- UPX1110 is an email thread
following an Apple earnings call; is that right?

A It seems to be, yes.
Q Okay.

And am I right that Google would regularly monitor
Apple's public earnings calls?
A We did after a certain point of time based on requests from Apple.

Q Okay. And it's part of the reason that Apple is a significant partner with Google, right? It makes sense to monitor their earnings calls?

A No. It was based on some issues that they raised in 2018.

Q Okay.

So since 2018, Google has monitored Apple's earnings calls?

A Yes.

Q And this email -- and you'll find it in

Exhibit 1110 -- a set of slide decks that conduct some analysis based on Apple's earnings calls and its security findings.

Do you see those slide decks attached?

A Yes.

Q And then look -- before we go to the slide decks, let's look at the top half of the first page where we see -you wrote two emails in a row.

Do you see that?
A I'm sorry. Where do you want me to go? First page, Bates ending in 191, the very first page, we see a couple of emails from you at the top.

Oh, okay.
Q Do you see those?
A Yes.

Q Okay.

And in the first email, so it's on the bottom, you
wrote, "+ Liz," and you put an attorney-client privilege label.

Do you see that?
A Yes.

Q And then above, you reply to your own email, and you ask that the slide deck be marked privilege, right?

A Yes.

Q And you didn't ask anyone for legal advice here, correct?

A Well, Liz is on there.

Q Okay.
THE COURT: I'm sorry. What was your answer?

THE WITNESS: Liz is on there. She's the
attorney.
BY MR. SEVERT:

Q Sure.

My question, you didn't ask Liz a question?

A No. I asked her -- mark the document.

Q Okay.
Let's take a look at the most recent slide deck, and that begins on the Bates ending in 1043. We put a little flag there so you can find it easily.

So we're at UPX1110, Bates ending 1043.
And we see the title is "Quarterly Apple Earnings Review."

Do you see that?
A I do.

Q And if we -- this particular analysis was done essentially quarterly?

A I don't know how often this was done.

Q Let's turn to the next page, Bates ending in 1044 . And we see this particular deck is for calendar year Q4 of 2020.

Do you see that?
A Yes.

Q And that's Apple's fiscal year Q1 '21 earnings.
Do you see that?

A I do.

Q Then let's go two pages, to the Bates ending in 1046 .

And this page is -- this is redacted, so I'm not going to talk about the numbers at all or say the numbers at all. And it's a little hard to read. So if you look in your binder, the next tab is an excerpt just of this slide. So it's excerpts of UPX1110. And it's just this slide, so we can see it a little better.

And as $I$ said, I'm not going to read any of the numbers, but the title expresses Google's payments to Apple as a percentage of Apple's operating income. Is that fair?

A That's fair.

Q Okay.
And on the left side, you see there's a graph on the left and a graph on the right?

A Uh-huh.

Q And then if we look at the left under the graph, do you see a small chart?

A Uh-huh.

Q And in the first row of that chart, there's a label that says, "Payment as a percentage of operating income."

Do you see that?

A Barely.

Q It's hard to read.
A I see it.

Q We did our best.

And as I think the title implies, what's depicted here is a set of quarterly percentages.

Do you see that set of quarterly percentages?
A Yes.

Q And what those depict are Google's payments to Apple as a percentage of Apple's operating income; is that right?

A I assume it is, yes.

Q And, in fact, the number for the most recent quarter on the far right, it's the same number as in the heading of the slide.

Does that look right?
A I'm going to trust the slide is correct.
THE COURT: So what was the question? The same
number as what?

MR. SEVERT: As the heading of the slide, the title --

THE COURT: Got you.

MR. SEVERT: -- has the same number as on the right, the last quarter.

BY MR. SEVERT:

Q And just looking across the row, we see some of the numbers in the row are larger, and even substantially larger than the number in the most recent quarter; is that fair?

A Sorry. I'm just trying to read the blue versus the red, what they mean.

But your question is?

Q Sure.

So the -- if I look at the row, payment as a percentage of operating income, I see a number of -- you see numbers per quarter; is that right?

A Yes.

Q And the most recent one we see on the far right, correct?

A Yes.

Q And some of the previous quarters had numbers that were even larger; is that right?

A The blue line over the red line is -- I'm
assuming --
Q Just focusing on the table. I'm not asking you about the chart.

A Oh, just on the table.
Q Just talking about the table.
A Well, I can't really read the table, but I'll trust what you're saying.

Q Okay.

Ms. Braddi, you can put aside -- well, first -and I don't want to be precise here, but would you agree that the percentages listed here of Apple's operating income, the Google payments, they're a meaningful percentage; is that right?

A I'm not a finance person. I couldn't answer that question.

Q Okay.

And just taking a step back, you're aware that Apple's iOS is the principal competitor to Android, right?

A Yes.

Q And Google relies upon Android partners to help compete against Apple's iOS; is that right?

A Yes.

Q And are revenue share payments to those Android partners one way Google helps make Android competitive against iOS?

A I'm not on the Android side.

Q So you don't know one way or the other?

A I don't understand those business models, no. THE COURT: I'm sorry. Could you say that again. THE WITNESS: I don't understand the business models on the Android side. I just handle Apple. BY MR. SEVERT:

Q Well, and, again, $I$ won't be specific; but am $I$ right that Google's payments to Apple are substantially larger than the payments that Google makes to all of its Android partners combined?

A I don't have the numbers on the Android side.

Q Okay.
You just don't know?
A I just don't know.
Q Okay.

And the revenue -- the search revenue share payments that Google pays to Apple, that's -- those are funds that Google is providing directly to its principle rival on mobile; is that fair?

A You could look at it that way.

Q Okay.
And, to your knowledge, there hasn't been any discussion at Google about whether Apple is using that money to improve iPhones?

A I'm sure they are.

Q Well, does Google impose any conditions on the way
Apple spends its search revenue share?
A No. Absolutely not.

Q So it must be that Google has determined the benefits to Google Search are worth whatever costs of propping up iOS?

A Repeat that question.

Q Sure. Sure.
So it must be the case that Google has determined that the benefits to Google Search are worth the cost of propping up Android's biggest rival; is that right?

A I don't think we have ever looked at it that way. We sell our search to many different competitors. It's an independent product.

Q Okay. Fair enough.

Let's talk a little bit more about the Google relationship with Apple.

Google first licensed its search engine for use in
Safari, $I$ think you said, in 2002; is that right?
A That's right.

Q And at that time, there was no revenue share at all, right?

A Yes.

Q But it wasn't until 2005 that Google became --

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began paying revenue share to Apple; is that right?
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A That's correct.

Q And am I right that the revenue share amount is the subject of negotiation between Apple and Google?

A Yes.
Q And would I be correct that, at least today, Apple has a lot of leverage in its negotiations with Google?

A Yes.

Q And would it be fair to say that Apple has no leverage -- negotiating leverage than any other distributor of Google Search?

A I don't know all of the distribution partners, but they are a strong compete -- negotiator.

Q Can you think of another search partner who might have more leverage than Apple?

A Not offhand, no.

Q But as you said, it's a negotiation, right?

A Correct.
Q There's a back-and-forth?

A Yes.

Q You understand their perspective; they understand yours, and you try to reach a deal, right?

A That's usually how it works.

Q Okay.
And no one gets everything they want, right?

A That's correct also.

Q And that includes Google, right?

A Correct.
Q And that includes Apple, right?

A Correct.
Q Okay.
And as part of the ISA negotiations, Google has sought commitments for Google to be the default search engine in Safari; is that right?

A Yes.

Q And Apple has asked for limits on its obligation to make Google the Safari default; is that right?

A I don't think that's correct, no.
Q Okay.
Well, let me ask you this. Do you understand that Apple would prefer total flexibility on whether and when to make Google the search default in Safari?

A I think they have a lot of flexibility today.
I have seen them wanting no commitments at all. But, again, it's a negotiation.

Q Sure.

But in terms of the negotiations with Google, Apple has asked for no commitments, correct?

A They asked for no commitments in the 2002.
Q Let's take a look at a couple of documents.

THE COURT: Why don't we take a break. It's about 12:25. So instead of turning to the document, it might be a good time to take a break for lunch.

MR. SEVERT: Absolutely.
THE COURT: All right. So we will resume at 1:30. Ms. Braddi, I will just ask you to please not discuss your testimony with anyone during the lunch break.

THE WITNESS: Thank you.

THE COURT: See everybody at 1:30.
COURTROOM DEPUTY: All rise. This Court stands in recess.
(Recess from 12:25 p.m. to 1:30 p.m.)

## C ERTIFICATE

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 10, 2023


William P. Zaremba, RMR, CRR

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| 4915/5 4918/19 | $14906 / 2490$ | 11:08 [1] 4902/22 | 2200 [1] 4832/19 |  |
| BY MR. SAFTY: [1] | 06/21 | 11:25 [1] 4902/16 | 2307 [1] 4832/9 | -16/18 |
| 4876/18 487 | 49 | 11:26 [1] 490 | 23rd [1] 4878/ |  |
|  | 18 | 12 [4] 4849/21 489 | 24 [1] 4925/6 | $4839 / 244840 / 64840 / 8$$4841 / 15$$4841 / 17$ |
| 4892/4 4894/20 4896/3 | 4/18 4916/24 | 4897/13 4925/25 | 25th [1] 4903/12 |  |
| 4901/11 4902/3 4903/4 | 4917/1 4917/5 4917/8 | 120 [1] 4838/2 | 2793 [1] 4832/20 | $\begin{aligned} & 4842 / 104843 / 44843 / 8 \\ & 4843 / 174843 / 20 \end{aligned}$ |
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| 4907/23 49 |  |  |  | $844 / 6 \text { 4844/10 }$ <br> 844/17 4844/17 |
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| BY MR. SEVERT: [8] | 4923/10 4923/16 |  |  | 845/11 4845/13 |
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| COURT REPORTER: <br> [1] 4924/19 |  | 15th [1] 4925/9 <br> 18th [1] 4894/25 <br> 19 [3] 4831/7 4880/25 | 354-3249 [1] 4833/10 | $\begin{aligned} & 4855 / 184855 / 24 \\ & 4856 / 19 \\ & 4856 / 19 \end{aligned}$ |
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| MR. HOFFMAN: [18] | 48 |  | 4867/14 4867/20 | 4868/20 4870/14 |
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| 48888/8 4890/14 $4913 / 20$ | 4846/9 4846/13 4847/2 | 4876/23 4877/5 4877/9 | 4875/25 4917/19 | 71/21 4889/17 |
|  | 4847/6 4847/22 | 4877/16 4877/18 | 4942/21 4942/25 | 90/20 4890/24 |
| $1448$ | 4847/22 4849/16 | 4877/24 4877/2 | agencies [1] 4849/14 | 91/1 4891/7 48951 |
|  | 4850/12 4851/11 | 4879/22 4880/12 | agency [1] 4840/21 | 05/5 4914 |
|  | 4851/11 4851/1 | 4881/15 4881/24 | aggregate [1] 4887/16 | 926/7 4926/8 4 |
| 4836/17 | 4853/1 4853/15 4854/1 | 4883/23 4886/14 | ago [3] 4876/22 4885/4 | 4935/19 4946/1 |
|  | 4857/3 4858/11 4862/8 | 4887/2 4887/5 4887/19 | 4886/20 | although [2] 4842/2 |
| $30 / 124886 / 13$ | 4862/22 4870/19 | 4889/2 4889/17 4920/2 | agree [11] 4852/2 | 4901/15 |
| uired [2] 4868/1 | 4875/3 4889 | 4920/3 4920/4 492 | 4858/21 4874/23 | always [10] 4841/22 |
| 4886/9 [2] 486 | 4889/21 4894/11 | 4935/15 | 4891/22 4910/4 4913 | 4844/2 4849/6 4849/8 |
| acquiring [2] 4871/22 | 4898/13 4901/16 | advance [1] 4884/18 | 4913/20 4914/12 | 49/10 4849/24 |
| 4893/3 [2] 487 | 4901/18 4901/19 | advantage [1] 4910/15 | 4919/10 4921/18 | 556/1 4856/2 4893/2 |
| acquisition [58] | 4906/14 4906/15 | Advertise [1] 4905/14 | 4942/10 | 36/5 |
| 4841/7 4841/10 4842/3 | 4906/15 4906/16 | advertisements [4] | agreed [2] 4893/10 | always-on [5] 4841/22 |
| 4842/5 4842/6 4842/7 | 4906/18 4906/23 | 4877/2 4890/20 4891/1 | 4934/24 | 4844/2 4849/6 4849/10 |
| 4849/6 4853/8 48 | 4906/23 4906/25 | 4891/10 | agreement [7] 4930/9 | 4893/20 |
| 4853/16 4853/22 | 4909/15 4916/13 | advertiser [1] 4870/19 | 4930/12 4932/10 | am [15] 4882/25 |
|  | 4920/5 4920/10 | advertisers [11] | 4932/22 4934/18 | 384/16 4897/17 |
| 55/6 4856/6 4858/8 | 4928/10 4 | 4851/22 4865/1 | 4934/21 4935/5 | 9/19 4925/9 |
| 4859/5 4859/8 4859 | 4935/23 | 2/20 4892/2 | agreements [1] | /14 4928/4 |
| 4859/15 4859/16 | Adam [3] 4832/6 | 4894/7 4909/18 | 4932/ | 30/16 4931/6 |
| 4859/24 4860/22 | 4923/17 4924/11 | 4909/20 4910/16 | ahead [1] 4915/6 | 32/15 4933/3 |
| 4860/23 4861/18 | Adam Severt [2] | 4912/2 4914/5 4914/11 | aided [1] 4833/11 | 4936/15 4943/8 49 |
| 4861/21 4865/14 | 4923/17 4924/11 | advertising [44] | air [1] 4893/22 | Amazon [10] 4837/20 |
| 4868/13 4868/14 | adam.severt [1] | 4837/10 4840/20 | al [2] $4831 / 34835$ | 4926/21 4927/2 4928/1 |
| 4875/11 4877/12 |  | 843/15 4843/2 | alias [3] 4895/1 | 4928/7 4929/6 |
| 4879/18 4886/22 | add [3] 4860/10 | 4843/22 4844/11 | 4895/10 4895/13 | 29/13 4929/16 |
| 4904/12 4905/5 4905/8 | 4873/22 4888/6 | 4844/12 4844/17 | all [52] 4835/2 4835/13 | 29/22 |
| 4906/4 4906/10 | addresses [1] 488 | 4845/4 4845/12 | 4835/15 4836/4 4837/9 | Amazon's [1] 4928 |
| 4906/14 4906/15 | adhere [1] 4891/3 | 4845/16 4848/ | 40/4 4840/6 4840 | amended [3] 4932/16 |
| 4906/18 4908/8 | adhering [1] 4891/5 | 4849/11 4849/1 | 40/19 4841/13 | 933/3 4933/5 |
| 4908/12 4908/25 | admit [6] 4878/19 | 4855/5 4855/19 | 4842/25 4843/1 4845/5 | AMERICA [3] 4831/3 |
| 4910/6 4910/23 4911/4 | 4884/20 4895/23 | 4856/19 4858/21 | 4846/15 484 | 4835/7 4835/20 |
| 4911/11 4911/24 | 03/17 4907/17 | 4858/24 4859/18 | 4848/15 4853/1 485 | Americas [1] 4832/19 |
| 4912/4 4915/18 | 4912/16 | 4860/3 4863/5 4869/16 | 4862/2 4870/13 | AMIT [2] 4831/9 4835/3 |
| 4915/23 4916/1 | admitted [10] 4834/ | 4870/6 4904/17 | 4872/20 4875/12 | mit P [1] 4835/3 |
| 4921/18 4921/19 | 4834/15 4851/16 | 4904/23 4905/20 | 4875/21 4876/10 | among [4] 4854/24 |
| 4921/24 4922/12 | 4851/18 4878/22 | 4905/25 4906/3 4906/4 | 4878/22 4887/8 | 996/22 4929/13 |
| 4922/18 | 4884/22 4895/25 | 4906/4 4906/5 4906/7 | 4889/22 4891/3 | 34/12 |
| acquisition-drive [7] | 4903/20 4907/20 | 4908/8 4909/1 4909/12 | 4894/12 4894/19 | mongst [1] 4913/15 |
| 4908/8 4908/25 4910/6 | 4912/18 | 4909/24 4910/23 | 4900/8 4900/13 | mount [15] 4866/12 |
| 4910/23 4911/4 | ads [85] 4840/9 | 4912/25 4914/12 | 4902/20 4902/23 | 4867/10 4867/25 |
| 4911/11 4911/24 | 4843/16 4845/9 | 4915/8 4917/16 4921/7 | 4902/24 4914/19 | 868/3 4877/5 4877/1 |
|  | 4846/24 4847/11 | 4921/24 | 4918/17 4922/13 | 79/20 4879/22 |
| 4854/18 4855/15 | 4847/14 4847/20 | advice [2] 4927/13 | 4923/6 4923/10 | 80/11 4880/13 |
| 4862/3 4877/9 48 | 4847/25 4848/6 4848/6 | 4938/4 | 4923/2 | 4886/12 4887/2 |
| 4904/18 4904/24 | 4848/9 4848/10 | advisor [9] 4872/19 | 4931/18 4932/3 | 4933/11 4936/3 4945/3 |
| 4917/25 | 4848/17 4848/18 | 4872/21 4924/17 | 4939/13 4939/14 | analysis [2] 4937/6 |
| across [14] | 4848/19 4849/5 4849/5 | 4924/20 4924/21 | 4943/10 4944/23 | 938/24 |
| 4857/25 4860/21 | 4849/17 4851/8 | 4927/7 4928/3 4929/12 | 4945/12 4946/19 | alyze [2] 4844/3 |
| 4861/3 4861/17 | 4851/21 4853/14 | 29/17 | 4947/5 4947/10 | 4/18 |
| 4880/25 4887/8 | 4856/21 | affect [2] 4868/7 | All right [1] 4835/ | Android [8] 4942/18 |
| 4889/19 4892/20 | 857/1 48 | 12 | up [1] $4887 / 8$ | 4942/2 |
| 4893/21 4894/1 |  |  | allow [1] 4851/22 | 42/24 4943/1 49 |
| 4915/16 4927/25 | $4860 / 1548$ | 4852/17 4867/9 |  |  |
| 4941/8 action [5] 4835/7 | 4860/16 4860/18 | 4880/16 4902/15 | alone [1] 4905/19 | $\text { Ann [4] } 4835 / 21$ |

## A

Ann... [3] 4836/10 4836/22 4913/9 annual [1] 4856/14 another [11] 4844/6 4854/11 4860/2 4863/18 4864/14 4865/19 4878/1 4900/15 4901/19 4920/7 4945/14 answer [7] 4842/19 4864/11 4882/13 4889/18 4901/25 4938/8 4942/14 answered [2] 4901/8 4903/6
Antitrust [2] 4832/7 4832/13
any [21] 4837/18 4847/4 4851/15 4861/15 4870/1 4876/7 4882/1 4889/12 4890/13 4899/4 4900/24 4908/19 4909/6 4913/17 4914/19 4919/9 4923/7 4939/18 4943/23 4944/2 4945/10
anybody [1] 4892/12 anymore [1] 4901/15 anyone [3] 4902/18 4938/4 4947/7
anything [5] 4835/15 4845/6 4878/6 4901/19 4902/5
anywhere [1] 4919/19
Apologies [1] 4884/1
App [3] 4873/5 4873/10 4874/15
appear [3] 4851/21 4852/20 4880/15
APPEARANCES [2] 4831/11 4832/22
appears [3] 4846/16 4882/9 4921/1
Apple [46] 4873/5
4873/9 4874/14 4926/21 4927/2 4929/6 4929/13 4929/16 4930/9 4930/17 4930/23 4931/5 4931/7 4931/17 4931/20 4931/20 4931/25 4932/4 4934/16 4934/20 4934/24 4935/3 4935/24 4936/3 4936/3 4936/12 4936/18 4936/20 4938/20 4939/19 4940/17 4943/6 4943/9 4943/18 4943/24 4944/3 4944/18 4945/1 4945/4 4945/6 4945/9 4945/15 4946/4 4946/11 4946/16 4946/23
Apple's [12] 4930/5 4930/18 4931/11

4936/16 4937/1 4937/6 4939/7 4939/20 4940/17 4942/11 4942/18 4942/21
applicable [4] 4909/13 4909/15 4909/25 4911/6
applying [1] 4877/13 appreciated [1] 4925/1 approach [14] 4835/23 4845/21 4858/22 4876/13 4898/3 4898/11 4898/21 4899/1 4899/9 4900/5 4900/6 4900/7 4900/14 4928/13

## approaches [2]

 4858/20 4858/23 approximately [1] 4889/15apps [1] 4873/7
April [2] 4880/19 4881/15
are [118] 4835/16 4836/24 4837/7 4838/8 4838/10 4839/15 4840/11 4841/8 4842/10 4842/16 4842/18 4842/21 4842/24 4844/1 4844/16 4845/2 4846/23 4847/20 4847/25 4848/10 4848/12 4848/19 4849/12 4851/2 4852/23 4852/24 4854/9 4855/18 4855/23 4856/10 4856/21 4856/24 4857/1 4857/5 4857/12 4857/18 4857/20 4859/3 4859/3 4859/21 4860/7 4860/18 4861/2 4861/5 4861/13 4863/12 4863/14 4863/15 4863/21 4863/23 4865/2 4865/20 4866/1 4871/25 4872/1 4873/2 4873/7 4874/2 4874/7 4874/8 4877/23 4877/24 4878/5 4882/18 4882/20 4883/12 4883/18 4883/22 4887/19 4889/19 4890/18 4891/5 4893/25 4895/14 4896/22 4898/6 4898/7 4899/17 4899/19 4899/21 4899/23 4900/8 4900/9 4900/10 4900/10 4900/24 4901/21 4903/2 4904/16 4904/21 4909/5 4909/12 4909/18 4912/1 4912/24 4915/17 4915/18

4921/22 4924/14
4926/20 4927/16 4930/4 4934/22 4935/19 4940/16 4941/9 4942/23 4943/9 4943/18 4944/1 4944/6 4944/11 4945/13 area [1] 4925/15 around [9] 4843/16 4857/5 4863/24 4925/22 4925/23 4929/21 4931/19 4931/21 4933/15 articles [1] 4840/7 articulate [1] 4901/14 as [121]
aside [8] 4844/2 4848/15 4856/17 4887/17 4921/4 4931/4 4935/19 4942/9
ask [29] 4838/15 4845/18 4850/2 4850/6 4850/22 4854/21 4855/11 4858/19 4861/15 4862/16 4870/15 4870/22 4873/14 4889/22 4893/8 4902/17 4903/8 4913/12 4918/22 4920/2 4921/5 4924/24 4933/14 4934/20 4938/2 4938/4 4938/13 4946/15 4947/6
asked [12] 4863/3
4876/21 4887/23
4891/12 4916/23
4918/21 4921/11
4921/13 4938/14
4946/11 4946/23
4946/24
asking [4] 4874/2
4883/7 4924/12 4942/2
aspiring [1] 4899/18
assembled [1] 4898/19
assign [1] 4894/10
Assistant [1] 4929/21 assume [1] 4940/19 assuming [1] 4942/1 attached [3] 4850/17 4895/14 4937/8
attaching [1] 4903/12 attachment [6]
4880/17 4895/19
4896/5 4907/9 4907/12 4908/1
attempt [2] 4894/9 4898/13
attention [2] 4928/25
4929/25
attorney [2] 4937/22
4938/10
attorney-client [1] 4937/22
attractive [1] 4913/3
attribution [1] 4894/9
attuned [2] 4891/23

4893/10
auction [4] 4843/15 4876/23 4876/25 4883/24
auction-time [1] 4843/15
audience [16] 4863/24 4863/24 4898/3 4898/11 4898/21 4899/1 4899/8 4900/5 4900/9 4900/12
4900/14 4900/15
4900/18 4900/25
4906/17 4910/11
audience-centric [1] 4900/14
audience-driven [6]
4898/3 4898/11
4898/21 4899/1 4899/8
4900/5
audiences [1] 4899/25
audio [7] 4844/23
4845/6 4862/17
4862/23 4863/4 4863/7 4919/14
August [2] 4894/25 4895/4
auto [1] 4887/11
available [5] 4853/9
4864/25 4866/12 4867/6 4892/23
Avenue [3] 4832/19 4833/3 4833/9 average [4] 4870/23 4879/20 4880/11 4886/12
aware [2] 4915/14 4942/17
awareness [17] 4841/9
4858/12 4859/19
4860/21 4897/2 4905/4 4906/4 4906/15 4906/16 4906/23 4910/21 4912/4 4912/25 4919/5 4919/12 4919/13 4919/22
away [2] 4856/18 4923/3
B
B-r-a-d-d-i [1] 4924/10 back [18] 4863/9 4863/16 4880/20 4882/7 4882/11 4884/1 4884/2 4885/2 4897/18 4901/3 4901/9 4906/6 4910/19 4911/9 4911/22 4934/4 4942/17 4945/19
background [1] 4849/24
backwards [1] 4886/11
bad [1] 4863/3
bank [8] 4842/20
4843/8 4846/5 4846/7
4846/17 4846/19
4866/2 4892/18
banking [2] 4843/19 4854/16
banner [3] 4843/16
4845/9 4849/17
bar [1] 4847/4
Barely [1] 4940/8
Barrett [1] 4833/8
barring [1] 4879/9
base [1] 4905/2
based [11] 4853/8
4857/8 4862/9 4869/3
4881/3 4914/5 4920/1
4920/3 4936/17
4936/23 4937/6
Bates [6] 4850/23
4937/15 4938/17 4938/19 4939/2 4939/10
be [98] 4835/4 4840/24
4846/16 4847/6 4848/20 4849/17 4849/20 4849/22 4851/4 4851/18 4852/16 4853/17 4854/11 4854/23 4856/2 4857/13 4858/11 4863/1 4864/21 4866/4 4866/13 4869/12 4869/20 4869/20
4870/23 4871/3
4871/16 4871/21
$4872 / 194874 / 16$
$4877 / 124878 / 22$
$4872 / 194874 / 16$
$4877 / 124878 / 22$
4880/15 4881/21 4882/9 4882/16
4883/11 4884/22 4885/9 4886/18 4888/3 4889/11 4890/15
4893/15 4893/16
$4893 / 244896 / 23$
$4898 / 144900 / 8$
$4893 / 244896 / 23$
$4898 / 144900 / 8$
4900/13 4900/16
$4900 / 164900 / 25$
$4901 / 154901 / 18$
4900/16 4900/25
4902/25 4903/20
4904/17 4904/22
$4904 / 234906 / 18$
$4906 / 244907 / 20$
4904/23 4906/18
4909/11 4911/5 4912/18 4913/14
4913/18 4914/7 4916/12 4916/20 4917/24 4919/9 4919/13 4920/5
4921/19 4922/7 4924/12 4925/1 4927/14 4928/4
4928/18 4928/18 4930/17 4930/23 4931/16 4931/22
$4931 / 164931 / 22$
$4936 / 14936 / 134938 / 2$
$4942 / 104943 / 84944 / 5$
$4944 / 104945 / 64945 / 9$
4942/10 4943/8 4944/5 4946/8 4947/2
beat [1] 4882/10 became [4] 4867/11
4868/1 4901/16

$\qquad$


$4917 / 24$ 4919/9

4951
24

| B |
| :--- |
| $\begin{array}{l}\text { became... [1] 4944/25 } \\ \text { because [17] 4845/6 }\end{array}$ | 4845/7 4854/9 4855/2 4867/7 4871/1 4887/5 4889/4 4889/10

4893/15 4893/22
4894/12 4897/15
4907/6 4922/2 4935/11 4935/20
been [21] 4837/4
4837/11 4839/19
4866/11 4866/11
4874/15 4877/17
4881/25 4899/2
4899/16 4908/7
4910/14 4910/22
4910/24 4916/18
4920/4 4931/14 4932/3
4932/15 4932/18 4943/23
before [11] 4831/9
4835/25 4843/11
4851/15 4855/24
4886/23 4893/8 4902/9
4923/19 4929/11
4937/10
began [4] 4873/5
4905/25 4906/6 4945/1
beginning [3] 4842/1
4860/8 4915/17
begins [5] 4879/4
4880/19 4904/6
4913/24 4938/17
behalf [5] 4835/12
4876/12 4899/22
4913/8 4913/9
behavior [1] 4893/18
behavioral [1] 4900/17
behind [3] 4880/16
4895/19 4907/12
being [16] 4836/5
4851/16 4856/6
4859/17 4866/14
4869/21 4881/4 4882/5
4883/20 4894/6
4900/18 4901/14
4904/21 4908/25
4923/12 4923/24
believe [14] 4852/25
4855/20 4859/18
4866/19 4867/20
4878/15 4881/4 4888/3
4888/9 4899/4 4905/23
4909/17 4910/11
4912/13
believed [2] 4881/19 4885/9
BELKNAP [1] 4832/18 Bellew [3] 4850/9 4850/11 4850/16 below [3] 4846/6
4852/6 4913/1
BENCH [1] 4831/9
benefit [1] 4910/11
benefits [11] 4852/9
4852/10 4882/4 4882/5 4882/8 4882/10

4882/11 4883/8 4906/17 4944/6 4944/11
best [9] 4846/5 4846/17 4846/19 4866/2 4868/2 4871/4 4883/25 4908/10 4940/11
better [5] 4847/15
4852/3 4871/22 4901/25 4939/17 between [16] 4857/7 4857/17 4862/8 4862/22 4863/1 4863/6 4869/13 4869/15 4869/22 4871/12 4884/1 4898/23 4906/14 4931/17 4934/15 4945/4
beyond [2] 4891/13 4921/10
bid [3] 4846/20
4871/16 4888/7
bidding [2] 4843/16 4881/19
big [3] 4837/19 4889/4 4920/11
Big Mac [1] 4920/11 biggest [3] 4842/21 4855/5 4944/12 binder [19] 4876/13 4878/3 4878/10 4883/1 4884/2 4893/7 4894/23 4895/20 4902/8 4903/8 4907/7 4912/5 4915/4
4928/15 4928/18
4933/8 4933/12 4936/9
4939/15
binders [1] 4928/12
Bing [12] 4840/7
4840/10 4851/22
4854/11 4869/3
4869/11 4869/15
4870/2 4873/1 4875/19 4875/22 4875/24
bit [7] 4839/23 4859/24
4863/9 4866/21
4907/25 4921/6
4944/17
blind [2] 4916/14 4916/21
blue [5] 4880/16
4895/20 4907/12
4941/12 4941/25
blunt [1] 4919/9
board [2] 4899/13 4918/11
bold [1] 4913/24
book [1] 4918/23
boss [2] 4884/14 4912/14
both [16] 4842/24
4847/10 4850/13
4854/16 4859/14
4861/18 4869/23
4872/13 4882/17
4883/12 4890/25 4912/25 4918/11

4922/24 4927/7 4933/12
bottom [9] 4850/16 4880/17 4884/5 4885/3 4896/6 4903/25 4904/10 4913/2 4937/21
box [4] 4896/6 4896/12 4896/16 4920/15
boxes [2] 4933/12 4933/13
Braddi [12] 4923/18
4923/23 4924/4 4924/7
4924/10 4924/24
4928/15 4928/22
4933/10 4936/8 4942/9 4947/6
branch [1] 4901/21
brand [6] 4838/25
4839/1 4839/1 4859/19 4892/17 4912/25
branded [19] 4846/23
4846/24 4846/25
4847/2 4847/6 4847/10
4847/10 4847/13
4853/18 4853/18
4866/2 4866/4 4870/22 4870/23 4870/24
4871/1 4871/8 4871/19 4872/17
brands [7] 4838/25
4898/2 4899/15
4899/17 4911/10
4911/24 4921/24
break [7] 4866/21
4902/13 4902/14
4902/18 4947/1 4947/3
4947/7
bridge [1] 4898/23
briefly [1] 4841/15
broadcast [1] 4883/19 broadly [2] 4911/9 4911/22
Broadway [1] 4832/14 brought [1] 4923/4 browser [4] 4922/8 4930/5 4930/18 4935/9 Bruce [1] 4832/11 budget [10] 4849/19 4856/8 4856/14 4857/22 4857/22
4869/9 4869/16 4876/3 4899/5 4916/17
budgetary [1] 4889/12
budgets [14] 4844/7
4857/12 4863/12
4863/21 4863/23
4864/9 4865/22
4869/13 4869/17
4881/10 4893/17
4917/22 4918/8 4918/9
build [1] 4926/6
built [2] 4863/23 4922/17
bulk [1] 4840/4
bullet [13] 4852/12
4853/7 4853/10
4855/14 4855/22

4879/3 4880/13 4881/1 4883/10 4885/24 4885/25 4904/11 4908/19
bundled [6] 4866/14 4866/18 4867/2 4867/11 4867/15 4867/25
business [47] 4842/11 4842/17 4842/18 4844/5 4844/8 4844/9 4852/25 4854/17 4856/3 4856/8 4856/8 4856/12 4856/13 4858/9 4863/15
4863/18 4871/10 4872/2 4875/14 4875/16 4877/11 4877/23 4880/2 4880/6 4880/9 4880/10 4881/20 4882/21 4887/6 4887/10 4887/18 4887/18 4887/21 4889/7 4889/7 4889/14 4907/14 4910/19 4917/14 4918/6 4918/7 4926/11 4926/11 4928/5 4935/17 4943/3 4943/5
business-case [1] 4856/8
business-unit-by-busi ness-unit [1] 4887/18
businesses [14]
4842/23 4842/25
4843/1 4880/8 4886/16 4887/9 4900/21
4900/23 4918/3 4918/4
4918/5 4918/11
4918/11 4918/13
buy [11] 4843/22
4845/7 4846/10
4846/11 4847/10
4847/13 4848/5
4857/17 4860/4 4873/3 4874/7
buyers [1] 4899/10
buying [10] 4837/12
4839/15 4840/9
4842/10 4843/12
4843/13 4872/24
4872/25 4873/1 4875/3
buys [6] 4843/21
4844/18 4848/10
4856/20 4873/9
4883/19

## c

calendar [1] 4939/3
call [15] 4835/16 4841/23 4845/14 4849/21 4865/7 4865/8 4865/9 4894/8 4906/23 4911/15 4921/23
4927/14 4929/25
4932/14 4936/12
called [9] 4839/18
4839/19 4847/22

4865/2 4895/20 4896/5
4897/20 4926/10 4930/11
calls [6] 4835/20
4923/18 4936/16 4936/22 4937/2 4937/6
campaign [16] 4841/25
4841/25 4849/13
4849/15 4849/23
4857/15 4857/16
4858/3 4861/4 4864/2
4864/18 4896/5
4908/20 4913/3
4918/25 4919/4
campaigns [8] 4840/20
4844/1 4868/17
4893/21 4899/19
4908/3 4908/16
4909/15
can [85] 4838/15
4839/24 4840/7 4840/9
4840/17 4841/10
4842/5 4842/13
4842/13 4843/6
4843/24 4844/10
4845/2 4845/6 4845/7
4845/14 4846/3
4847/24 4848/15
4849/20 4853/8
4853/14 4856/17
4859/16 4859/23
4861/14 4861/15
4861/19 4863/18
4864/6 4865/25
4868/13 4868/17
4870/15 4871/3 4871/7
4871/7 4871/15 4877/9
4881/21 4882/16
4883/11 4887/10
4888/17 4889/8
4890/15 4892/3
4893/12 4893/15
4893/16 4893/22
4897/14 4897/16
4899/23 4900/3 4901/3
4901/15 4904/17
4904/19 4904/23
4905/5 4906/5 4908/2
4912/1 4914/5 4915/24
4916/24 4917/12
4917/20 4918/7
4918/23 4919/13
4919/19 4920/7 4921/4
4922/20 4924/9
4924/25 4931/4
4934/20 4935/6
4938/18 4939/17
4942/9 4945/14
Can you [1] 4888/17
can't [3] 4852/3
4909/19 4942/6
cancelable [1] 4883/22
cannot [1] 4908/16
capabilities [1] 4914/4
capacity [5] 4840/8
4840/9 4872/13 4873/6
4921/25
capture [4] 4841/19

| C |  | 4898／6 4898／23 | Colorado［3］4832／11 |  |
| :---: | :---: | :---: | :---: | :---: |
| capture．．．［3］4841／19 4841／24 4845／6 | $\begin{aligned} & \text { CFO [2] } \\ & 4864 / 22 \end{aligned}$ | $\begin{aligned} & 4898 / 24 \text { 4900/9 } \\ & 4900 / 134900 / 15 \end{aligned}$ | $\begin{array}{\|l} \text { 4832/12 4832/14 } \\ \text { COLUMBIA [1] 4831/1 } \end{array}$ | comple |
|  | CH［1］ 483 | 5／3 4912／24 | column［5］4896／5 |  |
| 4842／20 4843／5 4843／7 | chain［2］4850／ | 4918／25 4919／13 | 4896／11 4896／16 | ［1］4901／24 |
| $4843 / 74843 / 74847 / 8$ | 4850／7 | 4920／25 4922／14 characteristics［2］ | columns［1］4918／24 | component［1］4910／5 |
| 4859／2 4866／3 4871／4 | challenge［1］4899／17 challenges［3］4905／17 | characteristics［2］ | columns［1］4918／24 combination［3］ | computer［1］4833／11 computer－aided［1］ |
| 4872／6 4872／16 | $\left.\right\|_{4909 / 17} ^{\text {chang }}$ | characterization［1］ | $\left\lvert\, \begin{gathered} \text { combination [3] } \\ 4893 / 194894 / 16 \end{gathered}\right.$ | computer－aided［1］ |
| 4875／15 | change［14］4857／9 | 4880/14 |  |  |
| 75／17 4877／13 | 4862／23 4866／11 | charge［2］4838／1 | combined［1］4943／11 | conceived［1］4913 |
| ／54888 | 4867／9 4867／14 4868／7 | 4839／25 | 2／3 | 退 |
| $\begin{aligned} & 4880 / 84882 / 34882 \\ & 4904 / 124905 / 5 \end{aligned}$ | 4869／2 4869／4 4877／2 | chart［7］4873／17 | 54／11 4879／10 | 4891／18 |
| 4908／12 | 4877／22 4887／24 | 4896／21 4897／6 | 4895／14 4927／10 |  |
| cards［10］ | 4888／4 4889／13 4916／3 | 4918／24 4940／2 4940／4 | 4927／13 |  |
| 4842／16 484 | changed［2］4863／7 | 49 | comes［3］ | ceptual［2］ 489 |
| 4843／4 4843／6 484 |  |  |  |  |
| 4854／15 4859／3 488 | $\begin{array}{\|c\|c\|c\|} \text { changes [9] } \\ 4881 / 21 \end{array}$ | 退1／7 4842／7 4843／5 | 4868／17 4900／20 | 4934／24 |
| 4905／15 | 4883／12 4888／1 | 483／7 4846／7 4846／18 | ／2 | conditions［3］ 489 |
| care［4］4852／21 | 4888／15 4888／19 | 仿 | coming［4］4837／15 | 4934／22 4944 |
|  | $8 / 2$ | ／4 | 4918／3 4918／11 4927／7 | conduct［2］4908／25 |
|  | channel［49］ | 4858／20 4859／1 | commentary［1］ | 4937 |
| 37／14 4837／19 | 48 | 4859／15 4860／4 | 4874／18 | fident |
| 4891／17 4892／1 4892／7 | 4841／23 4841／23 | 4861／20 4866／3 | commercial［4］ | 4890／13 |
| 4911／9 4911／22 | 4843／25 4845／4 484 | 4872／18 4873／2 48 | 4849／16 4934／4 493 | confused［1］4845／1 |
| Carr［1］4832／13 | 4852／13 4852／16 | 4873／23 4894／6 4894 | 4934／17 | Congratulations［1］ |
| case［10］4836／15 | 4853／2 4853／3 48 | 4897／12 4897 | commitments［8］ | 4837／16 |
| 4848／9 4856／8 486 | 4853／6 4854／11 | 4899／22 4901／17 | 4882／16 4882／19 | CONNO |
| 4878／9 4880／15 4900／2 |  | 4913／8 4913／11 | 4883／11 4883／18 | 4876／12 |
| 4905／5 4913／18 | 4856／11 4860／2 | chase．com［4］ 48 |  | sequen |
| 4944／10 |  | chase．com［4］4855 | 4946／23 4946／24 | 4888／4 4888／25 |
| Cassidy［4］ |  | $49$ | common［4］4859 4863／17 4892／11 | 4889／13 4909／13 consider［3］ 48 |
| 50／2 4 | 4897／2 4897／3 4897／4 | checking［3］ | 4892／1 | consider［3］ 4859 |
| 4855／11 | 48 | 4872／6 4877／12 | commonly［2］4891／21 | consideration |
| catastrophic［1］ <br> 4864／17 | 4898／20 4899／1 4899／9 | chief［4］4837／2 4837／6 | 4891／22 | 4860／22 4905／4 4912 |
| categories［2］ 48 | 4899／20 4900／6 4900／7 | 4837／8 4838／18 | communications［1］ | considered［4］ |
| 4909／20 | 4900／18 4900 | choice［1］4930／23 | 4931／17 | 4881／25 4906／9 |
| category［6］4889／ | 4910／21 4913／3 4913／3 | chose［1］4935／4 | communities［1］ | 27／17 4929 |
| 4890／3 4892／15 | 4917／15 4920／7 | Chrome［1］4922／8 | 4915／12 | considering［1］4899／5 |
| 4892／21 4922／25 | 4920／14 4921／8 | circumstances［2］ 4879／10 4886／23 | companies［8］ 487 | considers［2］4887／7 |
| 49 | 4922／12 |  |  | 4887／21 |
| cause［2］4888／15 | 4898／20 4899／1 | clarification [1] | $4927 / 164927 / 22$ | 83/ |
| caution［1］ 4 | 4900／6 | 38／16 | 4929／13 | stitution［1］ |
| Cavanaugh［3］ | iven | clarified | company［9］ 4838 |  |
| 32／17 4835／10 |  | clarify［3］4902 |  | $\begin{aligned} & \text { raine } \\ & 19 \end{aligned}$ |
| ＋ | $\begin{gathered} \text { channels [53] } 4 \\ 4840 / 244841 / 8 \end{gathered}$ | clear［5］4854／23 | 4913／17 4927／25 |  |
| caveat［1］4919／8 | 4841／24 4843／2 | 4867／18 4888／3 4890／5 | 31／19 | 4881／23 |
| center［2］4832／14 4903／25 | 4843／23 4844／1 | 9／11 | company＇s［2］4842／1 | nstructs［2］ |
| centric［6］4898／2 | 4844／12 4844／16 | click［3］ 485 |  |  |
| 4898／20 4899／1 489 | 4848／25 4849／12 | 6／19 4922／20 | comparab | consume |
| 4900／6 4900／14 | 4849／14 4852／23 | clicking［1］4857／5 | 4861／21 | 4832／12 4842／ |
| CEO［3］4884／17 | 4853／1 4854／25 4855／3 | clicks［1］4879／11 | compare［2］4861／15 | 43／4 4843／8 48 |
| 4884／18 4912／13 | 4856／20 4858／21 | client［1］4937／2 | 4886／19 | 43／19 4852／13 |
| certain［13］4858／1 | 4858／24 4859／4 | clients［1］4838／2 | comparing［1］4877／15 | 52／16 4852／12 |
| 4858／1 4858／2 4865／22 | 4859／10 4859／17 | close［1］4915／3 | compelling［1］ | 4853／2 4854／1 |
| 4877／23 4887／24 |  | closer［1］4838／2 | 48 | 4854／15 4854／16 |
| 4888／5 4888／12 | 4863／23 4864／3 4864／4 | clothing［1］4848／2 | compete［2］4942／21 | 4872／8 4892／16 |
| 4909／14 4911／7 4927／9 | 4864／9 4870／10 | CO［1］4832／15 | 49 | 4898／14 4909／25 |
| 4934／22 4936／17 | 48 | coag．gov［1］ 4 colleague［1］ | competitive［5］ | $4913 / 14921 / 244923 / 2$ $4923 / 5$ |
| 4842／21 | 18 | collect［1］4889／21 | 4942 | consuming |
| 1／3 4859／5 |  | collectively［3］ | itor［1］ 4 | － |
| C | $\begin{aligned} & 4894 / 104896 / 12 \\ & 4896 / 234897 / 23 \end{aligned}$ | $\begin{aligned} & 4873 / 24 \text { 4874/10 } \\ & 4887 / 21 \end{aligned}$ | competitors［1］ $4944 / 14$ | contact［2］4927／12 4931／11 |


| C |
| :---: |
| contain [5] 484 |
| 4847/4 4848/1 486 |
| 4865/14 |
| container [1] $4871 / 14$contains [1]cese |
|  |  |
|  |
| 4934/20 |
| content [6] 4852/24 |
| 4879/15 4900/19 |
| 4915/15 4915/16 |
| 1/14 |
| context [9] |
|  |

4855/18 4875/1 4878/9 4879/16 4880/1 4909/7
4909/9 4914/10
continue [2] 4856/9 4916/16
continued [2] 4833/1
4929/20
continues [1] 4904/11
contracts [1] 4881/22
control [3] 4893/25
4894/2 4894/3
convenience [1]
4878/11
conversation [2]
4844/4 4884/18
conversion [2] 4838/14 4863/16
conveys [1] 4896/22
Cook [1] 4933/24
cookieless [1] 4899/6 Cooperation [1] 4932/21
copy [2] 4845/25 4850/3
core [6] 4852/6 4852/9
4852/10 4874/19
4874/23 4883/7
corner [1] 4880/18
corporate [2] 4915/11
4915/11
correct [38] 4862/4
4862/6 4862/25
4864/15 4877/9
4879/13 4880/7
4883/24 4883/25
4884/16 4887/22
4898/18 4908/13
4910/2 4910/3 4919/5
4925/8 4925/11
4929/19 4930/10
4930/13 4930/19
4932/20 4933/25
4934/2 4935/16 4938/5 4940/24 4941/21 4945/2 4945/6 4945/18 4946/1 4946/3 4946/5 4946/13 4946/23 4948/3
correctly [3] 4863/10
4870/21 4890/12
corresponding [2]
4896/12 4896/16
cost [15] 4857/9
4862/9 4863/7 4868/12 4868/14 4868/15

4872/19 4879/17 4879/18 4886/9 4886/22 4887/6 4887/20 4917/25 4944/11
costs [6] 4862/23 4863/8 4865/14 4871/8 4879/10 4944/6 could [30] 4836/20 4848/18 4851/13 4857/15 4858/18 4864/3 4864/13 4867/3 4875/21 4877/12 4878/3 4884/2 4893/7 4893/8 4897/10 4900/16 4901/18 4902/8 4903/24 4905/3 4905/11 4907/7 4911/5 4912/5 4920/5 4924/24 4926/7 4926/23 4943/4 4943/21
couldn't [3] 4893/23 4905/13 4942/14
Counsel [9] 4835/13 4835/15 4838/15 4858/18 4902/9 4903/2 4906/13 4914/18 4924/23
countries [1] 4934/21 country [1] 4935/1 couple [3] 4907/5
4937/16 4946/25
course [2] 4864/6 4901/12
court [13] 4831/1
4833/6 4833/8 4835/2
4836/20 4836/21
4840/17 4842/5
4847/24 4902/13
4902/21 4902/24
4947/10
cover [2] 4847/18 4893/22
COVID [5] 4880/25
4881/2 4881/6 4881/11 4886/24
COVID-19 [2] 4880/25 4881/6
CPA [5] 4868/18
4871/13 4871/13
4879/12 4879/16
created [1] 4858/13
creating [2] 4840/6 4851/5
creative [2] 4849/13 4849/14
credit [27] 4839/5
4839/6 4842/16
4842/17 4842/20
4842/20 4843/4 4843/6 4843/7 4843/7 4843/7 4843/18 4847/8
4854/15 4859/2 4859/3
4866/3 4871/4 4872/6
4872/16 4875/13
4875/15 4875/17
4877/13 4880/6 4880/8 4905/15
credits [1] 4894/10 criteria [1] 4910/10 cross [4] 4834/4
4859/22 4876/17 4921/10
CROSS-EXAMINATION
[1] 4876/17
cross-section [1]
4859/22
CRR [2] 4948/2 4948/8 current [5] 4837/1
4838/14 4839/9 4882/4 4924/16
customer [12] 4877/12
4879/21 4880/12
4882/12 4886/13
4890/15 4891/19
4894/6 4901/17 4915/19 4921/21
4922/15
customers [9] 4847/21
4861/20 4871/23
4882/5 4882/10 4893/2
4897/23 4910/8 4915/10
CV [1] 4831/4

## D

D.C [6] 4831/5 4832/3

4832/8 4833/4 4833/9
4923/4
dabbling [1] 4860/12 data [5] 4890/15
4891/9 4899/24
4900/22 4914/3
Date [1] 4948/7
dated [1] 4895/21
David [1] 4832/6
day [5] 4831/7 4845/13 4849/9 4887/11 4915/9 deal [3] 4934/4 4934/5 4945/22
deals [1] 4931/25
decided [1] 4849/15
decision [2] 4880/23
4890/6
decision-making [1] 4890/6
decisions [3] 4880/19 4890/9 4900/22
deck [3] 4938/2
4938/16 4939/3
decks [3] 4937/5
4937/8 4937/10
decline [1] 4879/22
declining [1] 4886/14
decrease [5] 4865/22
4879/12 4880/13
4880/24 4881/4 decreased [1] 4886/8
deep [2] 4850/17 4850/19
default [7] 4930/4 4930/18 4935/8 4935/11 4946/8 4946/12 4946/17
Defendant [2] 4831/7 4833/2

DEFENDANT'S [9] 4834/15 4878/23 4884/23 4886/21
4894/22 4896/1
4903/21 4907/21
4912/19
Defendant's Exhibit 659 [1] 4886/21
Defendant's Exhibit
660 [1] 4894/22
define [3] 4842/7
4853/22 4875/14
defined [1] 4868/14
definition [5] 4843/13
4851/7 4851/13 4852/2
4852/6
definitive [1] 4916/16
degree [3] 4856/5
4872/2 4872/4
deliver [8] 4853/19
4853/19 4877/6 4877/9
4889/16 4890/20 4891/9 4898/13
delivered [1] 4887/5
delivering [1] 4887/20
demand [15] 4841/6
4841/17 4841/19
4841/24 4852/13 4852/16 4852/19 4853/2 4853/3 4853/6
4854/17 4858/12
4894/13 4915/14 4917/21
demographics [1] 4914/6
demonstrative [2]
4845/19 4848/16
Denver [1] 4832/15
department [16]
4832/2 4832/7 4832/12 4838/9 4839/17
4839/22 4839/25
4840/1 4840/2 4840/6
4840/15 4840/18
4841/4 4841/5 4850/9
4850/12
departments [7]
4838/5 4838/6 4838/10
4839/9 4839/12
4839/16 4840/1
departments' [1] 4838/8
depend [2] 4872/8 4921/19
depending [3] 4877/11 4887/9 4892/15
depict [1] 4940/16
depicted [1] 4940/12
deposition [1] 4836/16
describe [1] 4847/24
described [7] 4848/25
4853/1 4854/25
4858/20 4864/3 4881/5
4888/20
descriptor [1] 4848/20
designated [1] 4849/2
designed [2] 4862/2
4919/9

Despite [2] 4885/25 4886/7
detail [2] 4916/19
4916/20
details [2] 4867/2 4888/3
determined [2] 4944/5
4944/10
determines [1] 4889/8
determining [1] 4900/8
develop [2] 4849/14
4891/8
developed [2] 4863/22
4890/15
dictate [1] 4849/20
did [13] 4841/19
4868/7 4869/3 4870/5 4876/24 4888/15 4888/19 4905/16
4905/22 4916/12
4921/7 4936/17
4940/11
did you [1] 4869/3
didn't [8] 4867/15
4867/19 4868/4 4870/1
4901/18 4916/8 4938/4 4938/13
differ [1] 4900/5
difference [4] 4861/17
4861/23 4906/12 4906/14
different [38] 4838/4
4838/9 4838/10 4841/9
4841/11 4843/20
4843/22 4844/12
4844/16 4845/8
4848/24 4848/25
4854/25 4856/24
4856/25 4857/16
4857/18 4857/25
4858/7 4858/15
4858/21 4866/6
4869/20 4870/6
4870/10 4889/23
4890/8 4890/9 4892/22
4892/23 4893/3
4894/10 4894/17
4901/22 4917/18
4925/12 4927/22
4944/14
differently [5] 4856/22
4859/24 4860/18
4863/10 4910/18
differing [2] 4891/25
4892/8
digital [42] 4839/12
4839/16 4843/16
4844/19 4845/3 4845/3
4845/6 4845/7 4845/12
4845/13 4845/14
4846/9 4848/18
4848/19 4849/17
4856/21 4857/3 4857/8
4857/14 4857/24
4858/5 4858/11
4858/16 4859/4
4859/14 4862/14
4864/5 4889/14

\author{

}

/5
$\qquad$
$\qquad$


/1

17
/9

4954
4954
-
$\square$
$\qquad$



| G | go | 19 | handle [1] 4943/6 | 4916/15 4916/21 |
| :---: | :---: | :---: | :---: | :---: |
| gap [1] 4898/23 | 4863/9 4871/16 4886/5 | 4943/24 4944/2 4944/5 | happen [1] 4864/18 | 4917/10 4917/23 |
| gas [1] 4882/8 | 4863/9 4871/16 4886/5 | 4944/6 4944/10 | happened [2] 4867/9 | 20/4 4921/15 |
| gave [2] 4868/9 4883/2 | 4893/23 4897/14 | 4944/11 4944/17 | 4867/9 | $21 / 16$ 4922/1 |
| gears [1] 4864/24 | 4897/17 4897/18 | 4944/19 4944/25 | happening [3] 4858/1 | 4922/18 4923/19 |
| neral [3] 4913/8 | 4900/8 4909/2 4918/2 | 4945/4 4945/7 494 | 4863/14 4911/14 | 25/5 4927/11 |
| 4917/12 4934/25 | 4918/25 4924/12 | 4946/2 4946/7 4946 | happy [2] 4911/20 | 4928/5 |
| generally [8] 4837/11 | 4928/16 4933/10 | 4946/12 4946/17 |  | 4928/10 4929/8 |
| 4891/15 4898/12 | 4933/14 4934/8 49 | 4946/22 | hard [7] 4859 | /18 |
| 4909/14 4913/15 | /13 4939/18 | Google LLC [1] 4835 | 4906/18 4906/22 | 932/18 |
| 4913/21 4914/11 | 4940/24 | Google's [9] 4877/3 | 4916/16 4922/11 | 4943/12 4944/13 |
| 4933/1 | good [30] 4835/4 | 4884/18 4888/13 | 4939/14 4940/9 | 4945/15 4946/18 |
| nerate [1] 4915/14 | 4835/6 4835/13 | 4926/17 4930/8 4931/6 | hardworki | 946/19 |
| generated [2] 4863/12 | 4835/19 4836/13 | 4939/19 4940/16 | 4859/5 | haven't [1] 4892/11 |
| 4877/16 | 4836/18 4836/19 | 4943/9 | Harrison [2] 4926/ | having [7] 4838/24 |
| generates [1] 4935/24 | 4846/18 4846/20 | got [8] 4838/25 4841/2 | 4926/14 | 4844/4 4881/3 4884 |
| generation [8] 4896/6 | 4852/4 4852/5 4854/ | 4862/25 4866/5 4897/5 | has [40] 4837/14 | 4900/16 4905/1 |
| 4896/18 4896/24 | 4868/24 4874/17 | 4897/19 4907/1 4941/4 | 4841/11 4842/1 4842/2 | 4923/25 |
| 4897/3 4897/7 4919/6 | 4876/11 4876/19 | govern [1] 4890/15 | 46/5 4849/2 4852/18 | he [3] 4878/17 4884/18 |
| 4920/21 4921/1 | 4876/20 4877/1 | governance [3] 4890/5 | 4861/20 4866/11 |  |
| geo [4] 4920/1 4920/3 | 4894/10 4894/11 |  | 487 | [1] 4 |
| 4920/5 4920/9 | 4900/22 4913/12 |  | 4885/13 4887/1 |  |
| geo-based [2] 4920/1 | 4923/15 4923/16 | 4905/24 | 4890/14 4897/11 | 4885/21 4897/1 |
| 20/3 | 4924/7 4924/8 4930/23 | Graham [2] 4833/2 | 4899/4 4899/16 | 4897/22 4898/1 4904/1 |
| geographically [1] | 4947/3 | 4876/12 | 4904/16 4904/23 | 904/10 4908/2 |
|  | Go | Graham S | 4910/14 4910/2 | 08/16 4934/1 |
|  | 4835/4 4835/ | 4876/12 | 4910/24 4916/1 | 940/22 49 |
| 843/12 | 4836/13 4836/18 | graph [3] 4939/23 | 4917/1 4918/6 4926/16 | headline [1] 4866/4 |
| 19 | 4836/19 4876/11 | 4939/24 4940/1 | 4928/15 4932/15 | health [2] 4885/5 |
| 4865/5 | 4876/19 4876/20 | great [6] 4872/1 4872/4 | 4932/17 4937/1 4941/5 | 4913 |
| 4871/7 4895/13 | 4923/15 4923/16 | 4893/16 4893/16 | 4944/5 4944/10 4945/7 | hear [1] 4889/23 |
| 4920/10 4921/13 | 4924/7 4924/8 | 4923/4 4933/18 | 4945/9 4946/7 4946/11 | heard [3] 4870/18 |
| 4922/9 | goods [1] 4923 | greater [6] 4870/1 | 4946/23 | 2491 |
| gets [1] 4945/25 | GOOGLE [94] | 4870/23 4871/22 | bro [ | vily [1] 4890 |
| getting [2] 4874/1 |  | 4875/20 4918/12 | hasn't [1] | held [3] 4837/3 |
| 4918/1 | 4840/7 4840/10 4846/4 |  | - |  |
| Gil [4] 4850/7 4850/8 | 4851/22 4854/11 | grew [1] 4868/5 |  | 4861/25 |
| 4878/13 4879/24 | 484/25 4865/5 4869/3 | grocery [1] 4882/8 | 4837/18 4839/12 | 4893/16 |
| Gil Fishman [3] 4850/7 | 4869/7 4869/9 4869/15 | ground [2] 4892/11 | 4839/16 4839/17 | 898/23 4915/1 |
|  | 4870/1 4870/5 4873/1 | 4892/19 | 4839/18 | 4922/22 4931/19 |
|  | 4873/19 4873/23 | group [3] 4857/23 | 4844/1 4844/8 4844/19 | 931/20 4935/20 |
| Gill | 4874/10 4874/18 | 4895/7 4926/18 | 4845/25 4850/3 | 942/20 |
| 3 | 4874/19 4874/23 | grow [1] 4859/19 | 4852/15 4854/11 | Ipful [3] 4893 |
|  | 4875/20 4876/ | growth [2] 4889/9 | 55/3 4857/13 | 907/3 4909/9 |
| 65/25 4880/3 | 882 | 4889/11 | 857/25 4859 | lping [2] 489 |
| 4902/13 4916/16 | 83 | gsafty [1] 4833/5 | 4860/8 4864/18 4865/7 | 4894/12 |
| given [1] 4899/20 | 4883/23 4884/9 4885/5 | guarantee [1] 484 | 4867/15 4867/19 | ps [2] 4918/ |
| gives [2] 4909/7 | 4888/16 4888/21 | guess | 4869/18 4871/12 |  |
| 4916/14 | 4889/2 4901/21 | guide [1] | 4874/15 4876/5 4878/8 |  |
| glitch [1] 4911/ | 4914/16 4916/4 | guides [2] 4844/9 | 4879/15 4880/5 | $\left\lvert\, \begin{array}{r} \text { nere } \\ 485 \end{array}\right.$ |
| global [2] 4924/17 | 4924/15 4925/5 | 4895/16 | 4881/25 4882/19 | 855/19 4874 |
| go [17] 4843/11 4845/1 | 4925/18 4927/9 | H | 4882/20 4883/18 | 79/14 4879/23 |
| 4858/1 4876/4 4884/2 | 4927/17 4927/23 |  | 4883/19 4885/17 | 4880/10 4881/5 |
| 4894/2 4894/5 4901/3 | 4927/24 4929/21 | had [19] 4837/4 | 4887/14 4889/15 | 4881/11 4881/12 |
| 4915/6 4915/20 4922/9 | 4930/16 4931/2 | 4867/10 4868/22 | 4890/5 4890/8 4891/17 | 4881/17 4882/24 |
| 4922/11 4930/22 | 4931/12 4931/17 | 4868/23 4882/7 4888/4 | 4892/7 4893/12 | 4886/5 4886/11 4898 |
| 4934/4 4937/10 | 4931/21 4932/13 | 4889/3 4889/7 4889/10 | 4893/22 4893/25 | 900/10 4906/19 |
| 937/14 4939/10 | 4934/16 4934/2 | 4895/6 4908/7 4908 | 4/1 4894/2 | $11 / 144912$ |
| go ahead [1] 4915/6 | 4934/24 4935/3 4935/8 | 4908/11 4908/14 | 11 4897/14 | 13/14 4919 |
| goal [4] 4896/5 | 4935/11 4935/12 | 4916/20 4918/10 | 4898/2 4898/22 | 4923/12 4936/2 4 |
| 4896/23 4899/10 |  | 49251/12 49 |  | 4940/13 4942/10 |
| 4918/25 485 | 4 | half [2] 4873/4 4937/11 | 490 | high [5] 4871 |
| goals [2] 4858/3 4919/4 | 49 | hand [3] 4836 | 4910/22 4911 | 4881/17 4934/ |
|  | 4942/12 4942/20 | 4923/20 4928/11 | 4911/16 4911/24 | 4934/17 493 |
| $4917 / 20$ | 4942/24 4943/10 | handed [1] 4928/15 | 4914/14 4916/8 | high-performing [1] |


| H | 4844/19 | I understand［1］ 4845／12 | $4932 / 8 \text { 4932/8 }$ | indicating［1］4879／20 <br> individual［2］4922／16 |
| :---: | :---: | :---: | :---: | :---: |
| high－performing．．．［1］ | huh［4］4928／21 4933／21 4939／25 | 4845／12 <br> I want［7］4855／2 | $\begin{aligned} & \text { i.e [1] 4851/22 } \\ & \operatorname{lan}[3] 483 / 64835 / 19 \end{aligned}$ | individual［2］4922／16 $4934 / 21$ |
|  | $\begin{aligned} & 4933 / 2 \\ & 4940 / 3 \end{aligned}$ | 4872/18 4894/2 4921/5 | $4836 / 14$ | individually［2］4888／6 |
| higher［4］4868／18 4871／13 4871／18 | human［1］4893／18 | 4928／17 4928／25 | ian．hoffman［1］4832／9 | 4913／9 |
| 871／21 | I | 4929／25 | idea［5］4860／24 | industry［5］ |
| acking［1］4906／13 | I am［1］4909／19 | 4901／13 4901／14 | 4921／5 | 4889／21 4899／2 |
| ［1］4926／16 | I assume［1］4940／19 | I will［1］4947／6 | identified［1］4910／24 | influenced［1］ 486 |
| es［1］4895／13 | I believe［9］4866／19 | I work［1］4890／4 | identifying［1］4898／19 | influencing［1］ |
| ［1］4877／1 | 4867／20 4878／15 | I would［1］4899／23 | imagery［2］4848／1 | 4894／13 |
| ting [2] 4906/18 | 4888／3 4888／9 4899／ | I wouldn＇t［1］4898／16 | 4848／21 | inform［3］4865／18 |
| ［12 | 23 4909／17 | I＇d［8］4864／24 4878／19 | images［1］4857／4 | ／21 |
| 4835／19 4836／14 | 4912／13 | 4902／13 4903／8 | imagine［3］4864／2 | information［6］ |
| 4876／21 4879／17 | I can［1］ 48 | 4903／17 4907／17 | 4871／3 4887／10 | 865／12 4866／ |
| 882／22 4883／2 4883／7 | I can＇t［3］4852／3 | 16 | impact［2］4909／19 | 4890／13 |
| 4887／23 4891／12 | 4909／19 4942／6 | l＇ll［11］4842／19 | 4915／11 | 4930／11 |
| 4898／8 4903／6 | I couldn＇t［1］4942／14 | 4845／18 4850／2 | implement［1］4881／ | informed［2］4877／6 |
| Hoffman＇s［1］4888／20 |  | 4850／22 4 | implementation［1］ |  |
| home［10］4844／24 |  |  |  | informs［1］4900／22 |
| 45／7 4862／17 |  | 4873／1 | implies［1］4940／12 |  |
| 2／23 4863／2 4863／4 | 4881／25 4882／19 | 4942／6 |  | 4863／13 |
| 4863／7 4887／11 | 4886／16 4889／12 | $7 / 15$ | 872／12 48907 | itiated［ |
| 4899／21 4923／13 | $3409$ | 4843／12 | 49076 | 52／19 |
| Honor［28］4835／6 | 4919／9 4933／5 4939／1 | 4854／22 4859／13 | impose［1］4944／2 | Ink［3］4843／7 4880 |
| 4835／18 4835／23 | 4944／13 4945／12 | 4861／14 4863／9 | impression［2］ | 4880／5 |
| 4836／6 4845／21 |  | 4863／10 4867／18 | 4865／15 4865／15 | inquiry［2］4888／1 |
| 4851／17 4876／9 |  | 25 4883／5 | ［2］ 4935 |  |
| 4876／11 4878／19 | I guess［1］4874／5 | 4883／3 4883／5 4885／14 | 4943／25 | insights［1］ |
| 4878／21 4884／20 | l guess［1］4874／5 | $\begin{aligned} & 4886 / 2 \text { 4886/5 } 4 \\ & 4890 / 124896 / 9 \end{aligned}$ | improvement［2］ $4885 / 134885 / 16$ | Instagram［19］ $4840 / 254860 / 10$ |
| 4894／21 4895／23 | 4865／7 4876／5 4879／15 | 4901／13 4905／13 | inappropriate［1］ | 4903／7 4905／11 |
| 4903／3 4903／17 | 4885／17 4894／1 4932／2 | 4909／2 4911／20 | 4882／6 | 4905／15 490 |
| 4903／19 4907／17 | 4946／19 | 4916／2 | inbound［1］4927／8 | 4909／12 4909／1 |
| 07／19 4912／16 | I haven＇t［1］4892／11 | 4918／22 4924／11 | include［6］4839／5 | 4909／24 4910／5 49 |
| 4912／17 4914／15 | I hope［1］4918／15 | 4924／12 4924／15 | 4919／13 4919／18 | 4910／16 4910／21 |
| 4921／9 4923／9 4923／15 | I just［2］4943／6 | 4924／17 4924／20 | 4919／20 4923／1 4932／9 | 4910／24 4911／5 |
| 4928／13 492 | 4943／15 | 4924／23 4926／23 | include Chase［1］ | 4911／12 4911／25 |
| Honor＇s［1］4902／6 | I know［1］4921／6 | 493 | 4839／5 | 4915／9 4922／5 |
| HONORABLE［3］ | I mean［6］4860／23 | 4933／14 4934／8 | includes［2］4946／2 | instance［1］4864／21 |
| 4831／9 4835／3 4902／24 | 4864／6 4864／17 4900／4 | 4 | 4946 | instances［3］4841／1 |
| 47／17 | 4913／10 4917／13 | 4937／14 | income［5］4939／20 | 4842／2 4904／16 |
| ／14 4918／1 | I say［1］4841／19 | 4939／12 4939／18 | 4940／6 4940／17 | d［1］ |
| pefully［1］4922／10 | I should［2］4838／10 | 4940／24 4941／12 | 4941／17 4942／12 | stitution［1］ 4859 |
| hopes［1］4910／9 |  | 4941／25 4942／2 | incomparable［3］ | institutions［3］ |
| hoping［1］4852／23 |  | 4942／14 4943／1 4943／4 | 4861／1 4861／5 4861／13 | 4859／23 4909／14 |
| horizon［1］4899／7 | 4837／15 4841／14 $4852 / 4852 / 154859 / 1$ |  | incongruent［1］ | 8／7 |
| how［39］4837／3 | 859／1 | I＇m going［7］ 484 |  | ／18 |
| 4837／11 4837／14 | 退5／3 4859／7 4859／1 | 4863／9 | increase［7］4858／12 |  |
| 4838／1 4849／10 |  | 4918／22 4924／12 | 4879／11 | 4854／6 4854／8 |
| 4849／20 4858／20 | 4864／17 4865／4 48 | 4933／10 4940／24 | 4887／18 4917／13 | intercept［1］4852／24 |
| 4858／23 4860／18 | 4866／3 4866／13 | I＇m just［2］4909／2 | 4917／15 4918／9 | intercepting［1］4854 |
| 4863／13 4863／21 | 4866／15 4866／25 | 4941／12 | increased［2］4887／2 | interchangeable［1］ |
| 4863／25 4865／17 |  | I＇m not［10］4886／5 | 4918／13 | 4920／6 |
| 4865／18 4866／1 4866／6 | 4869／18 4872／1 4880／7 | 4933／14 4934／8 | incrementality［3］ | interest［5］4869／8 |
| 4868／8 4868／16 | 4882／20 4883／17 | 4935／22 4936／1 | 4904／6 4904／15 | 4869／10 4872／10 |
| 4871／12 4875／14 |  | 4939／12 4939／18 | 4904／21 | 4917／19 4918／13 |
| 4882／20 4889／8 |  | 4942／2 4942／14 4943／1 | indeed［2］4933／20 | terested［1］4894／4 |
| 4889／16 4890／15 | 4892／4 4892／9 | I＇ |  | ［1］4914／6 |
| 994／10 | 4892／20 4893／14 |  | inde |  |
| 895／16 4900／5 | $4894 / 214895 / 6$ | I＇m sorry［10］4841／20 |  | lly |
| 4901／14 4902／9 | 4901／13 4903／5 4907 | 仿／22 4883／3 48 |  | 4899／24 |
| 4913／15 4913／20 | 4916／7 4917／6 4921／1 | 05／13 4924／23 | 退退 4834／13 | Internet［1］4843／16 |
| 4914／11 4915／7 |  | 4926／23 4937／14 | indicate［3］4886／6 | interpret［1］4852／18 |
| 4915／18 4922／9 4925／5 | $\begin{aligned} & 4922 / 14928 / 14935 / 7 \\ & 4940 / 124944 / 20 \end{aligned}$ | 4938／8 4943／4 <br> I＇m sure［1］4944／1 | 4927／21 4933／13 | interrupt［3］4858／18 4911／13 4916／24 |
| 4939／1 4945／23 | 4940／12 4944／20 <br> 4946／18 |  |  | 4911／13 4916／24 introducing［2］4910／9 |
| how－to［1］4895／16 huge［2］4842／24 | I thought［1］4868／25 | $\begin{aligned} & \text { I've [6] 4837/4 4837/4 } \\ & \text { 4837/19 4928/15 } \end{aligned}$ | $\begin{aligned} & \text { indicates [2] 4904/11 } \\ & 4927 / 22 \end{aligned}$ | introducing［2］4910／9 4918／12 |


|  | 4847/18 4848/3 | jon.sallet [1] 4832/16 | /25 | kind [10] 4848/12 |
| :---: | :---: | :---: | :---: | :---: |
| 1/23 | 4852/19 4852/20 | Jonathan [2] 4832/11 | 84/23 | 4858/14 4864/8 |
| 23 | 4853/3 4856/3 4856/25 | 4835/10 | 4854/25 4857/1 | 5/16 488 |
|  | 4858/25 4859/7 | journey [8] 4853/20 | 4857/14 4857/14 | 2/23 4887 |
| invested [1] 4887/2 | 4859/17 4859/20 | 4854/2 4891/19 | 4858/4 4858/18 | 9/4 49 |
| investment [15] | 861/3 4863 | 4915/20 | 4859/17 4860/12 | 4916/15 |
| 4844/7 4857/13 | 4864/17 4867/4 | 4922/3 4922/15 | 4861/1 4861/21 4865/9 | kinds [3] 48 |
| 4857/14 4863/18 |  | 4922/24 | 4867/18 4867/20 | 3/22 4 |
| 4875/4 4875/6 4877/18 |  | JP |  | kit [1] 4895/14 |
| 4880/24 4881/15 |  | JP | 4871/22 4873/5 4880/7 |  |
| 4881/23 4886/7 |  |  |  |  |
| 4887/14 4887/19 | 4883/1 4883/1 4889/25 |  | 4902/12 4902/17 | 4859/3 4863/13 4864/7 |
| 4889/1 4889/9 |  | $4877 / 23$ 4879/21 | 4903/5 4908 | 1861 |
| investments [3] | 4891/22 4891/23 | 4880/11 4880/23 | 4909/6 4909/11 | $4867 / 14871 / 15$ |
| 4844/7 4877/24 4903/7 | 4893/15 4894/9 | 4881/4 4881/14 | 4911/16 4913/8 | 71116 4876/24 |
| invests [4] 4873/23 | 4894/15 4897/20 | 4881/18 4884/9 | 4913/19 4914/14 | 81/22 4881/25 |
| 4873/23 4877/5 | 4898/16 4899/13 | 4886/13 4887/2 4887/6 | 4919/10 4919/18 | 82/20 4886/16 |
| 4891/14 | 4899/13 4899/17 | 4887/24 | 4928/25 4930/20 | /16 |
| invoked [1] 4891/19 |  | 888/4 4888/16 | 4932/14 4933/7 | 4890/5 4894/2 4894/14 |
| involved [4] 4837/12 | 4915/20 4916/15 | 4890/14 4891/14 | 4934/20 4939/15 | 4900/17 4900 |
| 4931/17 4931/22 | 4919/10 4919/19 | 4893/1 4893/3 4895/1 | 4939/16 4941/8 | 4900/18 4901/4 4901/8 |
| 4932/3 | 4920/5 4921/23 4922/2 | 4895/4 4898/18 | 4941/12 4942/2 4942/4 | 4901/16 4901/23 |
| iOS [4] 4942/18 $4942 / 214942 / 25$ | 4922/5 4922/5 4922/6 | 4903/12 4904/16 | 4942/5 4942/17 4943/6 | 4909/20 4916/18 |
| 4944/7 | 4922/11 4922/16 | 4904/23 4905/7 | 4943/14 4943/15 | 917/20 4921/1 |
| iPhones [1] 4943/25 | 4926/21 | 4907/10 4908/7 | 4947/6 | 4927/10 4927 |
| is [310] | 931/19 493 | 4908/25 4909/11 | JUSTICE [2] 4832/2 | 4930/1 4930/4 4939 |
| is that correct [1] |  | 4909/23 4910/14 |  | 43/15 4945 |
|  | 4939/16 4940/9 | 4911/23 4912/10 | 4933/19 493 | knowledge [4] 4868/2 |
| 93/5 4897/8 4934/16 | 4940/21 4944/14 |  | K | 4883/25 4908/10 |
| 4934/22 4936/4 | 4947/1 | $1 / 23$ 4884/ | kee | known [2] 4861/20 |
| 4939/20 4941/11 | iterate [1] | 4890/23 4903/6 | 492 | 4863 |
| is | its [24] 4842/3 4849/2 | JPMorgan [34] | Kenneth [2] 4832 | L |
| 4843/5 4862/3 4866/7 |  |  |  |  |
| 4868/4 4895/21 |  |  | 4832/5 |  |
| 99/11 4904/3 49 | 4881/23 4889/1 4889/9 | 4839/1 4841/7 4842/7 | key [4] 4863/13 | $4940 / 5$ |
| 4909/1 4916/9 4919/15 | 4890/16 4910/14 | 4842/18 4843/18 | /17 4910/5 | labeled [3] 4845 |
| 4925/13 4928/23 | 4914/3 4915/7 4918/7 | 4843/21 4844/1 | 4921/22 | 4850/23 4855/15 |
| 4929/2 4929/14 4930/9 | 4935/20 4937/6 | 4848/4 4848/5 4848/10 | keyword [29] 484 | landscape [1] 4914/5 |
| 4931/12 | 4943/10 4943/19 | 4853/4 4856/20 4857/2 | 4863/13 4865/5 | large [5] 4859/21 |
| 4932/4 4932/10 | 4944/3 4944/19 4945/7 | 4858/20 4859/11 | 4865/15 4865/18 | 4861/19 4861/19 |
|  | 4946/11 | 60/4 4873/2 48 | 4865/19 4866/5 | 4899/10 4927/25 |
| 4935/21 4935 |  | 4873/23 4894/6 | 4866/16 4866/17 | large-scale [2] 4861/1 |
| 4936/12 4940 |  |  | 48667/17 4869/7 $4867 / 6$ |  |
| 4941/18 4941/2 |  |  |  |  |
| 4942/13 494 | January | 4915/23 4915/25 |  | 4941/10 4 |
| /1 4946/9 4946 | JBP [1] 4882/21 |  | 48 | 43 |
| is there [5] 4841/3 | JC [1] 4933/7 | 4838/20 4842/10 | 488 | largest [1] |
| 4847/21 4851/15 | JCA [4] 4932/2 | 4851/10 | 4887/24 4888/10 | la |
| 4854/17 4861/23 | 4933/1 4933/3 4933/20 |  | 8/1 | 4838/11 4839/20 |
| ISA [8] 4930/14 | Joan [3] 4923/18 | jschmidtle | 88/19 4888/25 | 104883 |
| 4930/16 4930/20 | 4924/4 4924/10 | 4833 | 4916/3 | 889/15 4898/1 |
| 4932/9 4932/15 | Joan Braddi [2] | JUDGE | keywords [23] 4846/1 | 4905/24 4906/1 490 |
| 5/8 4946/7 | 4923/18 4924/10 | Judicial [1] 4832/14 | 4852/21 4865/20 | 4906/24 4911/1 |
| ish [1] 4906/1 | job [6] 4837/7 4852/20 | July [2] 4878/12 | 65/23 4865/25 | 4916/18 492 |
| ISpionage [1] 4874/6 | 4865/17 4868/8 4875/3 | 4912/10 | 86/1 4866/6 4866/1 | 929/25 4933/2 |
| issue [3] 4877/11 | 4898/22 | jump [1] 488 | 4866/16 4866/22 | 4941/6 |
| $\begin{aligned} & \text { 27/9 4927/11 } \\ & \text { ues [1] } 4936 / 23 \end{aligned}$ | John [2] 4833 | jumping [1] 4884/1 | 67/14 4868/3 4868/7 | late [1] 4906 |
| $\begin{aligned} & \text { ues [1] } 4936 / 23 \\ & 172] \end{aligned}$ | 4835/12 | June [3] 4903/12 | 9/25 4870/1 | er [2] 4841/1 |
| (rould be [1] 4928/4 | John Schm | 4905/7 4907/1 | 70/20 4870/22 | 4905/25 |
| it's [79] 4836/16 | 4835/12 | just [63] 4835/16 | 71/1 4871/25 | latitude [1] 4857/2 |
| 4839/2 4841/22 4842/3 | joining [1] 489 | 8/15 4838/20 | 4881/19 4888/5 4888/7 | LAW [1] 4832/12 |
| 4843/15 4845/ | $\underset{4932 / 21}{ }{ }^{\text {joint }}$ [2] 4882/21 | $\begin{aligned} & 4838 / 224838 / 23 \\ & 4839 / 24841 / 15 \end{aligned}$ | kicked [1] 4922/7 | lawyer [1] 4924/11 layperson [1] 4866/23 |


| L | 4868/18 4869/20 | 4938/9 4938/13 | M | 4890/23 4891/18 |
| :---: | :---: | :---: | :---: | :---: |
| lays [1] 4885/15 |  | LLC [2] 4831/6 4835/8 | M | 4892/7 4898/19 |
| lead [4] 4842/8 | 4882/8 4883/17 | LLP [2] 4832/18 4833/3 | macroeconomic [2] | 4910/6 49 |
| 4853/23 4860/25 | 4883/18 4884/6 <br> 4885/14 4889/22 | locked [1] 4872/18 long [7] 4837/3 | 4881/10 4887/9 | 11/11 4911/25 <br> 13/16 4917/14 |
| 4868/15 | 4893/20 4894/1 4894/7 | 4837/11 4837/14 | made [6] 4838/6 | ketplace [3] |
| leadership [3] 4895/1 4895/9 4895/13 | 4894/8 4894/10 4898/8 | 4849/20 4866/25 | $4839 / 134853 / 9$ $4866 / 124867 / 4$ | 4869/8 4882/18 |
| leading [1] 4897/15 | 4899/6 4899/13 4900/4 | 4866/25 4925/5 | $4883 / 21$ | /13 |
| learned [1] 4875/19 | 4900/11 4901/15 | longer [4] 4881/19 | Maggie [4] 4850/9 | match [1] 4917/21 |
| learning [1] 4900/24 | 4902/13 4903/11 | 4881/20 4902/9 | 4850/11 4850/13 | matches [2] 4886/2 |
| least [5] 4858/23 | 4906/14906/12 |  | 4850/16 |  |
| 4900/23 4917/13 | 4906/14 4912/8 | look [34] 4843/24 | mail [1] 4855/4 | atter [1] 4948/4 |
| 4928/5 4945/6 | 4912/23 4915/3 | 4867/3 4873/14 | main [1] 4901/13 | atters [1] 4910 |
| led [4] 4900/17 4932/6 |  |  | Maine [1] 4833/3 |  |
| 4932/8 4932/12 | $4922 / 24922 / 54923 / 3$ | 4884/16 4885/17 | mainly [2] 4841 | res [1] 4918 |
| left [4] 4904/10 | $4936 / 8$ | 4900/4 4906/12 | 4844/23 | turity [1] 4918 |
| 4939/23 4939/24 | likely [2] 4859/1 | 4906/14 4907/13 | major [3] 4842/12 | x [1] 4876/2 |
| gal [1] | 4930/23 | 4908/15 4918/23 |  | maxes [1] 4875/24 |
| [1] | Lim [23] | 8/23 4928/11 |  | maximum [1] 4870 |
| 4905/14 4905/18 | 4836/4 483 | 4928/16 4928/22 |  | may [33] 4835/23 |
| 4905/19 4909/18 | 4836/13 4836/2 | 4929/6 4929/12 | $1248$ | 836/6 4836/7 483 |
| 4909/25 4910/13 | 4836/23 4836/24 | 4929/16 4933/7 | 901/13 4906/5 | 4845/21 4845/22 |
| 4911/7 | 4876/19 4878/5 4879/2 | 4933/22 4934/3 | 4915/14 4915/15 | 4852/15 4854/10 |
| lending-related [1] | 4885/2 4894/22 4896/4 | 4937/10 4937/11 | 4922/11 4922/19 | 4858/11 4859/23 |
| 4910/13 | 4902/4 4902/17 4903/5 | 4938/16 4939/14 | 4942/24 4946/12 | 4869/20 4872/8 |
| Leslie [3] 4850/20 | $149$ | 14940 | 4946/17 | 4872/19 4876/13 |
| 4884/7 4912/13 | 4907/24 4913/9 | 4941/16 4943/21 | makes [7] 4858/5 | 76/14 4885/17 |
| Leslie Gillin [1] 4884/7 | 4915/7 | 6/25 | 4858/17 4864/25 | 4892/17 48 |
| less [10] 4858/2 |  | looked [3] 4885/4 | 4872/7 4913/2 4936/21 |  |
| 4868/9 4871/8 4872/17 | limitations [1] 4909/11 | 4886/20 4944/13 | 4943/10 | 900/ |
| 4888/5 4889/3 4891/23 |  | looking [13] 4871 | makeup [1] 4849/12 | 4916/15 4916/15 |
| 4891/23 4893/10 | limits [1] 4946/11 | 4881/14 4883/5 4886/2 | making [3] 4883/17 | 17/23 4921/19 |
| 4893/10 | line [20] 4844/4 | /11 4893/24 | 4890/6 4890/9 | 21/19 4924/1 492 |
| let [7] 4863/3 4870 | 4850/19 4863/18 | 94/4 4919/12 | manage [5] 4840/4 | 4928/13 |
| 4913/12 4917/4 4 | 4867/3 4867/3 4867/22 | 4919/25 4933/19 |  | aybe [4] 4838/16 |
| [1189 48 | 4875/14 4875/16 | 1/8 |  | /15 4901 |
| [18] | 4877/11 4880/9 | looks [11] 4846/4 | managed [1] 493 | 4901/21 |
| 4856/19 486 | 4882/11 4888/1 4889/7 | 4851/4 4863/17 | 4839/19 4872/5 | McDonald's [1] |
| 4900/9 4928/1 4928/ | 4889/7 4891/15 | 4874/14 4884/6 | 2/16 | 20/10 |
| 4930/22 4931/5 4933/7 | 4895/10 4912/25 | 4885/14 4899/5 | ages [1] 4840 | [20] 4838/15 |
| 4934/3 4937/11 | 49 | 4903/11 4912/8 | aging [5] 4837/2 | 4842/14 4852/10 |
| 4938/16 4939/2 | 4941/25 | 4912/23 4928/24 | 4837/6 4857/21 | 4863/3 4870/22 4879/6 |
| 4939/10 4944/17 | linear [2] | loop [1] 4889/6 | 4857/24 4928/2 | 880/3 4900/3 4913/12 |
| 4946/25 | 4893/18 | [2] | nner [5] 4881/24 | 咗 |
| level [16] 4865/5 | lines [9] 4842/11 |  | 4900/1 4904/18 | 4920/2 4923/4 4923/25 |
| 4865/15 4866/17 | 4842/17 4842/18 | loss [2] 4869/25 | 4904/24 4912/3 | 27/10 4927/13 |
| 4867/5 4867/6 4867/17 | 4854/16 4877/23 | 4870/5 | many [14] 4838/1 | 4928/11 4937/14 |
| 4888/10 4888/10 | 4880/2 4880/9 4886/16 | lot [12] 4870/14 | 4845/7 4855/23 | 4946/15 |
| 4910/15 4916/19 | 4887/9 | 4872/24 4875/13 | 4863/14 4873/12 | mean [25] 4841/1 |
| 4917/12 4917/21 | lingo [2] 4897/13 | 4889/19 4892/11 | 4894/7 4899/19 | 4841/18 4844/13 |
| 4918/12 4934/16 |  | 4892/14 4892/19 | 4901/22 4911/10 | 846/20 4849/8 |
| 4934/17 4934/20 | LinkedIn [3] 4840/25 | 4900/22 4915/15 | 4911/24 4922/17 | 52/16 4853/13 |
| leverage [6] 4910/20 |  |  | 4927/22 4931/7 | 53/15 4853/24 |
| 4912/2 4945/7 4945/10 | lion's [1] 4837/9 | 4946/18 | 4944/14 | 54/7 4856 |
| 4945/10 4945/15 |  |  | map [1] 4886/17 | 4864/17 4866/24 |
| licensed [1] 4944/19 | listing [2] 4847/22 |  | mark [1] 4938/14 | 867/18 4874/25 |
| lift [1] 4904/7 | listing/6 2 [ $4847 / 2$ | lower/5] 4871/12 | marked [4] 4873/1 | 85/12 4888/23 |
| light [1] 4899/6 like [54] $4838 / 14$ | litigate [1] 4856/11 | 4892/12 4892/17 | 882/23 4928/17 | 900/4 4900/14 |
| like [54] 4838/14 4840/2 4841/23 | little [10] 4839/23 | lowest [3] 4896 |  | 13/10 4917/13 |
| 40/2 4841/23 <br> 41/24 4843/9 | 4859/24 4863/9 | 4896/24 4897/8 | rket [9] 4849 | 4931/16 4941/13 |
| 4841/24 4843/9 484/13 4846/4 4848/2 | 4866/21 4921/6 4925/6 | luggage [1] 4923/3 |  | [1] 49 |
| 4848/2 4848/12 | 4938/18 4939/14 | lunch [2] 4947/3 | 74/25 4894/3 | eaningful [1] |
| 4848/20 4851/4 4855/3 | 4939/17 4944/17 |  | 4934/25 4934/2 | 42/12 |
| $4857 / 34864$ | live [1] 4882/11 Liz [4] 4937/22 4938/6 |  | marketing [13] | means [9] 4842/5 4843/15 4853/17 |
| 4866/15 4868/15 |  |  | 4880/19 4890/16 |  |


| M | 4874/10 4926/21 | /20 | 4850/22 4855/11 | nascent [7] 4844/9 |
| :---: | :---: | :---: | :---: | :---: |
| means... [6] 4855/25 | 4927/2 4929 | 4918/14 4921/16 | 4876/19 4878/5 4879/2 $4884 / 134884 / 17$ | 4856/3 4900/23 |
| 4868/13 4869/14 | middle [3] 4842/1 | 4922/9 4922/14 | 48885/2 4894/22 4895/4 | 4918/13 |
| $4 / 54$ | 4873/16 4908/15 | 4926/24 4927/7 | 4896/4 4902/4 4902/17 | nationwide [1] |
| th | might [15] 4846/10 | 4930/20 4935/12 | 4903/5 4903/24 4907/6 | 4837/18 |
| meant [4] 4868/3 | 4849/22 4866/13 | 4944/17 4945/15 | 4907/24 4913/9 | native [4] 4907/24 |
| $4931 / 2$ | 4869/20 4872/15 | Morgan [1] 4859/15 | 4914/17 4915/7 | 4922/6 4922/18 |
| measure [2] 490 | 4888/7 4892/9 4896/23 | morning [16] 4831/7 | 4923/11 4923/23 | 22/21 |
| $4934 / 25$ | 4901/22 4906/24 | 4835/4 4835/6 4835/13 | 4924/7 4924/24 | nature [1] 4921/20 |
| measured [2] 4896 | 4913/13 4915/18 | 4835/19 4836/13 | 4928/15 4928/22 | navigate [1] 4927/2 |
| 4897/8 | 4920/10 4945/14 | 4836/18 4836/19 | 4933/10 4936/8 4942/9 | navigating [2] 4931/20 |
| easures [1] 4888 | 4947/2 | 4876/11 4876/19 | 4947/6 | 4931/21 |
| mechanical [1] | millions [1] 4873 | 4876/20 4902/13 | Ms. Braddi [9] 4923/2 | [2] 4904/5 |
| 4833/11 | mind [1] 4901/9 | 4923/15 4923/1 | 4924/7 4924/24 | 4904/10 |
| media [61] 4837/2 | minutes [3] 4876/2 | 4924/7 4924/8 | 28/15 4928/2 | nearly [2] 4837/15 |
| 4837/6 4837/8 483 | 4902/11 4902/16 | most [14] 4845/9 | 4933/10 4936/8 49 | 4932/3 |
| 4837/10 4837/12 | mirrored [1] 4842/22 | 48485/7 4852/20 4859/7 | 49 | cessarily |
| 4838/18 4838/19 | mirrors [2] 4869/9 | $\begin{aligned} & 4865 / 20 \text { 4892/21 } \\ & 4898 / 2499 / 15 \end{aligned}$ | Ms. Cassidy [4] 4845/18 4850/2 | 4931/23 |
| 4839/17 4839/18 | mix [2] 4906 | 4910/11 4914/4 | 4850/22 4855/11 | 4847/13 4853/21 |
| $4840 / 144840 / 18$ $4840 / 23 ~ 4841 / 5$ | mobile [4] 4920/1 | 4938/16 4940/20 | Ms. Gillin [2] 4884/13 | 4859/18 4859/1 |
| 4840/23 4841/5 | 4920/3 4920/9 4943/20 | 4941/10 4941/20 | 4884/17 | 4864/7 4865/22 4878 |
| $4841 / 23$ 4842/21 $4843 / 14843 / 244844 / 1$ | mobility [1] 4857/13 | move [10] 4863/1 | Ms. Lim [18] 4836/4 | 88/16 4888/21 |
| 4843/1 4843/24 4844/1 | model [4] 4844/8 | 4863/6 4869/12 | 4836/13 4836/24 | 4891/7 4902/5 4931/1 |
| $4844 / 64844 / 84849 / 2$ $4849 / 124849 / 13$ | 4844/9 4891/19 | 4878/19 4884/20 | 4876/19 4878/5 4879/2 | needed [3] 4867/3 |
| 4849/12 4849/13 | 4935/17 | 4895/23 4903/17 | 4885/2 4894/22 4896/4 | 4890/19 4890/25 |
| 48 | models [3] 4894/8 | 4907/17 4912/16 | 02/4 4902/17 4903/5 | needs [2] 4882/12 |
| 488 | 4943/3 4943/6 | 4922/20 | 4903/24 4907/6 | 4931/2 |
| 488 | moment [8] 4882 | moved [2] 4898/2 | 4907/24 4914/1 | gotiated [1] 4931/2 |
| 4891/17 4892/23 |  | 4899/16 | 4915/7 4923/11 | negotiating [2] |
| 4895/1 4895/7 4895 | 4887/13 4905/1 4905/6 | moving [3] 4864 | Ms. Okrami's [1] | 4932/23 4945/10 |
| 4895/13 4895/21 |  |  |  |  |
| 4896/12 4896/23 |  |  |  |  |
| 4897/13 4898/8 4899/2 | $\begin{aligned} & \text { monetizes [1] } 493 \\ & \text { money [7] 4863/1 } \end{aligned}$ | 4876/21 4879/3 | MSFT [1] 492 | 4946/20 |
| 4899/5 4899/10 | 4863/6 4864/4 4864/13 | 4879/17 4880/10 | much [7] 4861/24 | negotiations [5] |
| 4899/19 4900/12 $4903 / 7$ 4904/2 4907/14 | 4864/21 4936/3 | 4882/22 4883/2 4883/7 | 4871/12 4889/8 | 4932/4 4932/7 4945 |
| 4903/7 4904/2 4907/14 $4908 / 24911 / 104914 / 5$ | 4943/24 | 4886/20 4886/22 | 4897/ | 4946/7 4946/22 |
| 4908/2 4911/10 4914/5 <br> 4918/25 4919/12 | monitor [2] 4936/15 | 4887/23 4888/20 | 4914/17 4923/11 | negotiator [1] 4945/1 |
| 4920/14 4920/25 | 4936/22 | 4891/12 4898/8 4903/6 | multi [1] 4894/9 | net [5] 4853/22 |
| 4921/25 4922/13 | monitored [1] 4937/ | 4916/23 4918/21 | multi-touch [1] 4894/9 | 4856/12 4863/16 |
| 4922/18 | month [1] 4849/9 | 4926/14 4933/2 | multidimensional [1] | 79/11 4893/2 |
| MEHTA [2] 4831/9 | months [2] 4849/18 | 4933/24 | 4859/20 | tting [1] |
| 4835/3 | 305/ | va | Itipl | w [16] 4832 |
| member [2] 4878/15 | more [60] 4837/1 | 4876/7 | multitude [1] 4893 | 42/7 4853/23 |
| 4912/9 | 4838/2 4839/24 | Mr. Cook [1] 4933/24 | must [2] 4944/5 | 6/12 4860/22 |
| mental [1] 4891/19 | 4841/15 4846/13 48 | Mr. Fishman [3] | 4944/10 | 4875/17 4893/25 |
| mentioned [9] 4840/14 | 4859/11 4860/22 | 4888/122 | my [28] 4835/19 | 49910/12 4910/17 |
| 4841/14 4842/16 | 4860/22 4863/20 | Mr. Fishman's [1] | 4837/19 4838/3 4838/6 | 4918/3 491 |
| 4843/11 4843/18 | 4863/20 4866/18 | 4879/3 | 4838/9 4839/7 4844/20 | 4918/12 |
| 4844/21 4845/3 $4846 / 164878 / 15$ | 4866/23 4870/15 | Mr. Harrison [1] | 4851/4 4852/4 4853/13 | news [1] 4894/3 |
| [1] 4833/7 | 4870/25 4871/1 | 4926/14 | 4855/4 4857/23 | next [9] 4835/16 |
| 1] 4833/7 | 4872/15 4873/14 | Mr. Hoffman | 4865/18 4868/2 4868/9 | 4853/7 4887/11 |
| sage [5] 4853/ <br> $4 / 14910 / 1249$ | 4882/11 4886/9 | 4876/21 4879/17 | 4883/25 4888/14 | 4896/11 4913/23 |
|  | 4887/14 4888/16 | 4882/22 4883/2 4883/7 | 4894/11 4900/9 4901/9 | 4929/20 4930/22 |
|  | 4888/21 4889/1 | 4887/23 4891/12 | 4908/10 4911/20 | 4939/2 4939/15 |
| sage | 4894/15 4894/15 | 4898/8 4903/6 | 4923/3 4924/11 | e [1] 4836/1 |
| met [2] 4836/16 | 48 | fman's [ | /13 | [1] |
| 4934/22 |  |  | N |  |
| Meta [4] 4905/17 | 4900/21 4900/23 | Mr. Safty [2] 4916/23 | name [7] 4835/19 | 4851/17 4857/10 |
| 4922/4 4926/21 4927 | 4902/11 4906/1 | 4918/21 | 4836/14 4836/20 | 860/17 486 |
| methodology [1] | 4906/18 4906/19 | Mr. Sallet [1] 4876/7 | 4836/21 4850/9 4924 | 62/21 4862/2 |
| [1] 4924/25 | 4906/22 4907/5 | Ms. [35] 48 | 4924/11 | 4869/5 4870/3 4870/8 |
| mic [1] 4924/25 Microsoft [8] 4873/19 | 4910/19 4911/9 | 4836/13 4836/24 | names [3] 4838/8 | 4875/23 4876/3 4876/5 |
| Microsoft [8] 4873/19 | 4911/22 4915/17 | 4845/18 4850/2 | 4844/12 4874/6 | 4876/9 4878/21 4879/7 |


| N | 4910/24 4911/5 | obsess [2] 4875/6 | 4917/8 4918/20 4919/3 | opposed [6] 4873/12 |
| :---: | :---: | :---: | :---: | :---: |
| no... [39] 4879/15 | 20 |  | 4919/11 4919/17 | 4880/1 4898/11 4899/9 |
|  | 4916/15 4916/21 | obviously [3] 4840/3 | 4919/21 4919/24 | 09/14 4927/24 |
| 81/20 4881/22 | 917/4 4921/23 492 | 4855/3 4890/6 | 4920/13 4920/17 | timization [1] |
| 4882/16 4883/1 | 922/5 4922/6 4922/13 | October [3] 4831/5 | 4920/20 4921/3 492 | 40/13 |
| 4883/11 4884/21 | 4922/16 4923/8 4928/7 | 4886/12 4948/7 | 4923/10 4929/4 | optimize [2] 4857/15 |
| 4895/24 4901/15 | 4929/22 4930/23 | off [4] 4852/3 4858/1 | 4931/24 4933/16 | 4857/25 |
| 4902/4 4903/19 | 4931/18 4931/23 | 4863/15 4911/15 | 4933/17 4934/11 | opting [1] 4900/13 |
| 4905/11 4907/2 | 4933/14 4933/14 | offer [2] 4859/14 | 4936/14 4936/19 | Oracle [2] 4926/21 |
| 4907/19 4907/24 | 4934/8 4935/22 4936/1 | 4910/16 | 4936/25 4937/17 | 4927/2 |
| 4912/17 4913/10 | 4939/12 4939/18 | offered [1] 4909/15 | 4937/20 4938/7 | order [2] 4858/2 |
| 4914/16 4916/2 | 4942/2 4942/14 4943/1 | offerings [2] 4842/12 | 4938/15 4939/2 | 4877/25 |
| 4919/23 4920/16 | 4944/4 4945/16 4947/6 | 4843/9 | 4942/8 4942/1 | ordinarily [1] 4864/7 |
| 4921/14 4921/15 | note [1] 4909/5 | offers [2] 4843/18 | 4943/13 4943/ | organic [4] 4839/14 |
| 4931/23 4934/19 | nothing [1] 4905/2 | 4914/4 | 4943/22 4944/ | 4840/8 4847/17 |
| 4936/23 4938/14 | now [26] 4835/2 | offhand [2] 4851/3 | 4945/24 4946/6 | 851/23 |
| 4943/3 4944/4 4944/22 |  |  | 4946/14 | cally [1] |
| 4945/9 4945/16 | 4845/18 4847/20 | 4837/7 4837/8 4838/19 |  |  |
| 4945/25 4946/13 | 4848/13 4848/17 | Official [1] 4833/8 | omit [1] 4886/5 | $4893 / 174893 / 17$ |
| 4946/19 4946/23 | 4848/24 4850/2 | offline [4] 4864/3 | omitting [1] 4879 | original [1] 4933/3 |
| 46/24 4866/18 | 4850/22 4854/21 | 4864/4 4864/19 | onboarding [1] | other [28] 4837/24 |
| nominal [2] 4866/18 | 4855/23 4856/18 | 4899/21 | 4895/14 | 4842/17 4843/1 |
|  | 4860/9 4864/24 4875/3 | often [8] 4856/11 | once [3] 4856/7 4876 | 4849/11 4849/12 |
|  | 4887/23 4895/13 | 4857/3 4863/25 | 4918/6 | 4852/23 4856/19 |
| 8 | 4900/20 4902/15 | 4892/21 4894/15 | one [41] 4844/4 4852/3 | 4859/4 4859/10 |
| 4866/2 4870/24 4 | 4902/24 4906/19 | 4894/15 4931/22 | 4854/6 4854/7 4863/5 | 4859/10 4859/22 |
| 4871/19 4883/22 | 4916/23 4922/13 | 4939/1 | 4863/16 4864/13 | 4862/17 4863/23 |
| 4917/14 4917/14 | number [17] 4850/2 | oftentimes [2] 4856/3 | 4867/22 4868/12 | 864/9 4870/10 487 |
|  | 60/2 | 4918 | 548 | 4874/5 4874/6 4880/2 |
| 4846/24 4846/25 | //4 4886/9 4913 | Oh [8] 4879/7 4880/4 | 4878/1 4880/3 4882 | 1/23 488 |
| 4847/2 4847/10 | 7/4 4925/12 | 4883/1 4883/3 4901/12 | 4882/17 4883/1 | 93/21 4899/8 |
| 4853/18 4866/2 | 28/16 4932/16 | 4916/25 4937/17 | 7/11 4893/1 | 09/20 4931/18 |
| 4870/24 4871/1 | 34/9 4940/20 | 4942/4 | /77 4898/3 48981 | 4943/2 4945/10 |
| 4871/19 | 4940/21 4941/1 4941/5 | ok | 4898/21 4899/1 4899/9 | others [4] 4841/24 |
| non-business [1] |  |  | 4900/15 4900/25 |  |
|  | /13 4886/4 | 4839/21 4842/9 4843/3 | 4914/14 4921/7 |  |
| nc | 4903/25 4917/10 | 4843/10 4844/10 | 4921/16 4922/1 | 840/19 4841 |
|  | 4939/13 4939/13 | 4844/22 4844/25 | 4926/23 4928/23 | 4841/11 4842/22 |
|  | 4939/19 4941/9 | 4845/10 4846/12 | 4932/21 4932/23 | 4843/8 4843/24 4844/1 |
|  | 4941/18 4941/2 | 4846/22 4847/1 4847/9 | 4935/7 4941/20 | 4844/6 4844/9 4846/20 |
|  | 4943/12 | 4848/23 4850/1 | 4942/24 4943/2 | 4847/4 4847/17 4850/8 |
|  | NW [3] 48 | 4850/14 4851/6 4852/5 | 4945/25 | 4850/12 4852/20 |
| None [1] 4906/9 | 4833/9 | 4853/5 4853/12 | ones [2] 4871/4 4898/7 | 4852/25 4853/1 |
| nonregulated [1] 4890/8 | NY [1] 4832/20 | 4854/14 4854/20 | online [2] 4896/17 | 55/3 4861/2 4863/1 |
| north [1] 4884/1 | 0 |  |  |  |
| t [82] 4840/11 |  |  |  |  |
| 4842/3 4843/1 4845 | 4923/21 | 4860/14 4861/12 | 357/1 | 4869/17 4871/8 4871/9 |
| 4847/4 4848/3 4848/5 | objection [10] 4851/16 | 4862/7 4862/15 | 4859/17 4861/17 | 4871/14 4874/15 |
| 4854/9 4855/4 4857/16 | 4851/17 4878/21 | 4864/10 4864/23 | 4871/4 4881/8 48 | 4875/24 4876/3 |
| 4857/20 4858/6 | 4884/21 4895/24 | 4865/24 | 4897/15 4905/3 4921/1 | 4877/22 4881/9 4882/4 |
|  | 4903/19 4907/19 | 4866/21 | 4921/7 4931/19 | 4882/10 4882/11 |
|  | 4912/17 4921/9 | 4867/13 4867/24 | onwards [1] 4925/21 | 83/19 48 |
| 4/8 486 | 4921/12 | 4868/6 4868/11 4869/1 | opening [1] 4877/12 | 4890/6 4894/9 4898/23 |
|  | objective [3] 4858/16 | 4870/4 4870/12 4872/3 | operate [3] 4841/25 | 4898/23 4900/22 |
| $4867 / 24867 / 64868 / 25$ | 4899/10 4921/17 | 4872/22 4873/13 | 4871/15 4892/15 | 4900/23 4900/25 |
| $4871 / 2448872 / 14874 / 7$ | objectives [4] 4858/15 | 4873/21 4874/9 | operated [1] 4847/5 | 4902/12 4902/13 |
| 4883/1 4883/22 4886/5 | 4860/21 4861/4 | 4874/13 4874/17 | operating [5] 4939/20 | 4905/19 4915/12 |
| 4887/11 4888/15 | 4881/20 | 4875/3 4875/8 4875/18 | 4940/5 4940/17 | 4915/16 4916/17 |
| 4889/4 4893/18 4894/3 | obligation [1] 4946/11 | 4876/5 4876/7 4878/18 | 4941/17 4942/11 | 16/21 4917/2 |
| 4894/15 4894/15 | observation [1] | 4880/22 4884/22 | operations [1] 4895/6 | 26/6 4931/5 49 |
| 4897/2 | 4898/25 | 4901/10 4902/12 | opinions [1] 4889/19 | 44/ |
| 4900/24 4901/14 | observed [4] 4892/22 | 4903/20 4905/21 | opportunities [5] | 4] 4842/1 |
| 4901/15 4902 |  | 4906/2 4906/11 4907/1 | 4885/13 4885/16 | 4 4845/7 |
| 4905/3 4905/ | -4904/23 ${ }^{\text {observes [1] 4877/17 }}$ | $\begin{aligned} & 4907 / 20 \text { 4909/3 } \\ & 4911 / 18 \text { 4916/22 } \end{aligned}$ | $\begin{aligned} & 4910 / 224911 / 4 \\ & 4916 / 15 \end{aligned}$ |  |

out... [17] 4862/23 4863/2 4863/4 4863/7 4875/24 4876/2 4882/8 4885/15 4893/21 4894/2 4895/15 4899/13 4899/21 4906/19 4913/15 4917/4 4928/11 outbound [1] 4927/8 outcome [3] 4894/11 4894/12 4894/17
outcomes [6] 4856/13 4858/9 4877/6 4877/8 4889/11 4916/19 over [12] 4849/17 4863/6 4863/25 4875/2 4889/15 4896/11 4917/1 4925/6 4925/13 4932/16 4935/21 4941/25
overall [1] 4885/5 overlay [1] 4857/4 oversee [3] 4837/23 4838/4 4839/10 overwhelming [2] 4874/20 4874/25 own [5] 4855/3 4864/8 4891/8 4898/23 4938/1 owned [1] 4847/4

## P

p.m [2] 4947/12 4947/12
page [50] 4848/22
4850/16 4850/23
4850/25 4851/7
4851/24 4854/21
4855/10 4857/5
4873/15 4873/16 4877/3 4879/2 4880/5
4880/17 4880/18 4881/17 4883/5 4883/8 4884/5 4884/16 4885/3 4885/21 4896/4 4896/8 4896/9 4897/4 4897/10 4897/13 4903/24
4903/25 4904/1 4904/6 4908/1 4908/15 4909/3 4912/8 4913/23 4918/22 4922/9 4933/22 4933/23 4933/24 4934/4 4934/6 4937/11 4937/15 4937/15 4939/2 4939/12
page 1 [3] 4884/16 4885/3 4912/8
page 10 [1] 4897/10 page 2 [2] 4879/2 4913/23
page 22 [1] 4903/24
page 4 [1] 4933/23
pages [4] 4845/9
4852/17 4857/17
4939/10
pagination [1] 4907/25 paid [116] 4837/8

4837/9 4838/19 4839/13 4839/14 4840/3 4840/4 4840/8 4840/9 4840/14 4840/17 4840/19 4840/20 4840/23 4841/4 4841/6 4841/7 4841/12 4841/19 4841/22 4841/25 4842/21 4842/23 4842/25 4843/1
4843/14 4843/24 4844/1 4844/2 4844/8 4847/19 4849/24 4850/8 4850/16 4850/19 4850/23 4853/18 4854/13 4854/19 4854/19 4854/23 4855/1 4855/5 4856/4 4856/12 4857/12 4857/12 4857/18 4857/21 4857/21 4857/22 4858/5 4858/8 4858/16 4859/8 4859/14 4860/20 4860/20 4860/24 4861/2 4861/3 4861/18 4861/22 4861/24 4861/25 4862/2 4862/20 4863/6 4863/8 4863/12 4863/21 4864/5 4864/7 4864/19 4864/20 4865/9 4865/11 4865/12 4867/1 4867/21 4868/16 4869/19 4872/13 4874/7 4875/6 4875/10 4875/14 4876/3 4877/22 4878/16 4878/17 4879/25 4880/24 4881/9 4881/21 4882/15 4883/10 4883/15 4884/10 4885/4 4886/7 4887/14 4889/8 4891/13 4891/14 4892/9 4892/17 4892/23 4893/20 4898/8 4898/23 4899/5 4904/1 4908/2 4912/2 4918/7
painting [1] 4900/11 pandemic [1] 4882/7 paper [5] 4845/25 4850/3 4882/24 4883/2 4884/2
paragraph [5] 4909/9 4912/22 4929/1 4929/20 4930/1
parlance [1] 4866/24 part [10] 4840/3 4845/9 4848/7 4854/5 4859/7 4888/13 4930/16 4935/22 4936/20 4946/7
participate [2] 4842/25 4929/7
participated [1] 4932/8 percent [34] 4866/16 participating [1] 4883/23
particular [13] 4842/11 4870/19 4870/20 4871/15 4882/3 4892/1 4892/8 4893/1 4896/21 4913/17 4917/15 4938/24 4939/3 partner [16] 4874/6 4874/19 4874/23 4907/14 4922/16 4924/17 4924/20 4924/21 4927/7 4927/20 4928/3 4929/6 4929/12 4929/17 4936/21 4945/14
partners [17] 4869/13 4869/22 4873/17 4874/8 4890/24 4891/3 4891/7 4926/18 4926/20 4927/6 4927/12 4927/17 4927/18 4942/20 4942/24 4943/11 4945/12 partnership [1] 4885/12
partnerships [3] 4924/17 4924/20 4925/15
Parts [1] 4933/2 passage [3] 4880/23 4881/14 4913/24 passed [2] 4884/17 4929/5
past [3] 4920/10 4932/1 4932/16 paths [1] 4893/3 PATTERSON [1] 4832/18
pause [1] 4908/9 pausing [1] 4905/19 pay [3] 4863/15 4872/15 4918/1 paying [2] 4886/13 4945/1 payment [2] 4940/5 4941/16
payments [7] 4939/19 4940/16 4942/12 4942/23 4943/9 4943/10 4943/18 pays [3] 4930/17 4936/2 4943/18 pbwt.com [1] 4832/21 penalty [1] 4883/18 people [8] 4837/24 4838/3 4873/6 4894/2 4894/13 4901/22 4915/14 4926/16 per [9] 4865/14 4868/13 4868/14 4879/17 4879/18 4886/9 4886/22 4917/25 4941/18 perceived [2] 4889/10 4913/20
percent [34] 4866/16
$4866 / 204866 / 20$ 4866/22 4867/4 4867/4 4867/8 4867/11 4867/14 4867/20
4867/23 4868/1
4868/21 4868/21
4868/21 4868/22
4868/23 4869/2 4869/2 4873/8 4873/9 4873/24 4874/2 4874/11
4874/16 4875/2 4876/3 4888/7 4888/9 4888/10 4889/5 4889/5 4916/8 4916/8
percentage [7]
4866/14 4881/17
4939/20 4940/5
4940/17 4941/17
4942/13
percentages [3]
4940/13 4940/14 4942/11
perform [1] 4866/7 performance [16]
4865/4 4865/9 4865/11 4865/13 4866/17
4866/18 4867/1 4867/2 4867/7 4867/21
4867/23 4888/5 4889/9
4899/20 4903/13 4918/9
performing [3]
4865/19 4867/21 4871/25
perhaps [1] 4859/11 period [4] 4849/17 4863/25 4878/1 4917/2
periods [1] 4932/18
permanent [1] 4882/1 person [5] 4836/17
4872/20 4910/10
4917/14 4942/14
personal [2] 4875/13 4875/15
perspective [4] 4885/5
4889/23 4929/7 4945/21
perspectives [1] 4889/24
pertaining [1] 4905/18
phon [1] 4858/9
phone [1] 4932/14
phrase [3] 4891/21
4897/22 4912/23
phrased [1] 4899/15 phrasing [1] 4888/22
picture [1] 4900/11 piece [3] 4882/23 4909/2 4918/1
Pinterest [3] 4840/25 4860/6 4922/14 pivot [1] 4905/3
place [4] 4869/3 4870/19 4882/19 4891/4
placed [2] 4836/2 4923/21

Plaintiff [2] 4832/11 4835/11
PLAINTIFF's [2] 4834/5 4834/10
Plaintiffs [4] 4831/4
4832/2 4836/10 4924/4
Plaintiffs' [1] 4851/19
plan [1] 4882/21
planning [2] 4837/12 4839/19
platform [1] 4905/20
platforms [4] 4860/4
4903/8 4910/6 4915/16
play [3] 4863/9
4863/15 4881/12
players [1] 4869/18
please [17] 4835/4
4835/25 4836/3
4836/20 4878/9 4880/4
4885/18 4901/12
4902/7 4902/17
4902/25 4909/6
4911/21 4912/6
4923/19 4924/9 4947/6
plenty [1] 4912/1
point [17] 4852/12
4858/4 4866/19
4873/11 4879/3
4880/14 4881/1
4883/10 4885/24
4885/25 4894/5 4894/5
4901/13 4905/22
4908/19 4931/11
4936/17
pointing [1] 4861/17
policies [4] 4890/15
4890/18 4890/24 4891/8
portfolio [2] 4842/21 4843/8
portion [4] 4844/19 4877/1 4909/7 4933/13 portions [4] 4879/9 4879/14 4909/5 4911/3 position [1] 4837/1 positions [1] 4837/17 positive [2] 4877/17 4877/25
possibly [1] 4893/23 practice [2] 4837/9 4864/14
practices [1] 4890/14
precise [1] 4942/10
predict [1] 4893/23
prefer [2] 4845/25
4946/16
preliminarily [1] 4835/15
prepared [2] 4845/19 4870/19
present [3] 4860/7 4863/16 4915/9
presentation [3]
4895/20 4903/13 4908/1
presiding [1] 4835/3 pretty [5] 4852/4 4863/19 4864/17

## $\mathbf{P}$

pretty... [2] 4894/8 4917/14
Prettyman [1] 4833/8 previous [3] 4837/17 4880/5 4941/23
pricing [1] 4870/18 primary [6] 4853/2
4854/17 4854/24 4915/22 4915/25 4931/11
principal [1] 4942/18 principle [1] 4943/19 print [8] 4844/24 4849/16 4862/18 4862/23 4863/2 4863/4 4863/7 4899/21 prior [1] 4867/14 privacy [5] 4888/12 4889/17 4889/20 4890/6 4890/19 privies [1] 4891/2 privilege [2] 4937/22 4938/2
probably [3] 4902/11 4925/21 4925/23 problem [2] 4879/7 4907/2
proceed [2] 4836/6 4924/1
proceedings [3]
4831/9 4833/11 4948/4
produced [3] 4833/11 4849/17 4854/1
product [18] 4847/22
4848/3 4848/5 4853/20
4872/6 4893/24
4908/20 4908/21
4910/12 4921/20
4921/21 4922/25
4923/5 4926/6 4927/9 4928/9 4928/10
4944/15
production [3]
4879/11 4886/8 4904/7
products [13] 4839/4
4842/11 4843/17
4848/8 4851/23
4859/22 4893/3
4905/14 4909/25
4910/2 4911/7 4915/13 4917/23
professionals [1] 4913/16
profile [1] 4872/9 profitability [2] 4904/25 4918/14 profitable [7] 4871/16 4887/7 4887/21 4904/18 4904/24 4910/22 4911/4 profitably [1] 4917/21 program [1] 4879/25 programmatic [9] 4839/14 4839/15 4843/12 4843/13 4843/14 4844/20 4857/14 4857/17

4857/23
programmatically [2] 4845/8 4857/24
programs [1] 4855/23 prohibited [1] 4908/21 project [1] 4900/4 projection [1] 4889/10 prominently [1] 4909/17
promote [2] 4851/23 4915/13 propping [2] 4944/7 4944/12
prospects [5] 4861/20 4908/20 4910/4 4910/10 4910/17 protected [1] 4890/19 protecting [1] 4889/17 Protection [1] 4832/12 prove [2] 4856/13 4904/12
proven [1] 4856/7 provides [3] 4871/22 4916/4 4935/8
providing [1] 4943/19 provision [1] 4934/19 provisions [1] 4934/8 public [1] 4936/16 pull [4] 4858/1 4872/20 4880/20 4918/22 pullback [1] 4881/19 purchase [4] 4843/16 4869/10 4891/20 4922/21
purchased [1] 4857/24
purchases [2] 4876/22 4877/2
purchasing [2] 4837/18 4851/10 purpose [4] 4842/3 4849/3 4849/5 4915/22 purposed [1] 4906/15 purposes [2] 4849/1 4921/19
pursue [1] 4910/25
pursued [1] 4911/6
put [14] 4845/18
4848/15 4849/18
4855/11 4856/17
4864/4 4864/22 4891/4 4919/19 4921/4 4931/4 4937/22 4938/17 4942/9

## Q

Q1 [1] 4939/7
Q4 [1] 4939/3
quadrupled [1] 4868/4 quagmire [1] 4918/10 quantify [1] 4861/23 quarter [4] 4940/21 4941/6 4941/10 4941/18
quarterly [4] 4938/20 4938/25 4940/13 4940/14
quarters [1] 4941/23
queries [3] 4935/12

4935/15 4935/19 query [10] 4846/16
4852/18 4852/21
4852/21 4853/17
4853/20 4854/12
4854/13 4865/3 4872/20
question [25] 4838/16
4842/13 4853/13
4858/19 4862/16
4864/11 4868/24
4870/15 4882/13
4888/17 4889/18
4892/3 4901/4 4901/25
4911/20 4913/10
4913/12 4915/24
4929/8 4938/13
4938/13 4940/25
4941/14 4942/15 4944/8
questioning [1] 4877/1
questions [15] 4876/6
4876/8 4876/9 4876/21
4887/23 4888/20
4891/12 4902/6 4903/6
4907/5 4914/16
4921/11 4921/15
4923/7 4924/13
quick [2] 4933/7

## 4934/3

quickly [3] 4845/1
4881/21 4933/22
quite [5] 4871/6
4872/19 4874/15
4912/24 4927/19

## R

radar [1] 4874/15
radio [2] 4844/23 4894/11
raise [2] 4836/1 4923/20
raised [1] 4936/23
Ralph [1] 4832/13
ramp [2] 4882/17
4883/12
ran [1] 4925/17
range [6] 4871/16
4871/17 4871/21
4889/16 4916/10 4917/5
ranges [1] 4868/17
rate [1] 4877/21
rather [4] 4860/20 4870/7 4882/1 4893/4
rationale [1] 4917/13
re [1] 4856/11
re-litigate [1] 4856/11
reach [5] 4861/19
4863/24 4863/25
4899/25 4945/22
reaching [3] 4872/21
4910/8 4910/12 read [14] 4851/13 4879/8 4886/5 4895/13 4909/2 4909/6 4913/19
4933/14 4934/8
4939/14 4939/18

4940/9 4941/12 4942/6 reads [6] 4883/10 4885/4 4896/6 4896/12 4908/19 4914/3
ready [3] 4835/16
4835/18 4903/2
real [1] 4881/9
really [17] 4843/8
4844/9 4854/1 4856/5
4859/4 4871/9 4871/25
4872/12 4893/14
4893/23 4900/7
4900/22 4901/24
4919/8 4921/22
4922/11 4942/6
Realtime [1] 4833/7
reason [5] 4858/7
4859/17 4864/2
4879/15 4936/20
reasons [4] 4862/13
4893/19 4917/18
4922/1
reassess [1] 4882/10
reassessment [1]
4882/2
recall [2] 4876/21
4888/1
receive [2] 4871/10 4875/4
received [7] 4851/19
4878/23 4884/23
4896/1 4903/21
4907/21 4912/19
receives [1] 4887/25
recent [5] 4877/20
4938/16 4940/20
4941/10 4941/20
recently [3] 4860/12
4899/3 4915/17
recess [4] 4902/21
4902/22 4947/11 4947/12
recollection [1] 4881/3
reconfigure [1] 4882/7 record [3] 4841/16 4934/9 4948/3
recorded [1] 4833/11
RECROSS [1] 4834/4
rectangle [1] 4848/21
red [4] 4933/12
4933/13 4941/13 4941/25
redacted [8] 4878/6
4878/7 4879/8 4879/13 4886/8 4909/5 4933/11
4939/12
redactions [3] 4878/7
4886/4 4886/6
redirect [4] 4834/4
4914/19 4915/2 4922/10
reduce [1] 4881/23 reduced [3] 4881/15 4886/1 4886/7
reduction [1] 4882/1
refer [3] 4851/11
4882/21 4898/13
reference [9] 4879/16

4880/8 4881/1 4883/17
4883/20 4912/3
4913/17 4919/19
4930/8
referenced [7] 4866/3
4881/8 4895/10 4898/6
4904/15 4910/14
4916/17
references [1] 4850/16
referencing [2]
4880/23 4913/10
referred [3] 4877/8
4930/14 4932/24
referring [2] 4866/13
4908/24
reflects [1] 4887/19
regard [1] 4858/10
regarding [2] 4861/18
4875/25
Registered [1] 4833/7 regularly [1] 4936/15 regulated [3] 4890/4 4891/5 4905/18
regulation [1] 4909/18 regulations [1] 4909/25
regulatory [3] 4909/13
4910/13 4911/6
relate [1] 4934/15
related [7] 4848/9
4867/7 4882/6 4891/13
4908/21 4910/13
4934/17
relationship [6] 4884/9
4885/5 4926/18 4928/2
4931/7 4944/18
relationships [1]
4931/18
relative [10] 4857/9
4861/16 4862/9
4862/23 4863/7
4865/19 4881/9 4887/2
4889/8 4906/17
relatively [1] 4887/13
relevant [6] 4852/20
4852/25 4889/16
4890/20 4891/9
4898/13
relies [1] 4942/20
remember [4] 4851/3
4882/3 4891/15 4916/5
remind [1] 4848/18
reminder [1] 4853/22
remit [1] 4855/4
render [2] 4857/4
4920/4
repeat [6] 4842/13
4892/3 4904/19
4911/20 4915/24
4944/8
rephrase [1] 4888/17
reply [1] 4938/1
report [7] 4850/13
4865/3 4865/3 4866/20
4903/13 4926/12
4926/13
reporter [6] 4833/6
4833/7 4833/7 4833/8
17

16
$\qquad$
$\qquad$

18

3
/13


2

號




| R | rise [6] 4835/2 4879/11 | 4869/14 4870/21 | 0/3 | series [2] 4857/4 |
| :---: | :---: | :---: | :---: | :---: |
| 4836/21 | /24 4947/10 | 4871/17 4878/6 | 4850/19 |  |
| 02/13 | 4902/24 4947/10 | 4881/14 4883/23 | 4850/25 4851/7 4852/8 | e [3] 4848/25 |
| porting [8] 4850/9 | rival [2] 4943/20 | 4890/14 4898/1 | 4853/10 4855/14 | 9/5 4897/6 |
| 4865/4 4887/24 |  | 4899/17 4900/9 | 4863/10 4869/23 | 1] 484 |
| 4888/15 4888/19 | ROI [8] 4871/11 4875/9 | 4921/7 4924/19 4928/4 | 4874/5 4874/6 4874/21 | 4893/24 4910/12 |
| 4889/1 4889/13 | 4875/11 4875/14 | 4929/16 4930/17 | 4878/12 4879/5 | 4] 483 |
| 6/21 <br> rts [8] 4865/8 | 4875/19 4875/20 | 4939/13 4943/4 4945/9 | 4879/14 4880/18 | 4848/8 4851/23 |
| reports [8] 4865/8 <br> 4865/10 4865/11 | 4877/25 4918/1 | saying [7] 4854/23 | 4881/9 4884/11 4885/7 | 58/23 4859/22 |
| 4865/13 4865/17 | role [7] 4837/3 4837/5 | 4874/5 4886/18 4908/6 | 4885/24 4886/2 | 93/4 4915/13 |
| 4866/6 4866/11 4916/4 | 4841/11 4895/4 4895/6 | 4909/10 4919/8 4942/7 | 4895/17 4896/7 | 4917/23 4926/6 492 |
| represent [3] 4836/14 | 4926/17 4927/5 | says [16] 4846/6 | 4896/10 4896/14 | 26/8 4929/21 |
| 8/7 4901/24 | roles [1] 4925/12 | 4851/8 4852/6 4852/ | 4896 | 9/21 4930/1 |
| ative | rolled [2] 4867/22 | 4854/6 4855/2 | 4904/8 | ion [3] 4831/7 |
| 4/3 | 4886/16 | 17 4874/1 | 4904/13 4906/21 | 4835/3 4902/24 |
| represented | roughy 486 | 4896/17 4912/23 | 4908/4 4908/17 |  |
| 4867/22 | 4867/11 4869/11 | 4934/4 4934/13 4940/5 | 4908/22 4909/22 | 4865/19 4868/16 |
| representing [1] | 4869/17 4876/2 4888/9 | scale [13] 4861/1 | 4913/5 4914/1 4914/8 | 868/17 4937/5 |
| resents [1] 4869/7 | 4925/25 | 4861/7 4861/8 486 | 4917/11 4919/1 | 40/13 |
| request [1] 4929/5 | round [6] 4841/24 | 4861/10 4861/11 | 4921/23 4922/9 4929/9 | sets [1] 4884/1 |
| requests [1] 4936/18 | 4849/9 4856/8 4857/22 | 4861/14 4861/15 | 4929/23 4930/2 49 | setting [3] 4868/4 |
| required [2] 4877/24 |  | 4861/17 4861/19 | 4930/25 4933/11 | 7491 |
|  | 4919/12 4919/25 | 4861/21 | 4934/5 4934/9 4937 | Severt [3] 4832/6 |
| resituate [1] 4903/5 | 4920/21 4921/1 | scales [1] 4861/16 | 4937/11 4937/13 | 4923/17 4924/11 |
| 4891/8 $4892 / 6$ | 4937/12 4940/4 4941/8 | scene [1] 4911/14 | 4937/15 4937/18 | share [20] 4837/9 |
| 1/17 4927/5 | 4941/9 4941/16 | Schmidtlein [2] 4833/2 | 4937/24 4938/20 | 4865/15 4869/9 |
|  | run [4] 4837/8 4847/21 | 4835/12 | 4938/22 4939/3 4939 | 4869/18 4874/20 |
|  | 4908/2 4908/16 | scope [3] 4861/6 | 4939/8 4939/17 | 4874/25 4894/1 489 |
| $\begin{aligned} & \text { pondil } \\ & 54 / 12 \end{aligned}$ | running [3] 4848/21 | 4861/10 4921/10 | 4939/23 4940/2 49 | 30/17 4934/13 |
| ponse [5] 4852/2 | 4926/2 4926/16 | screen [15] 4845/19 | 4940/10 4940/14 | 34/15 493 |
| 4853/17 4853/18 | runs [3] 4850/12 | 4845/24 4847/16 | 494 | $36 / 1$ 4936/2 4942 |
| 88/20 4902/6 | 4878/17 4926/14 | 4848/13 4850/3 | 4941/17 4941/2 | 43/17 494 |
| responsibilities [3] | S |  |  | 44/22 4945/1 4 |
| 4837/7 4925/13 4926/3 | Safari [8] 4922/8 | 4879/14 4918/23 | 6/12 | 4895/15 |
| ibility [1] | 4930/5 4930/18 4935/8 | 4918/23 4928/19 | king [2] 4887/6 | [4] 4850/12 489 |
|  | 4944/20 4946 | 4930/23 4933/12 | 4887/20 | 4921/11 4921/13 |
| rest [1] 4845/13 | 4946/12 4946/17 | screenshot [1] 4846/4 | seemed [1] | e's [1] 4938/9 |
| result [3] 4847/21 | Safe [1] 4923/12 | [1] | seems [4] 4886/18 | et [3] 4880/16 |
| 4870/1 4870/6 | [4] | sealed [1] 4933/13 | 4913/18 4917/14 | 20 |
| ulting [1] 4886/8 |  | ss [1] 4853/ | 4936/13 | shift [9] 4857/7 4862/8 |
| results [6] 4851/24 |  | 3] | [3] | 62/22 4864/13 |
| 4851/24 4852/17 | said [15] 4841/20 | ate |  |  |
| 7/3 4887/6 4887/20 | 4843/5 4844/10 4857/3 |  |  |  |
| ume [3] 4902 | 4861/5 4861/13 |  |  |  |
| 4905/22 4947/5 | 4866/22 4867/16 | 48 | SEM [2] 4839/13 | fting [2] 4856/18 |
| ail [1] 4843/8 | 4928/1 4939/18 |  |  |  |
| return [5] 4863/17 | 4944/20 4945/17 |  |  | shopping [3] 4847/22 |
| 875/4 4875/6 4877/18 | Sallet [3] 4832/11 | 836/3 4923/19 | 4872/7 4901/1 4936/21 | 4848/2 48 |
| 4935/23 | 4835/10 4876/7 | seated [2] 4835/5 | sent [4] 4894/25 | short [1] 4902/13 |
| returned [1] 486 | same [11] 4860/16 | 903/1 | 4903/11 4907/9 | shortcomings [1] |
| rev [1] 4934/13 | 4862/13 4862/16 | second [7] 4850/22 | 4912/13 | 4909/15 |
| rev share [1] 4934/13 revealing [1] 4881/13 | 4862/19 4887/12 | 4850/25 4854/5 | sentence [6] 4854/5 | shortly [1] 4930/20 |
|  | 4888/22 4889/6 | 4864/24 4879/6 4880/3 | 4880/19 4885/3 4886/6 | should [3] 4838/10 |
| $4934 / 15495 / 19$ | 4922/16 4940/21 | 4885/21 | 4904/5 4930/22 | 4860/8 4928/18 |
| 4935/23 4936/1 4936/2 | 4940/25 4941/5 | section [7] 4832/12 | sentences [1] 4895/ | show [10] 4840/7 |
| 4942/23 4943/17 | Sapphire [1] 4843/7 | 4859/22 4874/18 | SEO [4] 4839/14 | 40/9 4847/15 |
| 4943/17 4944/3 | satisfy [1] 4881/20 | 4882/25 4883/8 4934/3 | 4840/6 4840/11 | 52/17 4853/19 |
| 4944/22 4945/1 4945/3 | saw [3] 4901/16 | 4934/5 | 4850/13 | 54/10 4871/4 |
| reverted [1] 4910/19 | 4901/18 4901/19 | Section 1 [2] 4934/3 | separate [1] 485 | 872/12 4877/24 |
| review [2] 4907/14 | say [27] 4838/10 | 4934/5 | tember [2] 4906/ | 4878/7 |
| 4938/21 | /18 4841/17 |  |  | d |
| right [137] | 4841/19 4849/8 | see [86] | September-ish [1] |  |
| rigid [1] 4882/20 | 48 |  |  | shown [1] 4908/11 |


| S |  |
| :--- | :--- |
| shows [1] 4846/18 |  |
| shut [2] 4882/17 |  |
| $4883 / 12$ |  |
| side [7] 4926/10 |  |
| $4926 / 114932 / 13$ |  |
| $4939 / 234943 / 14943 / 6$ |  |
| $4943 / 12$ | 48 |
| sides [1] 4842/24 |  |
| sign [1] 4846/20 |  |
| signals [3] 4853/9 |  |
| 4854/6 4854/8 |  |
| signed [2] 4933/23 |  |
| 4933/24 |  |
| significant [6] 4885/12 |  |

4861/3 4861/13 4861/18 4861/25 4862/5 4862/9 4892/9 4892/17 4896/13 4896/22 4897/2 4897/6 4898/8 4903/7 4905/3 4907/13 4912/2 4912/24 4913/3 4919/14 4919/14 4920/7 4920/18 4920/22 4921/17 4921/18 4921/25 4922/13 4922/18 sole [1] 4842/3 some [33] 4841/10 4842/2 4849/18 4852/18 4853/8 4856/19 4864/2 4876/21 4878/5 4885/15 4885/16 4885/19 4886/4 4891/12 4892/25 4899/10 4903/6
4905/22 4908/7 4908/14 4924/13 4927/8 4927/12 4927/13 4928/5 4928/12 4932/6 4932/8 4935/14 4936/23 4937/5 4941/8 4941/23 somebody [6] 4846/5 4852/18 4854/2 4893/23 4894/4 4922/3 somebody's [2] 4848/2 4872/18
someone [1] 4872/15
someone's [1] 4847/14
something [25]
4847/22 4848/2 4848/3 4856/4 4858/12 4864/14 4864/17 4865/2 4867/2 4869/21 4873/11 4894/4 4899/14 4899/17 4905/2 4906/17 4910/9 4911/13 4916/10 4920/11 4921/13 4922/20 4927/11 4931/20 4931/21
sometime [1] 4905/24 sometimes [5] 4877/8 4877/20 4891/18 4930/14 4932/24
somewhere [1] 4873/4 sophisticated [2] 4894/8 4914/4 sophistication [1] 4910/16
sorry [28] 4839/7 4841/20 4842/13 4854/22 4860/7 4861/12 4862/25 4874/7 4879/6 4883/3 4892/3 4896/9 4897/17 4902/2 4904/19 4905/13 4906/13 4911/13 4911/16 4913/10 4915/24

4924/18 4924/23 4926/23 4937/14 4938/8 4941/12 4943/4 sort [40] 4838/19 4848/20 4849/20 4863/4 4866/18 4866/23 4867/22 4869/9 4871/14 4879/8 4882/4 4886/21
4886/22 4887/16 4887/16 4888/6
4890/13 4891/12 4891/13 4891/23 4891/25 4892/6 4893/2 4893/4 4898/12
4898/18 4899/2 4899/4 4899/9 4900/11 4900/24 4906/1 4907/5 4910/14 4910/23
4911/4 4911/6 4914/10 4918/17 4929/11
sought [1] 4946/8
sound [1] 4933/16
sounds [1] 4933/17
space [5] 4843/15 4854/19 4858/16 4869/19 4905/18 spanned [1] 4837/14 speak [1] 4909/19 speaking [4] 4879/24 4887/13 4898/12 4899/22
specific [3] 4881/13 4936/2 4943/8
specifically [4]
4846/13 4849/4
4851/11 4859/2
spell [2] 4836/21 4924/9
spend [22] 4857/7 4858/2 4858/14 4861/24 4862/2 4862/8 4862/22 4863/19 4863/20 4864/7 4868/23 4870/23 4870/25 4875/24 4877/25 4888/16 4888/21 4889/1 4916/13 4916/16 4917/1 4917/15
spenders [1] 4842/21 spending [11] 4868/18 4869/3 4870/2 4870/6 4873/5 4873/9 4873/22 4873/24 4875/21 4879/21 4880/12 spends [2] 4877/15 4944/3
splash [1] 4922/9
split [2] 4869/11 4869/22
splits [1] 4935/23
spoke [4] 4838/2
4838/11 4839/20
4901/20
sponsored [1] 4846/6
spot [2] 4916/14
4916/21

Spotify [1] 4900/11 spread [1] 4880/24

4922/2 spring [1] 4880/25
successfully [4]
4904/17 4904/24
4911/11 4911/24
such [7] 4843/9 4847/5
4877/20 4881/6 4892/8
4905/14 4913/16
suggest [1] 4881/11
suitcase [1] 4923/3
Suite [2] 4832/15
4832/19
summarizes [1]
4885/19
summary [2] 4887/8

## 4888/8

summer [1] 4905/24 super [2] 4914/7 4922/19
support [4] 4840/22
4856/9 4856/14 4915/10
supported [1] 4855/22
sure [30] 4835/24
4839/11 4842/15
4842/23 4843/12
4844/15 4845/15
4859/13 4862/1
4862/25 4863/11
4868/25 4870/16
4880/4 4884/3 4888/18
4888/24 4892/5
4901/14 4904/20
4909/4 4916/21 4925/2
4926/25 4938/12
4941/15 4944/1 4944/9
4944/9 4946/21
sustain [1] 4877/25
SW [1] 4833/3
swiftly [1] 4881/18
switch [1] 4875/21
SWORN [2] 4836/10 4924/4
syndication [1] 4926/10
system [1] 4868/19

T-r-a-c-y-A-n-n [1] 4836/23
tab [2] 4878/3 4939/15
table [4] 4942/2 4942/4 4942/5 4942/6
tail [2] 4866/25
4867/21
take [20] 4864/4
4880/4 4884/4 4885/18
4893/2 4902/12
4902/15 4907/13
4910/15 4922/10
4926/6 4926/8 4928/11
4933/7 4934/3 4935/6
4938/16 4946/25
4947/1 4947/3
taking [1] 4942/17
talk [17] 4839/22
4841/14 4845/13
4856/19 4859/2
4864/24 4865/25

| T |  | 17 | 4892/20 4896/16 | 4900/10 4900/10 |
| :---: | :---: | :---: | :---: | :---: |
| talk... [10] 4875/4 | testimon [6] 4870 | 4859/25 4864 | 4897/22 4898/1 | 4905/23 4922/18 |
| 4876/24 4904/25 | testimony [6] 4870/18 | 4872/22 4873/13 | 4900/12 4901/16 | 4927/9 4927/10 |
| 6/16 4918/4 492 | 4888/8 4893/11 | 4876/5 4876/15 | 4901/18 4901/19 | 4927/10 4927/1 |
| 4927/10 4930/20 | 4902/18 4923/12 | 4882/14 4894/19 | 4901/20 4901/20 | 4927/13 4928/9 4928 |
| 4939/13 4944/17 | 4947/7 | 4901/2 4902/1 4902 | 4901/21 4905/10 | 4928/10 4931/18 |
| talked [24] 4841/17 | testing [2] 4904/ | 4903/3 4907/1 4914/1 | 4905/22 4908/8 4918/3 | 4931/19 4935/20 |
| 4843/4 4843/17 | 4905/2 | 4916/22 4918/16 | 4918/25 4919/12 | 4936/23 4941/13 |
| 4845/11 4848/17 | tests [3] 4904/6 | 4921/3 4921/4 4921/15 | 4919/25 4920/21 | 4944/1 4945/13 |
| 4848/18 4849/4 | 4904/15 4904/21 | 4923/6 4923/11 | 4922/10 4927/13 | 4945/21 4945/25 |
| $4854 / 154855 / 24$ | text [42] 4840/9 | 4923/12 4923/22 | 4928/7 4929/25 | 4946/18 4946/24 |
| 4856/19 4856/21 | 4846/13 4846/24 | 4923/24 4923/25 | 4933/12 4937/10 | they're [7] 4871/1 |
| 4860/2 4862/17 | 4848/10 4848/17 | 4947/8 | 4938/1 4939/10 4940/1 | 4871/11 4890/25 |
| 4868/12 4870/14 | 4848/21 4849/4 4849/5 | that [595] | theory [3] 4864/4 | 4900/10 4927/18 |
| 4872/24 4872/25 | 4851/11 4853/14 | that's [59] 4836/23 | 4864/6 4864/13 | 4927/24 4942/12 |
| 4873/1 4874/3 4875/13 | 4853/15 4855/19 | 4841/8 4843/5 4850/17 | there [47] 4841/3 | thing [8] 4858/14 |
| 4916/3 4918/2 4921/6 | 4856/18 4856/22 | 4850/23 4852/4 | 4842/10 4842/17 | 4865/16 4887/12 |
| 4929/11 | 4857/1 4857/4 4857/8 | 4853/24 4855/14 | 4847/18 4847/21 | 94/1 4906/20 |
| talking [11] 4855/18 | 4858/5 4860/16 | 4856/15 4859/1 | 4850/4 4851/1 | 06/24 4921/5 4935/7 |
| 4860/7 4862/14 4865/4 | 4860/19 4861/14 |  | 4854/17 4859 | things [8] 4841/9 |
| 4866/11 4868/20 | 4862/9 4862/20 | 4863/21 4864/14 | 4861/23 | 4844/3 4859/20 |
| 4872// 4898/7 4905/6 | 4864/25 4866/5 4870/7 $4870 / 24870 / 5$ | $4871 / 64871 / 1448$ $4883 / 144883 / 17$ | $4866 / 19$ 4871/25 $4873 / 24873 / 64876 / 2$ | 4863/14 4868/12 |
| 4917/6 4942/5 | 4872/25 4873/3 4873/8 | 4883/20 4886/17 | 4878/4 4878/9 4879/5 | $4927 / 24$ |
| $\begin{aligned} & \text { ngible [1] 4848/3 } \\ & \text { rget [8] 4897/23 } \end{aligned}$ | 4873/22 4873/24 | 4887/5 4887/8 4888/14 | 48 | think [73] 4835/18 |
| $\begin{aligned} & \text { get [8] 4897/23 } \\ & 00 / 124900 / 18 \end{aligned}$ | 4874/8 4874/11 4875/5 | 4888/22 | 4882/18 | 4837/15 4838/24 |
| 4900/25 4906/17 | 4875/15 4875/19 | 4891/18 4894/16 | 4883/21 4886/2 4889/9 | 4841/14 4843/6 4844 |
| 4910/11 4913/25 | 4875/20 4875/21 | 4898/3 4907/3 4908/24 | 4889/10 4889/19 | 4844/10 4844/16 |
| 4914/5 | 4913/24 | 4909/3 4909/8 4911/18 | 4900/10 4901/14 | 4844/17 4849/6 4852/ |
| targeted [1] 4 | than [23] 4838/2 | 4913/12 4918/1 | 4901/15 4901/21 | 4852/15 4857/14 |
| targeting [7] 4905/19 | 4838/9 4838/11 | 4921/12 4921/14 | 4902/5 4904/1 4910/22 | 4858/25 4859/1 4859/3 |
| 4910/4 4910/7 4910/9 | 4841/12 4859/11 | 4922/1 4924/21 | 4911/3 4912/1 4919/18 | 4859/7 4859/14 |
| 4910/17 4913/2 4914/4 | 4859/2 | 4924/25 4928/19 | 4925/17 4927/13 | 4860/10 48 |
| targets [1] 4908/20 | 4870/7 4870/10 | 493 | 4927 | 48 |
| team [23] 4838/3 | 4870/24 4875/20 | 4930/13 4932/23 | 4938/6 4938/9 4938 | 4865/4 4865/9 486 |
| 4838/6 4839/7 4839/15 | /14 4892/18 | 4932/24 4935/3 4935/5 | 4/22 | 4866/13 4866/15 |
| 4840/4 4840/8 4840/19 | 4894/15 | 4935/17 4936/10 | there's [31] 4872/1 | 4867/3 48 |
| 4844/20 4846/10 | 4900/5 | 4939/7 4939/21 | 73/19 | 1 4869/18 |
| 4851/4 4857/21 | $74916 / 17$ | 4944/21 | 80/18 488 | 4872/12 |
| 4857/23 4863/17 | 4943/10 | 945/2 4945/23 494 | 4886/4 4892/11 | 4879/24 4880/7 |
| 4865/18 4868/9 | 4945/15 | 4946/13 | 4892/14 4892/19 | 4882/20 4883/17 |
| 4878/16 4895/1 4895/9 | thank [47] 4836/3 | their [15] 4851/23 | 4893/14 4896/5 | 4883/20 4888/22 |
| 4895/13 4895/15 | 4836/5 4836/8 4837/22 | 4859/17 4859/23 | 4897/15 4897/22 | 4889/19 4889/25 |
| 4898/19 4898/22 | 4841/2 4843/10 | 4869/9 4872/20 | 4898/14907/24 4908/ | 4890/1 4892/11 |
| 4912/9 | 4844/25 4848/15 | 4875/24 4877/24 | 4908/15 4908/19 | 4892/14 4892/19 |
| teams [1] 4871/10 | 4850/1 4850/14 4853/5 | 4877/25 4889/22 | 4909/6 4910/7 491 | 4892/20 4893/14 |
| tech [1] 4874/8 | 4854/14 4855/7 | 4890/24 4891/2 | 4913/24 4919/25 | 5/6 |
| technical [1] 4911/16 | 4856/16 4858/17 | 49 | 4920/22 4921/7 | 4901/13 4902/10 |
| technology [2] | 4859/25 4864/23 | 4945/21 | 4927/19 4934/9 | 4903/5 4907/6 4910/7 |
| 4898/19 4899/24 | 4872/22 4873/13 | them [18] 4841/1 | 4945/19 |  |
| [7] 4839/24 484 | 4876/15 4882/14 | 4865/18 4866/1 | thereafter [1] 4905/25 | 4921/14 4921/22 |
| 6/6 4868/13 | 4894/19 4901/2 4902/1 | 4872/25 4873/1 | thereof [1] 4840/5 | 4922/1 4928/1 4933/5 |
|  | 4902/4 4902/19 | 4889/22 4891/4 4894/8 | these [15] 4858/21 | 4935/7 4940/12 |
|  | 4902/25 4903/3 4907/1 | 4899/6 4910/9 4910/12 | 4858/24 4865/8 | 4944/13 4944/20 |
| $\begin{aligned} & {[3]} \\ & 5 / 11484 \\ & \hline 2 / 4 \end{aligned}$ | 4914/17 4914/18 | 4915/14 4927/25 | 4865/12 4865/17 | 4945/14 4946/13 |
|  | 4916/22 4918/16 | 4929/18 4933/15 | 4866/6 4866/10 4878/5 | 4946/18 |
|  | 4921/3 4921/4 4921/15 | 4946/19 | 4900/8 4905/3 4915/16 | thinking [10] 4842/10 |
|  | 4923/6 4923/11 | then [51] 4836/21 | 4919/10 4927/8 | 4843/20 4844/9 |
| [1] [1] | 4923/12 4923/14 | 4844/6 4846/21 | 4927/12 4929/13 | 848/24 4863/4 |
| [ | 4923/22 4923/24 | 4848/17 4849/18 | they [39] 4841/16 | 66/10 4892/12 |
| ms [13] 4841/14 | 4923/25 4925/3 4947/8 | 4849/19 4849/23 | 4842/24 4845/2 | 4893/17 4911/9 |
| 4846/23 4847/5 4865/3 | thank you [40] 4836/3 | 4852/6 4852/12 4853/7 | 4847/21 4848/1 | 4911/22 |
| 4869/15 4871/8 | 4836/5 4836/8 4841/2 | 4854/5 4856/13 4860/2 | 4848/25 4849/17 | third [1] 4896/16 |
| 4875/25 4882/20 | 4843/10 4844/25 | 4862/16 4863/20 | 4856/24 4857/1 | this [107] 4835/2 |
| 4883/20 4883/22 | 4848/15 4850/1 | 4866/5 4867/9 4867/25 | 4857/20 4858/7 | 4835/7 4836/15 4837/5 |
| 4891/3 49 | $4850 / 144853 / 5$ $4854 / 144855 / 7$ | 4874/18 4875/9 4882/7 | 4871/12 4877/6 4894/5 | 4838/16 4839/5 4846/1 |
| 4946/22 | 4854/14 4855/7 | 4882/10 4892/14 | 4898/14 4900 | $4846 / 9$ 4846/13 |


| T | 4926／7 4926／8 4926／20 | 4924／21 4938／20 |  | 4856／15 4857／7 4862／8 |
| :---: | :---: | :---: | :---: | :---: |
| this．．．［98］4846／25 | 4926／23 4927／5 | 4939／19 4940 | 4857／17 | 4862／22 4863／5 |
| 4847／2 4850／6 4850／15 | 4927／16 4932／6 | 4941／3 | transition［1］4898／20 | 663／23 4864 |
| 4850／17 4851／2 | 4935／14 4937／8 | titled［3］ 489 | travel［1］4882／5 | 665／14 4881／8 4905 |
| 4851／16 4858／4 | 4937／18 4940／16 | 4907／13 4948／4 | travels［1］4923／12 | 4927／14 49 |
| 4863／19 4863／19 | 943／18 | $\begin{aligned} & \text { today [27] 4836/17 } \\ & \text { 4837/23 4838/3 4838/9 } \end{aligned}$ |  | U |
| 4866／21 4867／9 | though［4］4844／3 | 4838／11 4839／12 | tricky［1］4907／25 | U． |
| 4870／22 4871／16 | 4891／22 4897／15 | 4845／8 4845／14 4861／1 | tries［2］4841／4 484 | 4880／25 |
| 2 4874／14 4875／1 | 4899／16 | 4891／23 4893／10 | triggers［1］4914／6 | Uh［4］4928／21 4933／2 |
| 799／8 4879／16 | thought［2］4868／25 | 4893／11 4899／19 | true［7］4859／1 4871／2 | 39／25 4940 |
| 879／16 4879／20 | 4893／9 | 4900／2 4915／19 | 4871／24 4885／9 | Uh－huh［4］4928／2 |
| 880／1 4880／7 4880／13 | thousands［1］4873／12 | 4922／12 4924／13 | 4887／11 4887／11 | 4933／21 4939／25 |
| ／23 4881／1 48 | thread［1］4936／11 | 4926／12 4926／12 | 4922／13 | 940／3 |
| $\begin{aligned} & 4881 / 24 \\ & 882 / 23 \end{aligned}$ | three［8］4838／25 | 4926／15 4926／17 | trust［2］4940／24 | ultimately［1］4894／13 |
| $\begin{aligned} & 882 / 23 \\ & 4883 / 14 \end{aligned}$ | 4839／12 4839／15 | 4927／5 4928／16 4936／6 | 4942／7 | umbrella［2］4927／18 |
|  | 4861／24 4905／25 | 4936／7 4945／6 4946／18 | try［10］4853／19 | 4927／20 |
| 4885／24 4886／17 | 4919／4 4919／10 | together［8］4844／3 | 4859／16 4863／3 4894 | unable［1］ 4869 |
| 4887／13 4892／6 | 4929／13 | 4863／5 4866／15 | 4894／17 4898／22 | ommon |
| 4894／25 4895／10 | through［20］4844／20 | ／18 4867／2 4867 | 4915／17 4927／23 | 21／23 |
| 4895／12 4895／15 | 4845／1 4847／19 | 4888／6 | 4933／15 4945／22 | er［17］ |
| 4895／19 4896／21 | 4853／18 4853／21 | token［1］4889／6 | trying［11］4856／4 | 4846／19 4874／5 |
| 97／4 4897／6 4898／ | 59／ | told［1］4916／7 | 4858／11 4859／6 486 | 4874／18 4878／6 4885／3 |
| 99／5 4899／8 4899／15 | 20 | tolerance［1］ 487 | 4863／24 4888／22 | 4885／21 4895／16 |
| 4901／16 4901／16 | 4876／23 4879／21 | too［1］4860／2 | 4901／13 4917／4 | 4897／22 4898／1 |
| 4902／21 4902／24 | 4880／12 4886／13 | took［5］4854／1 4869／3 | 4921／13 4927／25 | 904／10 4923／21 |
| 4903／11 4903／18 | 㖪 | 4879／6 48 | 494 | 退／2010 |
| 4903／24 4904／1 | 4922／20 4927／10 | $4901 / 16$ | turn［18］ | 析 |
| 4904／15 4904／22 | 4934／15 4935／1 | ［4］4864／25 |  | 近 |
| 4905／1 4905／6 4906 | throughout［3］ | 4872／19 4893／16 | 4885／21 4891／21 | underneath［1］ 4866 |
| 4907／5 4907／9 4907／2 | 4837／19 4899／2 | 4919／9 | 4893／7 4896／4 4897／10 | understand［18］ |
| 4909／2 4910／23 4912／9 | 4931／14 | tools［1］48947／17 | 4901／22 4902／8 49018 | $5 / 20487$ |
| 4913／14 4914／10 | thus［1］4871／7 | top［18］4847／4 | 4903／24 4907／7 4912／ | 5／20 |
| 4917／9 4918／24 4919／8 | TikTok［2］4860／12 | 4848／21 4851／7 | 4913／23 4917／24 | 4888／23 4891／7 |
| 4920／25 4921／9 | 4860／13 | 4851／21 4852／3 | 4936／8 4939／2 | 3／15 48 |
| 4923／18 4929／1 | Till［1］4925／23 | 寿 | turning［4］4885／2 | 4913／14 4914／11 |
| 4929／11 4929／21 | Tim［1］ | 4883／8 4904／5 4912／8 | 4905／12 4926／12 | 4915／18 4927／23 |
| 4930／17 4933／9 | ［48］ | 118 | 49 | 仡3／3 |
| 933／19 |  | 4927／20 4928／22 | TV［15］4844／13 |  |
| 4933／23 4936／11 |  |  |  | 863／10 4881 |
| 4938／24 4939／1 | 4860／7 4864／14866／13 | ／11 | 48 |  |
| 4939／3 4939／12 | 4866／19 4866／25 | pic［1］4898／25 | 4862／22 4863／1 486 | 888／11 4888 |
| 4939／12 4939／15 | 4873／15 4878／16 | total［3］4879／4 4879／9 | 4863／7 4883／19 | 4890／12 4896／2 |
| 4939／16 4946／15 | 4880／4 4881／4 4882／2 | 4946／16 | 4892／12 4894／10 | （11／10 4911／23 |
| 4947／10 | 4882／3 4882／9 4882／12 | totally［2］4867／7 | ／9 4899／2 | 18 |
| This is［1］4835／7 |  |  |  | $4890 / 114911 / 2$ |
| those［61］4837／20 | $\begin{aligned} & 4885 / 184885 / 20 \\ & 4887 / 144889 / 14 \end{aligned}$ | touched［1］4852／15 | $\left\lvert\, \begin{array}{\|c\|c\|c\|c\|c\|} \text { two [21] } \\ 4841 / 144842 / 19 & 4840 / 2 \end{array}\right.$ | unfair［1］4859／1 |
| 4838／8 4839／15 | 4887／14 4889／14 $4903 / 18$ 4905／1 $4905 / 6$ | touchpoints［1］ | 4842／21 4842／23 | unforeseen［1］ 487 |
| 4840／11 4841／8 | 4905／10 4910／20 | 4927／23 | 4861／5 4863／13 | unique［1］4854／13 |
| 4842／23 4844／3 | 4911／23 4912／14 | tough［1］4889／18 | 4869／13 4869／18 | unit［3］4832／13 |
| 4844／11 4844／12 | 4914／17 4917／2 4917／7 | towards［1］4891／19 | 4869／22 4874／5 4874／ | 4887／18 4887／18 |
| 4845／1 4847／24 | 4917／24 4923／11 | Tracy［4］4835／21 | 4895／12 4901／19 | UNITED［11］ 4831 |
| 4849／14 | 4923／18 4925／17 | 4836／10 4836／22 | 4904／6 4910／7 4916／18 | 4831／3 4831／10 4835 |
| 4856／10 48 | 4926／4 4926／24 | 4913／9 | 4929／8 4937／12 | 4835／20 4835／20 |
| 4857／9 4859／17 | 4931／14 4931／18 | Tracy－Ann［3］4835／21 | 4939／10 | 4836／15 4923／8 |
| 4859／20 4862／10 | 4932／18 4932／18 | 4836／10 4836／22 | TYLER［1］4832／1 | 4923／17 4923／1 |
| 4862／19 4863／6 4864／2 | 4935／21 4936／17 | Trade［1］4837／20 | type［6］4845／12 | 4924／12 |
| 4867／7 4869／13 | 4944／22 4947／3 | traffic［4］4897／3 | 4846／9 4849／10 4863／5 | United States［6］ |
| 4869／18 4874／7 4874／8 | $\begin{aligned} & \text { timeline } \\ & 4908 / 6 \end{aligned}$ | $\begin{aligned} & \text { 4919/5 } 491 \\ & 4920 / 14 \end{aligned}$ |  | 4836/15 4923/17 |
| 4877／8 4883／22 4886／5 | timely［1］4914／7 | traffic－driving［1］ | 12 | ／1 |
| 4886／5 4887／17 | times［5］ 4861 | 析 | types［6］ | United States of［1］ |
| $\begin{aligned} & 3 / 114888 / 15 \\ & 3 / 254890 / 18 \end{aligned}$ | 4891／23 4893／1 | trajectory［1］4886／21 | 7／24 4849／1 | 335／7 |
| 4891／7 4899／20 | 4904／22 4932／16 | transcript［3］4831／9 | 4859／20 4865／8 | known［1］4910／10 |
| 4900／13 4910／6 | timetable［1］4841／25 | 4833／11 4948／3 | 4872／ | unless［1］4921／12 |
| 4917／10 4918／9 | $\left\lvert\, \begin{aligned} & \text { timing [1] 4881/11 } \\ & \text { title [6] 4924/16 } \end{aligned}\right.$ | transcription［1］ |  | unlock［2］4856／14 |


| U | 4865/21 4866/1 4891/9 | view [2] 4845/5 | 4909/20 4910/20 | 4857/25 4858/1 4858/1 |
| :---: | :---: | :---: | :---: | :---: |
| unsure [1] 4909/19 |  |  |  |  |
| until [3] 4911/1 | 4944/19 | vews [2] | 4925/20 4926/3 4926/5 | weeks [4] 4849/21 |
|  | used [14] 4842/4 | virtually [1] 4836/ | 4926/7 4932/14 | 4849/21 4849/21 |
|  | 4856/22 4860/18 | visibility [13] 4867/10 | 4932/21 4933/23 | 4901/19 |
| 4846/18 4847/4 | 4890/15 4891/21 | 4867/15 4867/19 | 4936/23 4938/8 | weight [1] 4842 |
| 4847/15 4852/3 | 4891/22 4896/23 | 4868/4 4868/7 4868/22 | 4938/24 4939/1 | welcome [2] 4836 |
| 4852/17 4856/12 | 4904/17 4904/23 | 4868/23 4869/25 | 4940/25 4944/22 | 4923/23 |
| 4858/19 4867/4 | 4915/9 4915/10 | 4870/5 4888/5 4889/3 | Washington [5] 483 | well [31] 4838/14 |
| 4867/22 4868/16 | 4915/13 4919/13 | 4916/3 4916/7 | 4832/3 4832/8 483 | 4839/22 4842/16 |
| 4869/21 4870/15 |  | 4866/23 | wasn't [4] | 4847/18 4849/16 |
| 4871/4 4872/12 | 4889/17 4890/19 | vision [1] 4899/13 | 4921/11 4936/5 | 4849/16 4859/6 |
| 2/17 4883/12 | 4891/9 4922/19 | vogue [1] 4899/2 | 4944/25 | 4861/20 4864/20 |
| 4887/8 4888/6 4893/9 | users' [1] 4891/2 | voice [2] 4924/25 | watch [1] 4906/25 | 4866/21 4873/6 |
| 4894/22 4897/11 | uses [3] 4873/3 | 4924/25 | way [25] 4841/3 484 | 4874/4 4875/9 48 |
| 4901/22 4903/9 | 4915/23 4915/25 | volatility [1] 4881/9 | 4844/7 4845/5 4852/20 | 4877/7 4891/4 4892/15 |
| 4913/13 4917/20 | using [7] 4843/15 | volume [12] 4863/13 | 4856/24 4857/19 | 4897/3 4913/1 4918/1 |
| 4917/22 4918/22 | 4903/25 4905/3 4905/8 | 4869/8 4869/11 | 4860/16 4861/15 | 4920/2 4926/5 4938/6 |
| 4923/7 4924/25 | 4912/3 4914/6 4943/24 | 4869/12 4869/23 | 4861/23 4862/19 | 4942/6 4942/9 4943/8 |
| 4924/25 4928/18 | usual [1] 4910/20 | 4872/10 4875/24 | 4863/3 4863/17 | 4944/2 4946/15 |
| 4944/7 4944/12 | usually [1] 4945/23 | 77/7 4913 | 4867/12 4867/15 | nt [10] 4866/ |
| date [4] 4890/24 | V |  | 4915/25 4922/21 |  |
| 4903/14 4907/14 | valuable [2] 4935/11 | $\text { vs [1] } 4831 / 5$ | 88/24 4942 | 4891/13 4901/20 |
| updated [2] 4890/18 |  | W |  | 4901/21 4906/6 4916/8 |
| $5 / 1$ | 4863/17 4865/21 | walk | ways [6] 48 | 4866/16 4866/22 |
| ront [1] | 4877/16 | walking [1] 4920/10 | 480/9 48924 | 4 |
| oaded [1] 4895/15 | variability [2] 4872/2 | want [22] 4855/2 | 4898/20 4901/2 | 68/20 4872/5 |
| [3] | 4872/5 | 4858/13 4863/14 | 4910/7 | 879/10 4879/17 |
| 20 | variance [3] 4887/8 | 4863/25 4872/18 | wc.com [2] 4833/5 | 881/22 4882/4 |
| UPX0441 [3] 4850/2 | 4892/14 4892/20 | 4878/6 4894/1 4894 | 4833/5 | 882/11 4885/19 |
|  | variety [2] 4838/6 | 4897/13 4900/25 | we [234] | 86/16 4888/11 |
|  | 4841/9 | 4907/13 4909/7 4921/5 | we believe [3] 4852/25 | 4889/12 4889/21 |
| 4936/16 | various [5] 4857/15 | 4927/8 4927/11 | 4859/18 4910/11 | 4898/7 4900/4 4905 |
|  | 4858/15 4891/13 | 4927/13 4928/17 | we will [5] 4847/15 | 4905/17 4905/19 |
| UPX441[2] | 4892/23 4894/17 | 4928/25 4929/25 | 4849/18 4856/12 | 4906/24 4908/6 |
| UPX911 [3] 4928/17 | vary [1] 4863/18 | 4937/14 4942/10 | 4902/16 4947/5 | 908/24 4909/10 |
| $4928 / 204928 / 22$ | vast [1] 4869/7 | 49 | we'll [5] 4841/14 | 11/3 491 |
| UPXD013 [2] 4845/20 | versa [1] 4927/11 | wanted [3] 4862/ | 4878/7 4902/15 | 22/17 4925/9 4 |
| 4846/1 | version [6] 4838/13 | 4926/8 4930/21 | 4930/20 49 | 26/3 4941/2 |
| URL [1] 4857/2 | 4839/7 4839/9 4866/4 | wanting [1] 4946/ | we're [15] | fcavanaugh [1] |
| us [29] 4836/5 4839/24 | /8 4933/24 | was [71] 4838/9 | 4838/2 4844/4 4849/19 | 2/21 |
| 4840/22 4846/3 | versions [1] 4878/8 | 4860/2 4861/6 4861/1 | 4854/12 4856/4 4859/5 | what [94] 4837 |
| 4847/17 4848/18 | versus [15] 4835/8 | 1/18 4866/15 | 4868/16 4871/16 | 4837/7 4838/8 4839/18 |
| 4849/13 4851/13 | 844/13 4858/5 486 | 4866/17 4866/19 | 4881/14 4900/23 | 39/24 4840/12 |
| 4859/19 4859/24 | 872/ | 4867/5 4867/6 4867/20 | 4905/6 4917/25 | 340/17 4840/23 |
| 4861/21 4864/18 | 4887/13 4893/20 | 4867/21 4867/25 | 4938/19 | /3 4841/4 |
| 4865/25 486 | 06/4 | 868/21 | we've [21] 4838/25 | 4841/18 4842/5 |
| 9/21 48 | 906/23 | 4868/25 | 4845/19 | 4844/16 4845/2 4845/3 |
| 2 4890/7 | 18/4 4941/12 | 4875/20 4879/21 | 849/15 | 4846/3 4847/7 4847/24 |
| 4899/25 4900/7 4903/5 | very [19] 4847/18 | 4879/22 4880/11 | 4856/7 4856/9 4856/18 | 8/19 4849/5 48 |
| 4916/14 4917/24 | 852/5 4874/17 | 4880/12 4881/18 | 4858/13 4866/11 | 852/15 4853/13 |
| 4918/14 4919/10 | 8/18 4884/5 488 | 4883/77 4884/13 | 870/11 4870/14 | 53/15 4853/24 |
| 4922/16 4923/24 | 4889/25 4890/5 4890/6 | 4884/14 4884/18 | 4870/18 4872/24 | 54/7 4854/23 |
| 4930/24 4931/2 | 4890/6 4900/20 4913/3 | 4885/14 4886/13 | 4872/25 4873/1 | 4855/25 4856/10 |
| usdoj.gov [3] 4832/5 | 4914/17 4922/18 | 4886/14 4886/20 | 4875/13 4891/4 | 4856/15 4856/24 |
| 4832/9 4832/10 | 4923/11 4927/25 <br> 4929/1 4932/9 4937/15 | 4886/22 4887/6 488 | 4916/18 4918/10 | 4857/19 4858/4 |
| use [23] 4841/8 | 4929/1 4932/9 4937/15 | 4887/11 4889/1 4889/3 | wealth [5] 4872/5 | 859/10 4860/4 |
| 4845/25 4849/12 | via [1] 4922/18 | 4889/9 4889/10 | 4872/16 4872/18 | 60/23 4863/15 |
| 4849/15 4859/8 | vice [1] 4927111 | 4893/10 4894/10 | 4872/21 4914/3 | 63/25 4864/7 4865 |
| 4860/15 4860/16 | video [8] $4848 / 21$ $4857 / 4858 / 13$ | 4894/11 4895/4 4901/9 $4901 / 13$ 4901/14 | web [4] 4845/9 | 4865/7 4865/12 4866/1 |
| 4860/20 4861/3 | 4915/15 4915/16 | 4903/11 4905/7 | 812 |  |
| 4862/19 4862/19 | 9/14 4919/18 | 4905/16 4906/3 4906/3 |  |  |
| 4864/22 4865/17 | 4919/19 | 4906/9 4908/12 | websites [7] 4857/16 | $\begin{aligned} & 4867 / 184868 / 13 \\ & 4872 / 94873 / 84873 / 9 \end{aligned}$ |

what... [41] 4873/24
4874/25 4885/19
4886/16 4886/17
4886/22 4888/23
4889/3 4890/2 4894/12
4895/4 4897/11
4897/20 4899/5 4900/3
4904/11 4905/13
4906/3 4906/12
4906/13 4908/24
4909/10 4917/2 4918/7
4920/2 4921/23 4923/1
4926/3 4926/3 4927/13
4927/20 4927/20
4929/11 4934/19
4935/5 4938/8 4940/16
4940/25 4941/1
4941/13 4942/7
what's [5] 4924/16
4926/10 4927/5
4928/17 4940/12
whatever [4] 4849/21
4854/10 4891/3 4944/6
when [46] 4838/2
4838/10 4838/11
4838/18 4839/19
4841/17 4844/4
4844/17 4845/13
4849/8 4853/24
4859/11 4861/5
4861/13 4862/13
4865/18 4865/25
4866/13 4866/19
4868/16 4868/20
4869/2 4869/14 4873/6 4873/22 4875/15
4877/15 4881/8
4882/11 4885/9
4893/23 4893/25
4894/2 4894/4 4903/2
4905/7 4906/6 4906/6
4910/17 4923/1
4925/20 4925/22
4926/2 4929/16 4931/9
4946/16
where [36] 4836/24
4841/10 4841/22
4841/23 4846/6
4857/13 4859/16
4859/18 4859/19
4861/19 4875/24
4876/3 4879/5 4882/9
4886/2 4892/1 4892/8
4896/5 4900/12
4900/18 4900/21
4900/23 4900/25
4904/16 4904/22
4905/1 4916/14 4921/1
4922/8 4922/19
4924/14 4925/17
4930/22 4934/3
4937/11 4937/14
whereas [11] 4840/8
4841/7 4841/24 4843/1 4843/8 4849/24
4852/23 4858/11
4859/22 4890/8 4922/3
wherever [1] 4898/14 whether [4] 4865/21
4905/2 4943/24
4946/16
which [46] 4837/9
4838/13 4839/7
4839/13 4839/13
4839/14 4839/15
4842/11 4844/1
4844/19 4844/23
4845/5 4845/11
4845/19 4849/13
4852/18 4854/13
4855/4 4855/23 4856/5
4860/24 4865/20
4867/6 4867/22
4869/22 4871/14
4876/2 4882/6 4883/19
4888/7 4891/14
4892/20 4893/9 4894/5 4895/19 4896/11
4897/7 4897/11
4897/17 4901/22
4905/4 4907/12
4910/20 4913/2
4921/18 4922/11
whichever [1] 4845/25
while [3] 4852/24
4879/10 4889/17
whilst [1] 4854/9
who [13] 4840/11
4850/6 4850/11
4872/15 4899/4 4899/4 4912/2 4912/13 4926/12 4926/20 4927/10 4927/12 4945/14
who's [1] 4850/7
whole [5] 4858/24
4858/25 4885/13
4917/4 4920/25
whom [2] 4871/10 4909/18
whose [2] 4850/9 4898/22
why [17] 4847/2
4847/13 4848/5 4856/2
4857/11 4862/12
4869/6 4870/9 4875/9
4893/12 4893/19
4902/12 4905/16
4905/16 4922/1
4922/11 4947/1
will [25] 4847/15
4847/17 4849/17
4849/18 4849/20
4849/23 4851/18
4856/5 4856/12
4878/22 4884/22
4894/5 4902/16
4903/20 4906/16
4907/20 4909/5
4912/18 4917/22
4918/8 4922/8 4928/18 4930/23 4947/5 4947/6
William [5] 4832/17
4833/6 4835/10 4948/2 4948/8

WILLIAMS [2] 4833/3 4876/12
willing [1] 4918/1
willingness [1] 4870/23
win [1] 4913/3
within [20] 4840/1
4840/2 4850/8 4851/24 4855/4 4855/5 4856/8 4857/16 4868/19 4871/10 4871/14 4871/16 4880/9 4882/25 4892/1 4892/9 4892/15 4895/7 4915/12 4927/23 without [4] 4879/8 4881/13 4890/13 4913/16
witness [7] 4834/2
4835/17 4836/2 4836/10 4876/13 4923/21 4924/4
WITNESSES [1]
4834/4
won't [2] 4856/5 4943/8
words [7] 4857/1 4867/10 4868/21 4868/25 4869/10 4886/11 4899/8 work [12] 4837/23 4838/4 4840/22 4856/7 4856/13 4868/9 4890/4 4893/16 4898/19 4899/11 4922/12 4933/15
worked [4] 4837/18 4837/19 4881/3 4925/5 working [8] 4837/17 4840/21 4846/21 4849/13 4859/3 4864/3 4889/3 4889/4
works [1] 4945/23
world [2] 4898/14 4898/17
worries [1] 4841/21 worth [3] 4918/8 4944/6 4944/11 would [72] 4839/5 4840/23 4847/6 4848/20 4851/4 4857/9 4857/13 4858/21 4860/10 4863/1 4863/5 4864/18 4864/21 4865/14 4865/18 4865/19 4865/21 4866/4 4869/12 4870/22 4870/25 4871/8 4871/21 4872/4 4874/2 4874/16 4875/14 4877/21 4877/22 4879/11 4880/15 4881/9 4881/11 4881/20 4881/25 4883/18 4889/10 4889/23 4890/23 4890/24 4898/12 4899/16

| $4899 / 234904 / 22$ |
| :--- |
| $4906 / 124906 / 13$ |
| $4906 / 224910 / 4$ |
| $4910 / 114910 / 18$ |
| $4910 / 194913 / 19$ |
| $4915 / 34916 / 204919 / 8$ |

4919/10 4919/19
4921/18 4922/7 4923/1 4925/1 4926/5 4927/14 4928/4 4931/16 4931/22 4932/9
4936/15 4942/10
4945/6 4945/9 4946/16
wouldn't [3] 4871/3
4874/15 4898/16
write [3] 4929/5 4930/4 4930/22
written [1] 4884/13
wrong [1] 4841/20
wrote [4] 4885/9
4928/23 4937/12 4937/22

## $\mathbf{Y}$

Yandex [2] 4926/22 4927/3
yardstick [1] 4935/3
yeah [16] 4838/17 4839/6 4840/16 4845/17 4850/5 4852/4 4852/10 4864/16 4865/5 4868/2 4883/16 4909/9 4911/21 4913/18 4916/25 4918/10
year [16] 4841/24
4843/2 4849/9 4856/8 4857/22 4859/9
4893/22 4898/18
4905/24 4906/1 4906/7
4911/1 4917/3 4917/10
4939/3 4939/7
year's [1] 4918/8
year-round [6] 4841/24
4849/9 4856/8 4857/22
4859/9 4893/22
years [10] 4837/15
4866/10 4889/15
4916/18 4925/6
4925/13 4925/24
4925/25 4931/7
4932/16
yep [8] 4838/7 4851/9
4852/11 4877/7 4883/4
4883/6 4883/25
4891/21
yes [198]
yet [3] 4861/21
4874/15 4900/24
yielding [1] 4879/11
York [1] 4832/20
you [490]
you understand [2] 4891/7 4898/7
you'd [1] 4891/22
you'll [6] 4838/16
4845/24 4850/3 4933/8 4933/11 4937/4
you're [28] 4838/18
4839/25 4854/10
4854/23 4856/12
4863/24 4865/4
4868/17 4880/7
4886/11 4892/16
4894/12 4894/16
4895/9 4897/14
4897/18 4900/11
4900/14 4912/12
4920/9 4921/12 4928/2
4929/12 4929/17
4931/11 4933/1 4942/7
4942/17
you've [13] 4837/17
4848/25 4854/15
4858/20 4866/5
4891/25 4892/22
4893/2 4925/12 4931/6
4931/25 4932/3 4932/6
your [146]
Your Honor [27]
4835/6 4835/18
4835/23 4836/6
4845/21 4851/17
4876/9 4876/11
4878/19 4878/21
4884/20 4894/21
4895/23 4903/17
4903/19 4907/17
4907/19 4912/16
4912/17 4914/15
4914/16 4914/20
4921/9 4923/9 4923/15
4928/13 4928/20
Your Honor's [1] 4902/6
yours [1] 4945/22
yourself [4] 4889/22
4909/6 4913/16
4931/22
YouTube [1] 4900/9
Z
Zaremba [3] 4833/6
4948/2 4948/8
zero [3] 4873/11
4873/11 4905/1
Zoom [1] 4911/15

