IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA, et al.,
Plaintiffs,

vs.

GOOGLE, LLC,

Defendant.
_____/

Civil Action
No. 1:20-cv-3010

Washington, DC
October 30, 2023
9:31 a.m.

Day 30
Morning Session

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

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DEPUTY CLERK: This is civil action 20-3010, United States of America, et al., vs. Google, LLC. Kenneth Dintzer for the DOJ; Jonathan Sallet and William Cavanaugh for Plaintiff States; and John Schmidtlein on behalf of Google.

THE COURT: Good morning, everyone. Welcome back. Hope everybody had a nice, unusually warm weekend.

Anything to discuss before we get started this morning?

MR. DINTZER: Not from the DOJ plaintiffs, Your Honor.

MR. CAVANAUGH: Not from us, Your Honor.

MR. SCHMIDTLEIN: Not from Google, Your Honor.

THE COURT: Mr. Schmidtlein, ready when you are.

MR. SCHMIDTLEIN: Your Honor, John Schmidtlein for Google. Google calls Sundar Pichai.

DEPUTY CLERK: Can you please raise your right hand. Do you solemnly swear or affirm that the testimony you will provide to the Court will be the truth, the whole truth, and nothing but the truth?

THE WITNESS: Yes, I do.

DEPUTY CLERK: Thank you.

THE COURT: Good morning, Mr. Pichai, and welcome.

THE WITNESS: Thank you, I appreciate it.

THE COURT: Mr. Schmidtlein, whenever you're ready.

DIRECT EXAMINATION OF SUNDAR PICHAI

BY MR. SCHMIDTLEIN:

Q. Thank you, Your Honor.

Mr. Pichai, would you please state and spell your name for the record.

A. Sundar Pichai, S-U-N-D-A-R, P-I-C-H-A-I.

Q. And by whom are you currently employed?

A. Google and Alphabet.

Q. And what is your position?

A. CEO.

Q. How long have you been the CEO, roughly, of Google and Alphabet?

A. Since October of 2015 as CEO of Google, and 2019 as CEO of Alphabet.

Q. I'd like to ask you some questions this morning first about your journey to becoming the CEO of Google. Where did you grow up?

A. I grew up in Chennai, India.

Q. When did you first become interested in computer technology?

A. Pretty early on. My dad was an electrical engineer, and so I had a lot to learn from him and, I think, everything I could get my hands on. I didn't have access to computers, but I got interested reading about them quite a bit early on.

Q. Did you pursue your interest in technology as part of your educational studies?

A. Yes, I had the chance to attend the Indian Institute

of Technology where I pursued studying engineering.

(Brief interruption)

Q. What did you study at the Indian Institute of Technology?

A. Metallurgical engineering, it's now called materials science.

Q. And how did your studies at IIT influence your future?

A. You know, that was the first time I got access to a computer for a brief period, really got interested in it. My background was more in physics and materials science, and so I got interested in semiconductors, literally the technology which powers computers. So I wanted to study more about semiconductors. I literally read about Silicon Valley, and just wanted to be in Silicon Valley.

Q. Did you -- when did you first get exposed to telephone technology?

A. Growing up, there was a long waiting list, so we had to wait for about five years to get access to a rotary phone. And there was only one supplier, which was the government, and so it took about five years. But getting access to the phone changed pretty much every facet of our lives. So early on, I got a good sense of how technology can impact people's lives. People would come to our home to make calls. I used to go get rissoles for my mom, and it would take me two hours to go and two hours to come back, and sometimes the rissoles wouldn't be

ready. The phone allowed me to call and find that out. So for me, I was a kid, I was 12 years old, and it really left a lasting impression on me, you know, how access to technology can make a difference.

Q. Now, after you graduated from IIT, what did you decide to do next to pursue your interest in technology?

A. You know, I was fortunate to get a full scholarship to Stanford. I came to pursue my PhD in materials science.

Q. Now, after obtaining your degree at Stanford, what did you do next?

A. I joined Applied Materials and started working on my research interests, which was designing semiconductors. My first project was working on 1 gigabyte DRAMs, designing the process around it.

Q. How long did you work at Applied Materials?

A. I was there as an engineer for about five years.

Q. And what did you do after working at Applied Materials?

A. I realized I was so deep in technology, but I wanted to step back and get a sense for how the world worked, how businesses worked, how value got created and get a more broader perspective. So I decided to go to business school, and I pursued my MBA at the Wharton School at the University of Pennsylvania.

Q. And after you obtained your MBA, what did you do next?

A. I joined McKinsey. Again, I wanted to continue just getting a broader perspective across industries. I was there for about just over a year.

Q. And after McKinsey, where did you go to work next?

A. I joined Google.

Q. How did you become interested in working at Google?

A. I'd always been interested -- given my personal experience, I was very interested in figuring out how to get the benefits of technology to as many people as possible. Google's mission statement was about making information universally accessible and useful. The internet had just come around then, it was a few years since, and I saw the potential. I realized for the first time the internet would touch pretty much most of humanity, and it was a once in a generation opportunity. I used to love using Google products, and I saw how it was providing access to information. It didn't matter whether you were a professor at Stanford or a kid in rural India, as long as you had access to a computer and connectivity, you had the world of information at your fingertips. So I wanted to be part of that journey.

Q. So how exactly did you go about applying for a job at Google?

A. I applied online, and the process took about a year; I interviewed for about a year. At the company, there was about 400 people when I started interviewing, and there was 1,400

people when I joined.

Q. And what year did you join Google?

A. April of 2004.

Q. And what was your first job at Google?

A. I joined Google as a product manager, and I was working on what was known as Google Toolbar at that time.

Q. And what was Google Toolbar?

A. Google Toolbar was a way by which, in those days in browsers, you could add an extension. It was primarily a search box. So you could install the Google Toolbar and it would add a search box to your browser, and it provided users a convenient way to search Google.

Q. At that point in time, did browser technology allow people to search in the -- sort of the URL or the browser Chrome?

A. No. You could go navigate to Yahoo.com or Google.com or whatever your choice was, that's how it worked. But people could install something like the Toolbar so that they would have a search box in the browser.

Q. You mentioned that when you applied for a job at Google, there were roughly 400 people working at Google. How many people work at Google today?

A. Approximately 180,000.

Q. Can you describe how your jobs at Google changed over the years?

A. After Google Toolbar, I started working on -- you know, I founded a few others, a product called Google Chrome. It was a browser. And so as we built them -- scaled it up, I started managing a few more products. Eventually it ended up being products like Gmail, Google Maps and so on. At some point, it included the Android operating system. Around 2014, I became the head of all of Google's products and services, and in 2015 the CEO.

Q. You made reference a few moments ago to Google's mission statement. What was Google's mission statement when you joined Google?

A. To organize the world's information, and make it universally accessible and useful.

Q. And has that mission statement changed in the almost 20 years that you've worked at Google?

A. In fact, every year at our annual conference I speak about it. I feel the mission, if anything, is more timeless and relevant today than ever before. User's information needs have literally exploded; they're inundated with information. And to organize it across everything they do and help them make sense of it, I think the task, as current, is even more important and useful.

Q. How has accomplishing Google's mission statement become more challenging over the years?

A. If you literally think about it, particularly with the

people who have multiple devices -- they have computers, they have phones, they use literally hundreds of applications. Their information needs have gotten much more diverse. They want answers right away. It can be multiple formats. It can be text, images, videos. And so they also ask us more complicated queries. In a place like India, almost one in three queries are people just speak to us and use voice because they can't always type in English or so on. They ask it in their native languages. So we try to understand over a hundred languages today. So it's never ending, but it's what makes the challenge really inspiring.

Q. How has the growth of the internet impacted the challenge of organizing the world's information?

A. I mean, the scale is something we couldn't have -- probably at the time Google started, maybe there were about a few hundred million personal computers. Today there are over 5 billion people with phones connected all over the world. And so when we look at the scale of information out there, it's been growing exponentially. And so to help organize that, and do it in a way that makes sense for our users, I think it's definitely gotten more challenging and more rewarding.

Q. I want to go back and talk to you a little bit about Chrome, because you mentioned that that was one of the products that you had responsibility for.

Has the introduction of the Chrome browser improved user's

ability to find information online and make it universally accessible and useful?

A. We realized early on browsers are critical to how people are able to navigate and use the web and improve their experience. It became very clear early on the better you make the user's web experience, they would use the web more, they enjoyed using the web more, and they would search more in Google as well. We understood that from Google Toolbar. We also saw that the browser market at that time had kind of become stagnated. The leading browser at the time was Internet Explorer made by Microsoft. We had a sense that from Microsoft, they viewed the browser as a potential threat to their Windows franchise, to their operating system. So they were not that incented to improve the browser. I mean, the browsers had stagnated.

Mozilla Foundation was one of the organizations who was pushing to make the web better. We felt aligned with that, aligned with making the web better. And the web was also evolving dramatically. It used to be simple text pages, but around 2004, it started becoming rich web applications, things like Google Maps, Flickr from Yahoo!, Gmail. See, people started using applications online. Browsers weren't quite designed to do that. So we made Chrome, it was almost a modern operating system designed as a browser, right. To give you a sense, we improved the execution speed of many of the

applications by over 20 times by building Chrome. We also made applications much more secure for users. So it was a pretty dramatic improvement of the state of the art of what browsing was.

Q. And when was Chrome launched, if you recall?

A. 2006, I think -- sorry, we started working on it in 2006, and launched it in 2008.

Q. And is Chrome available today on many different platforms?

A. That's correct.

Q. You touched on this a little bit, but given that there were already so many browsers -- well, let me jump back.

At the time you launched Chrome in 2008, who were the other browsers that were in the market? You mentioned a couple of them.

A. Internet Explorer on Windows, Safari on Mac, Mozilla Firefox, Opera are a few that come to mind.

Q. Given there were so many browsers available, why did Google invest in and decide to develop and release a product that was free?

A. We realized just improving the state of browsers would overall help users use the web more, will increase online activity and increase search usage, including Google's usage. And the correlation was pretty clear to see, and we had seen that. For example, we had built a product to make other

browsers faster. You could install an application called Google Web Accelerator in other browsers, and if you could improve the speed, you know, you saw users using the web more and searching more. So we realized we had to improve all browsers, and so Chrome was a way by which we built a much better browser.

But it was equally important to us to open source the technology, which was built underneath Chrome, so that others could adopt it and make their browsers better. In some ways, we were just trying to make all browsers better.

Q. Has Google studied this question of whether improvements in browser technology lead to greater online search?

A. Yes, we definitely undertook studies which showed that adoption of Chrome increased web usage, Google usage by significant amounts.

MR. SCHMIDTLEIN: Your Honor, I've marked as DX23 an exhibit that I'd like to hand up. May I approach?

THE COURT: You may.

BY MR. SCHMIDTLEIN:

Q. Mr. Pichai, I've handed you a document that's been marked DX23. Do you recognize this document?

A. I recall the study at a higher level, yes.

Q. Okay. And this is an e-mail that you sent to a number of your colleagues within Google in August of 2010; is that

right?

A. That's right.

MR. SCHMIDTLEIN: Your Honor, at this time we'd move into evidence DX23.

MS. BELLSHAW: No objection.

THE COURT: It will be admitted.

(Exhibit DX23 admitted into evidence)

BY MR. SCHMIDTLEIN:

Q. Can you describe or summarize the information that you are providing in DX23?

A. We were trying to highlight how people adopting a better browser would impact the queries we see as Google. At a high level, what this was showing is that -- the study actually showed that when people adopted Chrome, previous users of Internet Explorer, the query usage increased by 48 percent. And the same is true to a lesser extent from Firefox to Chrome. And so it showed the profound increase in the amount of usage people had when they switched browsers.

Q. Now, you made reference to open source a moment ago. I want to talk just briefly about that. What is Chromium?

A. Chromium is the underlying engine which powers Chrome. It's both the rendering engine as well as all of the browser internals. It's fully open sourced, so somebody else from the outside -- it's pretty much most of what it takes to build a browser, outside of a few features on top of it, we've

completely open sourced the technology. So any browser can -- any startup, anyone can take that and build a browser. In fact, people do that. Microsoft's current browser is based on Chromium. Brave, the browser, is based on Chromium. I think Opera's based on Chromium. So there are many examples of that.

THE COURT: Mr. Schmidtlein, I'm sorry, if I can interrupt for a moment. Mr. Pichai, to what do you attribute the dramatic increase in search as a result of the adoption of Chrome? I mean, what was it about Chrome that encouraged people to search more?

THE WITNESS: That's a great question. A few things. One is it was just much faster to use, so you could consume a lot more of web -- and it was designed to do that. The whole reason we called the browser Chrome, chrome used to refer to the border of the browser, and it had gotten so big that people could actually not see the content on the web pages. We called our browser Chrome because we wanted to minimize the chrome of the browser. So we gave people a lot more access to content, made it much faster to use.

We also integrated -- one of the unique designs was we combined the URL box and the search box so that, as a user, you could type. If you were trying to navigate, we would help you navigate to the website you were looking for. If you were looking for -- to search, we made it seamless. So that seamless integration, I think, people really enjoyed it, people

valued it, and people used the web more and searched more. That's what we found.

THE COURT: Thank you.

BY MR. SCHMIDTLEIN:

Q. Now, does Google Chrome come with a preset default search engine?

A. Yes.

Q. And what is the default search engine on Chrome?

A. It is today Google Search.

Q. And can Chrome users change the default from Google to another search engine on Chrome?

A. Yes. We clearly realized people -- because Chrome is a product from Google, and a lot of people value the integrated search experience. That's what they're looking for when they get Chrome. So we have it with Google as default search. But we made it very, very easy for people to change and use any default search provider of their choice.

Q. How have consumers reacted to the introduction of Chrome?

A. It was very well received as soon as we launched it. At that time, people didn't really know what browsers were. In fact, we wrote a comic book to help explain what browsers are so that people could understand it. But we saw strong adoption. Since then, we've continued to make the product better. One of the things I'm most proud of is we release a

new version of the product every six weeks. Before Chrome, Internet Explorer used to release a new version once every one to two years. We changed the product release cycle to once every six weeks. We have had over a hundred releases, new versions of Chrome since then, and it's gone on to be widely adopted.

Q. How has Chrome improved -- how did Chrome, when it was initially launched, improve security in the browsing experience?

A. Before Chrome, every tab you opened in a browser was all part of the same underlying process. What that meant is you could have accidentally opened malware on one of your tabs, and that malware could steal data from any other applications you had opened on your browser. So we did something called sandboxing, we isolated each tab into its own process, so that even if you accidentally opened a bad application, that didn't compromise the rest of your user data. It was one of the most profound security advances at that time for browsers, and really helped improved user security and privacy.

Q. Is Chrome the most popular browser in the United States today?

A. That's my understanding.

Q. And is it the most popular browser on Windows PCs today?

A. Yes, that's correct.

Q. Now, you also mentioned that at some point in time, the group that was in charge of developing the Android operating system began reporting to you.

Does the Android operating system also advance Google's mission of organizing the world's information and making it universally accessible and useful?

A. Just like Chrome, Android was designed to be a free open operating system with the goal -- okay, and we saw that -- you know, the personal computer industry had only touched about, at that time, around 600,000,000 people, and there were over 6 billion people in the world. So how do you give everyone else access to computing? The phones were a real opportunity to do that. But if you need to do it globally and at scale, we felt the best model was to build a world-class operating system and make it open source, and make it free for OEMs to use and adopt which facilitated both adoption of the product, as well as allowed OEMs to customize and meet the needs of people around the world, including building affordable smartphones, which I think was key to reaching as many people as possible. Again, like Chrome, this made people use -- connect to the internet, use the internet more which meant they also searched Google more.

Q. What are some examples of third parties that use the Android operating system to build their own devices?

A. There are many ways you can use Android. Android is

an open source operating system, so there's Android Open Source Project. So you can just take the open source project and do whatever you want with it without ever talking to Google. One of my favorite experiences, I first encountered a Peloton. And while it was booting up, I realized it was built on Android. No one from Peloton had ever reached out to Google, and they could just build a product using Android. So it's built as open source. Of course, you can -- you know, literally over a thousand companies, OEMs, et cetera, also partner with us and work with us to build Android-based devices, particularly smartphones.

Q. As it pertains to mobile smartphones and tablets, who is Android's largest competitor in the United States?

A. That would be Apple.

Q. And has the competition between Android and Apple impacted search engine usage, in your view?

A. Oh, in a core way. The fierce back and forth between Apple and Android OEMs working with us is what helped us all push the state of smartphones. Sometimes if you go back and look at a smartphone from 10 years ago, you really see the difference, right. The phones have gotten bigger, much better screens, much better connectivity, much better user interface. It's much easier to use applications and browse the web. All of this has led to a dramatic increase in growth of how people are consuming information, using applications, and being online

and increasing their search usage as well.

Q. Now, Android was launched in 2008 as a free open source operating system. Why does Google continue to launch Android -- or continue to make Android available as a free operating system today given its popularity?

A. We really want to lower the barrier for adoption, right. And I think people use Android to build smartphones at prices as low as $30, right. It's what has helped bring hundreds of millions of people online and give them to access to computing, which otherwise wouldn't have been possible. I don't think that could have been done with any other model. So allowing Android to be free to license allows people to just build. I think it lowers the barrier to invest in Android, and so that's partly by design.

Q. In addition to providing a free Android operating system to OEMs to build smartphones, has Google supported Android OEMs through the development of Google applications that run on those Android devices?

A. Yeah, we've invested a lot to develop a set of useful applications called Google Mobile Services. They're available for OEMs to license. Our goal with this has been to -- and people don't buy an operating system, right, people are buying a phone at the end of the day. And so when they buy a phone, they expect essential out-of-the-box functionality to work off the gate. And their choice is to either buy an Android phone

or a phone from Apple, an iPhone.

So making sure the phones are comparative out-of-the-box in the retail store, has the essential out-of-the-box functionality for users I think has been very important. It's been also important to make sure users have a consistent experience. You know, across devices, they can switch from one Android device to another, and giving them a sense of consistency has been very important as well.

Q. You're familiar with something -- are you familiar with something called the Mobile Application Distribution Agreement?

A. Yes, I am.

Q. And what is the MADA, as it's sometimes referred to?

A. The MADA is effectively a way for OEMs to license a set of Google Mobile Services. It allows for a suite of applications to be licensed. It is non-exclusive, but it has some placement requirements. Again, this gives users a consistent way to navigate across phones. Also, developers, when they write across Android applications, need a consistent set of APIs. It also gives developers access to the Google Play Store so they can update their applications, and it's a distribution channel for them. So all of that is part of MADA.

Q. What are some of the applications that are included within the MADA?

A. Google Search, Google Play, YouTube, Chrome, Google

Maps, Gmail, Calendar.

Q. Has Google found that, over the years, these are highly demanded and popular applications for consumers?

A. These are extraordinarily popular applications, even on other platforms. But one of the reasons I think people prefer Android is that they are seeking -- they realize it's an operating system from Google, and they're looking -- this differentiates Android from iPhones, and helps the OEM compete better with iPhones.

THE COURT: Sorry, if I can ask a quick one. Mr. Pichai, in terms of Android, is it used as an operating system on any desktops, desktop computers?

THE WITNESS: Your Honor, there are -- or from time to time, there are OEMs who are constantly -- they have shipped versions of Android on desktop computers. Our model allows them to do that. It has not been as successful on desktop as it's been on mobile.

THE COURT: Thank you.

BY MR. SCHMIDTLEIN:

Q. Now, are you also familiar with the fact that Google enters into revenue share agreements with Android OEMs and wireless carriers?

A. Yes, the revenue share agreements are commercial deals where we give a revenue share to our partners, both OEM partners and telecom partners, so that they can provide

enhanced promotion of our products and services.

Q. Now, are you involved in the negotiation and the day-to-day administration of those agreements?

A. Not for a long time. I was involved at a very high level. We had been doing both modern RSA -- it predates my involvement at Android. You know, we have -- at the head of Android. And given these happened routinely, we have business teams which are structured to do these.

Q. Are you familiar with the concept of letter updates and security upgrades?

A. Yes, it's been a very important focus. I think it's really important to keep the phones up to date. One of the challenges is if you're Apple, you're building a product that's vertically integrated and so you can update it. We build an operating system which we have to work with thousands of OEMs, so we have to figure out a way to get all of them to update. And sometimes they're incented to sell devices, but sometimes there's a lot of cost and effort which goes into updating these devices. But it's really important for user security and privacy.

So to incent OEMs, we've often included incentives as part of the revenue share agreements. They include provisions so that they comply with both security and operating system version updates.

Q. And are operating system updates and security upgrades

something that Apple does on a regular basis to its devices?

A. That's correct.

Q. How do the Android RSAs with wireless carriers incentivize them given that they're selling both iPhones and Android devices in their stores?

A. It ends up being very, very important. Apple provides incentives for wireless carriers to sell their phones in the retail stores, so we want to make sure Android phones can compete. Part of the incentives which go with the revenue share agreements, or in conjunction with them, are intended to support it. Also, we need carriers to also support the updates of the operating system. So the revenue share agreement considers that as well.

Q. I'd like to shift gears here now to talk a little bit about Google's agreement with Apple with regards to the Safari browser.

THE COURT: Mr. Schmidtlein, I'm sorry to interrupt. Can I ask a question before you proceed.

So Mr. Pichai, why wouldn't the OEMs and carriers already be incented to make upgrades, security upgrades, if for no other reason than to ensure that their products are up to date and able to compete with Apple and other Android device manufacturers or carriers?

THE WITNESS: You're right, Your Honor, on paper they should be incented to do that. But I think some of the OEMs

have short-term pressures and long-term pressures, and they are also incented to sell devices. They are competing with other OEMs. So we've found over time more effort goes into developing the next version. And updates are costly, you know, it's costly. And so sometimes they make trade-offs, and we are adding an incentive. You're right that they have an incentive. We are making sure we are working to add to that incentive.

We've found that the compliance wasn't fully there as what you would expect compared to Apple, that simply they just have to update their own products. So we noticed that by adding these incentives, we've been able to improve the rate of compliance for these security updates.

THE COURT: Thank you.

BY MR. SCHMIDTLEIN:

Q. Sir, were you involved -- have you been involved in the negotiation of the Apple Safari agreement that led to a renewal of that agreement in 2016?

A. I was extensively involved. The agreement long predates -- it's been a long-standing agreement. But in 2016, I was directly involved in negotiating that agreement.

Q. Okay. And who was your negotiating counterpart at Apple?

A. Mr. Eddy Cue.

Q. And what was your goal for those negotiations?

A. Going in, there was a clear understanding that this

had been -- there had been precedent, the deal had been around for a while. From the time of the deal, Apple had grown tremendously, so we saw great usage growth from the deal. The Google experience on iOS was very valuable. The user feedback was very positive, it was working well. Our queries from iPhones had also been growing significantly since the start of the deal. So it was both increasing usage, creating financial value for our shareholders, and so I thought it was a valuable deal and wanted to continue that deal.

Mr. Cue had indicated that it was a very competitive deal dynamic. And there was some precedent -- you know, he had acknowledged in our first meeting that there was tension in the relationship, primarily due to the fact that the revenue share had decreased from the amount it was there previously. One of his main objectives was to increase the revenue share from the deal. I obviously wanted to get the deal done at the best revenue share that's possible for Google.

Added to that, I definitely felt uncertainty. Given Apple designs then to an experience, it wasn't fully clear how they would change the experience if the financial incentive wasn't there. And it was clear to us that the current implementation was leading to increased usage of search, and it was a deal which was working well for both parties. But there was a lot of uncertainty about what would happen if the deal didn't exist. So those were all of the context going into the deal.

Q. If users can switch the default on Safari, why does Google pay so much money for the default?

A. Well, we've known from -- we want to, first of all, make it very, very seamless and easy for users to use our service. That's how we've approached all the way from developing Google Toolbar to everything we've done, so we want to provide easy access. We do know people are looking to use Google. By making it the default, we know it would lead to increased usage of our products and services, particularly Google Search in this case. So there's clear value in that, and that's what we were looking to do.

Q. Now, during the course of the negotiations, you made reference to the fact that Mr. Cue indicated that one of the goals he had was to get the revenue share percentage back up to levels that it had previously been to.

Were there other goals or things that Mr. Cue indicated were important to Apple as part of that agreement?

A. I think I felt the overwhelming concern from his side was to get the revenue share higher. He had indicated it was a very comparative deal dynamic. He said they preferred Google because Google was the best product for their users, and that's the sense they had. My sense was both of us felt -- I think we valued our product working well with Apple brands and users. I think they valued the fact that Google being there helped improve the iPhone experience, and increased the perception of

iPhones. But it was definitely, you know, the revenue share was a big topic.

Q. Was the term of the agreement an issue that was an important part of the discussions back and forth between the parties?

A. In addition to increased rev share, Mr. Eddy Cue had indicated one of the more important aspects of it was to get as long a term as possible. Apple was very interested in a long-term deal.

Q. And did you push back on that?

A. Yes, I did. Yes, I did. You know, the longer the timeframe, there can be uncertainties. But we eventually ended up doing it in a way in which Apple has the right to extend the deal to a longer term, if they choose to do so.

Q. Is it fair to say that at the end of the negotiations, both parties had sort of compromised their positions?

A. Yes, on pretty much everything. It was an intense back and forth, we didn't agree on everything, but I think we tried to find common ground to make progress.

Q. Did Google agree to increase the revenue share percentage to the amount that Mr. Cue was originally asking for?

A. No, we did not.

Q. Did Google agree to a compromised revenue share provision?

A. That's correct.

Q. Now, was the 2016 agreement subsequently extended?

A. Yes, that's correct, in 2021.

Q. And did Apple approach Google to request an extension?

A. That's my understanding, yes.

Q. And during the course of the 2016 agreement negotiations, did Google ask Apple to include language requiring Apple to continue implementing the Safari default in a substantially similar manner as it had done to date?

A. Yes. This wasn't a major part of the negotiation for most of the time, but towards the end. Internally, our deal teams had been concerned that -- we were obviously doing the deal for default placement. And so we wanted to make sure, as we contemplate a longer term deal, that the notion of default was reasonably preserved in a similar way, particularly with respect to Apple being able to send queries to rival providers. And so we contemplated that and worked through that.

Q. Was there a concern internally within Google that Apple could divert queries to third-party vertical providers?

A. Yeah, that was precisely the concern, you know, concern maybe where they would take some queries, for example, and just send it to Amazon for shopping queries and do additional deals. And it's perfectly within Apple's right to do. But for us, the rev share and how we structured the current deal didn't take that into account, so we wanted to

make sure it was substantially similar to the current deal we had structured.

Q. And did you explain this concern to Apple?

A. Yeah, we explained this concern to Apple. I think they understood this concern. I don't think this was their intent.

Q. Did Google seek to have this new language included in the 2016 agreement to restrict Apple's ability to directly answer queries from Apple's own index of information?

MR. CAVANAUGH: Objection, leading.

MR. SCHMIDTLEIN: It's a yes or no.

THE COURT: I'm sorry?

MR. SCHMIDTLEIN: It's a yes or no, did we.

THE COURT: I think that question's fine. There were some other questions that have been not open ended, so I'll overrule the objection on that question. Go ahead, sir.

THE WITNESS: No. In fact, particularly Apple was known for really exerting control over how they design their experiences. It was well understood by us. And in fact, I think the agreement captures that clearly so that Apple can continue to improve their services the way they see fit, and they've continued to do that.

BY MR. SCHMIDTLEIN:

Q. Has Google from time to time raised issues with Apple when they believed that Apple was suggesting answers that were

a poor user experience?

A. The main context in which -- you know, at one point, Apple had raised concerns about the commercial performance of the deal. They were worried that the growth they saw was maybe less than the overall growth of Google overall, and they wanted to understand it. And as part of that, I think there were conversations. And it turned out to be a mix of factors: geographic mix, foreign exchange rates. But one of the factors were Apple gets to decide what queries they send Google, so we don't see all the queries we would see else. So that explained the difference. And some of it we felt was also, in addition, a poor user experience, because they weren't addressing the intent of what users were looking for. So we had had discussions with them about it.

Q. Mr. Pichai, do you believe that the journey of solving the question -- or the challenge of online search -- today, do you believe Google has solved the challenge of online search?

A. Far from it. Always Larry Page and Sergey Brin, the founders of Google, used to say search was 1 percent solved. I have to say, early on I was skeptical, I thought the product worked well. But over time, I have definitely come more to their view that there's so much left to be done, there's so much innovation to be had. Now with artificial intelligence, I think we are again in the early stages of completely rethinking what's possible for our users. Our users are going to demand

that, too. So I definitely feel we are less than 1 percent done.

MR. SCHMIDTLEIN: I have no further questions, Your Honor.

THE COURT: Okay. Ms. Bellshaw.

CROSS-EXAMINATION OF SUNDAR PICHAI

BY MS. BELLSHAW:

Q. Thank you, Your Honor.

Good morning, Mr. Pichai. My name is Meagan Bellshaw, and I represent the United States.

A. Good morning, Ms. Bellshaw.

Q. I want to start by talking about Google's search distribution contracts. Google pays revenue share to be the exclusive default search engine on Android devices, right?

A. We have revenue share agreements for pre-load exclusivity on a device-by-device basis.

Q. And the revenue share agreements require that Google is set as the exclusive default out-of-the-box, correct?

A. On a device-by-device basis, yes.

Q. And Google pays for these exclusive defaults because they have value, right?

A. That's correct.

Q. Google pays for the defaults because they have value in distributing Google Search?

A. Partly, yes.

Q. And an OEM or a carrier will receive full revenue

share on a device only if all the search access points on that device are set to Google, right?

A. That's my understanding, yes.

Q. You would agree that Google pays a lot of money for these defaults, right?

A. We pay a proportion of our money based on the value we see, particularly -- which has proven itself over time. And these revenue share agreements not only cover pre-load exclusivity on a device-by-device basis for Google Search, but they also cover additional things, like I said earlier, about security updates, as an example.

Q. And the portion that Google is paying in revenue share to its Android partners each year, that adds up to billions of dollars, right?

A. That's my understanding.

Q. And you talked about the Apple agreement, but Google also pays revenue share to be set as the default on Safari, right?

A. That's correct.

Q. And Apple doesn't pre-load any third-party apps on its devices, right?

A. Third-party applications on iPhones?

Q. On iPhones.

A. I don't think so.

Q. Apple hasn't pre-loaded third-party applications on

iPhones for at least a decade, right?

A. Yeah, not that I'm aware.

Q. Apple's position against pre-loading third party applications on its iPhone devices is pretty well known in the industry, right?

A. Yeah, just to clarify, when you say applications, Apple for a long time, for example, has placed bookmarks on its browsers to other third-party websites. So it's not -- I mean, that is an example. But if you're literally talking as a mobile downloadable application, I think I'm not aware of it. But they have placed bookmarks on their browser to other sites for a while.

Q. Yeah, to be clear, I'm asking about the applications that are pre-loaded onto a device. It's been common knowledge in the industry that Apple doesn't pre-load applications developed by third parties onto its devices out-of-the-box, right?

A. That's correct.

Q. And Google is the only search engine that's set as the default on Apple devices?

A. In the browser, we are set as the default search engine. Users can change it. I haven't seen the latest implementation, but they've also had bookmarks to other websites as well.

Q. In terms of the default set on the browser, Google is

the only search engine that's set as the default in the Safari browser?

A. Yes.

Q. Altogether, the revenue share that Google pays to be set as the default on Android devices and the Safari browser and other browsers like Firefox, that adds up to tens of billions of dollars every year, right?

A. That's my understanding.

Q. And Google pays tens of billions of dollars every year because being set as the default is valuable, right?

A. Yes. I mean, it's enhanced promotion of Google Search. Over time it leads to increased usage of Google Search. And as I said earlier, there are other provisions which go with some of these agreements as well.

Q. As CEO, you owe a fiduciary duty to Google's shareholders, right?

A. That's correct.

Q. And as a fiduciary, your job is to make sure that Google is spending money in a way that is ultimately best for Google's shareholders, right?

A. That's correct.

Q. And you wouldn't authorize contracts to pay billions of dollars every year for defaults if it wasn't good for Google, right?

A. That's correct.

Q. Google has made these revenue share payments in exchange for defaults since at least 2005, right?

A. I can't be fully sure when they first started, but that sounds about right to me, yeah.

Q. The first Apple contracts for revenue share in exchange for defaults was in 2005?

A. Yes, that's correct.

Q. And Google has paid revenue share in exchange for defaults since at least 2005, because defaults have been valuable for a long time, right?

A. You know, we definitely see value. It depends on the context of the deal, it depends on how it's implemented, and so the value can change. But we try to understand it, and based on that we do deals, yes.

Q. But you would agree that the value of being set as the default, that has persisted since at least 2005, right?

A. Yes, I would think so.

Q. And you personally have understood the value of defaults for many years, right?

A. That's correct.

Q. Mr. Pichai, I'd like to pass up a binder with some exhibits that we're going to show you.

Mr. Pichai, you'll see that the binder in front of you has tabs, and the numbers on the tabs refer to the exhibit number. So if you would please turn to the tab number UPX2049. It's

also going to appear on the screen in front of you, if that's easier for you.

A. What's the tab number again, please?

Q. It's UPX2049.

A. Yes.

Q. Do you see that UPX2049 is an e-mail from Nitin Sharma dated April 17th, 2007 copying you?

A. Yes, that's correct.

MS. BELLSHAW: Your Honor, I'd move to admit UPX2049 into evidence.

MR. SCHMIDTLEIN: No objection.

THE COURT: 2049 will be admitted.

(Exhibit UPX2049 admitted into evidence)

BY MS. BELLSHAW:

Q. Mr. Pichai, who is Mr. Sharma?

A. I vaguely recall him being in our financial analysis team, but I can't be fully sure.

Q. Looking at the bottom e-mail on UPX2049, you were sent a summary of a GPS meeting. Do you see that?

A. Yes.

Q. And what is a GPS meeting?

A. It stands for Google product strategy meeting.

Q. And the meeting title was: On the Strategic Value of Browser Home Page to Google. Do you see that?

A. Yes, I do.

Q. Mr. Sharma made a presentation on this topic during the GPS meeting in April 2007?

A. Yes.

Q. If you would please turn to UPX123 in your binder. UPX123 is a presentation entitled: On Strategic Value of Default Home Page to Google. And the Court has seen this presentation before with Dr. Varian and Dr. Ramaswamy, so I'm not going to ask you about the contents.

But this is the presentation that Mr. Sharma made during that GPS meeting in 2007?

A. I don't see a date or anything, but it seems reasonable to assume that, at least for me, based on the two exhibits.

Q. Okay. If you could turn back to UPX2049. In the top e-mail, Mr. -- of UPX2049, Mr. Sharma wrote to you: "Thanks for setting up GPS and getting the key message across to EMG."

What was the EMG?

A. It stood for our executive management group, so it was the top leadership group in the company.

Q. Do you recall who was on the EMG at this time in 2007?

A. Yes, I do.

Q. And who was on the EMG?

A. It would be -- at the time it was our CEO, Mr. Eric Schmidt, our founders -- and do you want me to name all the people or what --

Q. That's fine. So you set up this EMG meeting with Google's CEO and founders to hear Mr. Sharma's findings, right?

A. Yeah, this was the Google product strategy meetings. It was a standing routine meeting for people to bring product topics and get them reviewed by the EMG.

Q. And then you set up -- withdrawn.

If you look down at the summary of discussion at the bottom of UPX2049, do you see there's a line at the bottom that says: "EMG representatives agreed that this is important"?

A. Yes.

Q. So you were the individual responsible for helping get the message of Mr. Sharma's presentation to the EMG representatives, correct?

A. Yes.

Q. Staying with the summary of the discussion, Mr. Sharma presented data showing a causal link between browser home page market share and search market share, right?

A. That's -- I mean, yes, he's trying to do research to see what is the value of setting a home page as the default.

Q. And Mr. Sharma argued that setting the home page as the default was valuable in increasing Google's market share, right?

A. That's correct. He was talking about user query activity, right. It's less share, I think. It's talking about how much more people would search or less.

Q. Do you see the last line in the first paragraphs of the summary discussion, Mr. Sharma argued that: "Focusing on home page market share is one of the most effective things we can do to make gains in search market share"?

A. That's right, that's what Mr. Sharma is arguing.

Q. So Mr. Sharma's thesis was that defaults would help Google gain market share, right?

A. That's correct.

Q. Gaining search market share through defaults was an important topic for Google's search team in 2007, right?

A. I would say increasing usage of search, you know, was a lot of what we were thinking about. And some of it would be because we gain market share. Some of it is because you're taking existing users, and by giving them more convenient access points, you're making them search more. So both of them could be contributing to it.

Q. And one of the methods that was a topic of conversation to increase search in 2007 was the use of defaults, right?

A. It was the context of -- I mean, this is talking about we were trying to actually build a product called iGoogle which was a browser home page to compete with Yahoo!, which was a popular home page at the time -- or AOL, people had many different home pages. So this is both trying to understand the importance of building it -- Google didn't have a home page

product, and Ms. Sieving, who worked for me at that time, was leading in developing this home page product. So both the importance of what would the value be to have a home page product, and then having that as the default. So those were the kinds of things we were thinking through.

Q. It was both having a home page product, but also the value of having that home page product set as the default?

A. Yes, both.

Q. And this idea that defaults were important, that wasn't a new concept for you, even in 2007, right?

A. Yeah, I don't think so.

Q. You understood before Mr. Sharma's presentation in 2007 that defaults were important?

A. Again, the word default can mean so many things, so it depends on what you're trying to do in what context; whether what you're trying to do is aligned with what a user would want, right. And there are cases where defaults haven't mattered, because that's not what the user is looking to do. So with that caveat, yes. Done correctly, and if you're putting a product out in front of users which users like and want to use, yes, defaults can make a difference.

Q. And one example of setting a default that aligns with typical user preferences would be a default search engine in a browser, right?

A. That's correct, yeah.

Q. Or setting the default home page to Google when a user opens their browser for the first time?

A. Assuming we have a good home page product experience, otherwise they would just switch it to whatever they like to use.

Q. You thought Mr. Sharma's analysis on the importance of Google being set as the default home page for market -- to increase market share was important enough to share with Google's top management in the EMG, right?

A. That's right. Google was a much smaller company at that time, so definitely this was. I think the Google product strategy meetings, these were forums designed to cover topics like this, actually go deep and look at product topics across the company. They would have separate EMG meetings to discuss management topics. These were product strategy meetings.

Q. Mr. Pichai, I think you mentioned earlier, but you worked on the Google Toolbar when you first joined Google, right?

A. That's right.

Q. And you mentioned that in -- when you first started, I think one reason Google developed the toolbar was so that users could download a browser extension and install a search engine in their browser, right?

A. That's correct.

Q. Because back then, users weren't able to type a search

into their URL box the way that they are today?

A. That's correct, and there was no built-in search box into the browser. We weren't the only ones to do toolbar, other companies were doing toolbars as well.

Q. In 2005, Microsoft announced a new version of its Internet Explorer browser, right?

A. I can't be sure of the timing, but --

Q. IE7, are you familiar with Internet Explorer 7?

A. Very, very familiar, yeah.

Q. And IE7 -- are you okay if I call Internet Explorer 7 IE7?

A. Yes, perfectly fine.

Q. IE7 was the first version of Internet Explorer that had a built-in search box, right?

A. That's right.

Q. So users, if they wanted a search box in their browser, they would no longer need to download a toolbar extension to implement that functionality?

A. Yeah, that's correct.

Q. As part of its announcement for the new IE7, Microsoft also announced that it would set a default search engine in that search box, right?

A. That's my recollection.

Q. And Microsoft -- withdrawn.

Google sent Microsoft a letter about Microsoft's plans for

setting the default search engine in IE7, right?

A. Yeah, I recall one of our concerns was as they were developing IE7 and they were putting a search box in the browser, they had announced a plan to migrate the search settings, not based on toolbars which people were using. But there was a hidden search -- default search setting in previous versions of the browser which didn't matter, because there was no search box in the browser. And they were relying on that setting, which was just set to Microsoft for this new search box, which we thought didn't reflect what pretty much any user wanted from their browser.

Q. So prior versions of Internet Explorer didn't include a built-in search box, right?

A. That's correct.

Q. This was a new feature that Microsoft was introducing?

A. Yes.

Q. And Microsoft announced that it would set the default search engine in the new search box, it would match whatever the user had in their prior version of Internet Explorer, right?

A. Some hidden setting in the browser, which not a single user had ever gone and changed to my knowledge.

Q. And Microsoft planned to set as the default whatever search engine had been built into the prior version of Internet Explorer, right?

A. There was no search engine built into the prior version of Explorer.

Q. Well, is it your understanding that there was a default setting in the prior version of --

A. There was a setting, but there was no functionality built into the browser before.

Q. And so unless the user knew to change the default in the earlier version of IE7 -- I'm sorry, of the earlier version of Internet Explorer, the default in IE7 would be set to Microsoft's own search engine, right?

A. Yes, there would be no reason for users to go and change the setting, because it had no functionality in the browser commensurate with that setting.

Q. Mr. Pichai, you don't have any personal knowledge as to whether any Microsoft user had ever gone to change the search default in prior versions of the browser?

A. I mean, I don't know what every user did. I've never encountered anybody who had told me once that they accessed the setting.

Q. So Google's concerns over Microsoft's announcement for setting a default in IE7 was that in the vast majority of cases, the new search engine default would be Microsoft's own search engine, right?

A. No, our concern was a lot of us had invested -- you know, they're a platform. We had invested time and effort to

build applications like Toolbar. We had invested hundreds of people, built a product over years, and users were using that. Not just us, there were other companies, like the Yahoo! Toolbar. And to that extent, we were fine with an implementation which would just honor some notion of what users are doing. But we felt, you know, that's not what they were trying to do.

Q. Mr. Pichai, if I could direct your attention to UPX172 in your binder. UPX172 is a July 22nd, 2005 letter from David Drummond to Brad Smith.

Who is Mr. Drummond?

A. Mr. Drummond was the chief legal officer of Google at that time.

Q. And who was -- and Mr. Smith was Microsoft's general counsel?

A. That's correct.

Q. So Mr. Drummond sent this letter in UPX172 on behalf of Google?

A. That's correct.

Q. And you would have seen this letter around the time that it was sent, right?

A. I would assume so, yeah.

Q. And Your Honor, UPX172 has been admitted into evidence.

Looking at the bottom of UPX172, there's a section: How

the Default is Set. Do you see that? It's on the first page.

A. Yes.

Q. This lays out what we've been talking about Google's description of how Microsoft planned to set its own search engine as the default in the new search box in IE7, right?

A. That's right.

Q. And looking at the first -- the last sentence in the first paragraph on page two of UPX172, Google wrote that: "Microsoft's approach puts its own interests above those of end users."

Do you see that?

A. Yes.

Q. So Google believed that by setting Microsoft -- withdrawn.

MSN Search, was that the name of Microsoft's search engine at the time in 2005?

A. I think so. They've had a few names so I can't be fully sure, but I think that -- I recall it being MSN Search, yeah.

Q. So Google believed that by setting MSN Search as the default search engine in IE7, Microsoft was putting its own interests above those of its end users, right?

A. That's not -- it's the stated reason as to why they were doing that, right. I think they were not saying they were going to set MSN Search as the default. They said they would

honor whatever the default -- you know, they presented it as they're going to honor user choice based on a hidden search setting -- which you can acknowledge -- as you can see, even employees from Microsoft acknowledged, didn't know existed. So that was the issue we were taking into account.

Q. And the ultimate outcome of the method that Microsoft was using to set the default in IE7 was that the vast majority of users would have their default set to MSN Search, right?

A. That would have been the outcome of what they were trying to do, yeah.

Q. If you would please turn -- or look, on page two of UPX172, there's a section entitled: How the Default is Changed. Do you see that?

A. Uh-huh.

Q. In this letter, Google wrote to Microsoft: "As you know, most end users do not change defaults."

So the fact that end users don't change defaults was common knowledge in 2005?

A. In the context of that product. As I said earlier, that's not a default. I've never encountered a single user who would even know how to find that default search setting.

Q. If you would please turn to page three, there's a section entitled: Impact on the Market for Search Services. And in the first paragraph, Google wrote: "We are deeply concerned about the potential for harm to the competitive

process from Microsoft's actions."

And, again, that's referring to the method that Microsoft is using to set the default search engine in IE7?

A. Yes.

Q. And because users don't change defaults, Google was deeply concerned that Microsoft's actions could harm the competitive process?

A. Yeah, that's what Mr. Drummond is articulating here.

Q. Looking at the first sentence of the next paragraph on page two of UPX172, Google wrote that: "By pushing out an update of IE with a new search box that will default to Microsoft's own search product in the vast majority of cases, Microsoft would gain a large number of search users for reasons having nothing to do with the merits of Microsoft's search offering."

And that was Google's concern, correct?

A. Yes.

Q. So by setting its own search engine as the default, Google believed that Microsoft would gain a large number of search users for reasons having nothing to do with the merits of Microsoft's search offering?

A. With all the additional context in the letter, in addition to that sentence, yes.

Q. And Google's position was that Microsoft setting a default on behalf of its users could harm the competitive

process, correct?

A. Yes, with the way they were doing it.

Q. And Google understood, in the context of this letter, that defaults mattered, right?

A. In the context of this implementation of what Microsoft was doing around IE7, the previous default was not something users would ever change. And so carrying that over, there was no user default setting involved. That's what we were arguing.

Q. And Google understood more broadly that defaults mattered for competition in search, right?

A. We've always valued the importance of defaults. As I said earlier, again, it depends on the context; it depends on the implementation; it depends on the product; it depends on the merit of what you're offering to users; it depends on user likelihood. But, yes, there are scenarios in which defaults are very valuable.

Q. And defaults are very valuable for competition in search, right?

A. Yes.

Q. Turning back to page two of UPX172, looking at the second paragraph on the top of the page, Google proposed that: "Users be prompted to select the default search provider the first time they use the inline search feature."

And the inline search feature there, that refers to the

new search box in IE7?

A. That's right.

Q. So instead of Microsoft setting the default to MSN Search, Google proposed an alternative, right?

A. This was one alternative. There are many ways they could have done it. They could have chosen the most common toolbar installed there. So there were many ways to do it, but this was one such edition, yes.

Q. And the way that Google proposed that Microsoft select the default search provider was to offer users a choice screen --

A. That's correct.

Q. -- the first time they access the new search box, right?

A. That's correct.

Q. Google thought that the user, not the company distributing the browser, should be the one to choose the search engine?

A. There are many different ways of doing it. We were referring -- at that time, it was clear to us that Microsoft's intent when they added the search box was -- and how they were implementing it, had nothing to do with how the entire market was using search. So we felt this was a unique egregious case of how they were not honoring user preference at all, and so that's what we were objecting to.

Q. And a choice screen would get closer to user preference, right?

A. Yes.

Q. And Google believed that a choice screen had benefits for the user, correct?

A. Yes.

Q. Today, Google's RSAs and the ISA prohibit choice screens for search defaults, correct?

A. Sorry, to be very clear, we don't prohibit choice screens. But if you want us to -- I mean, if you're doing a commercial deal, we are paying for enhanced promotion, right, that's the commercial deal. OEMs have the option not to take the RSA and they can put some other product, so they have choices to do what they want. The RSA has payments associated for enhanced promotion of our services.

Q. In order to receive revenue share, Android partners and Apple and any other distribution partner with a revenue share agreement, they cannot offer users a choice screen for their default search engine, correct?

A. Yeah, that's not consistent with -- for what we would pay commercial terms on a rev share deal, that's correct.

Q. Because when Google is paying revenue share, Google's pay for defaults, right?

A. We're paying for defaults, that's correct. It depends on what you're asking for. We pay for pre-load exclusivity on

a device-by-device basis for Google Search and other products.

Q. So for Microsoft's Internet Explorer 7, Google advocated for a choice screen, but under its commercial agreements, its partners are not allowed to offer users a choice screen if they want revenue share, correct?

A. There are two different scenarios. In the case of Microsoft, for all the reasons I spoke about, we took the position we did. Even Microsoft does commercial distribution deals all the time on Windows, including paying for placement. So similarly, we do commercial deals in which we pay for enhanced promotion of our services as a standard practice in the industry.

Q. But that was a yes, that for Microsoft Internet Explorer, Google advocated for a choice screen, but under its commercial distribution agreements, partners who receive revenue share cannot offer choice screens on those devices, correct?

A. If you're currently doing a revenue share agreement, yes, we pay for setting Google on a device-by-device basis as the exclusive pre-loaded search provider, yes.

Q. Apple has requested flexibility from Google to offer Apple users a choice screen to select the default search engine in Safari, right?

A. Can you give me more context on it, please?

Q. Sure. I'd like to direct your attention to UPX126.

And Your Honor, UPX126 has been admitted.

Mr. Pichai, UPX126 is an e-mail from Jeff Shardell to you dated June 4th, 2007?

A. That's correct.

Q. And the subject is: Apple EMG Review -- Apple EMG Deal Review?

A. Yes.

Q. And who is Mr. Shardell?

A. Mr. Shardell, at the time, was responsible -- one of the people responsible for some of our business deals.

Q. Including the Apple ISA?

A. I don't recall him being the main person on it, but I think he was part of the team which was working on it.

Q. In UPX126, Mr. Shardell sent you a slide deck regarding the Apple deal negotiations that he was presenting to the EMG, right? If you need to, you can look at the other pages.

A. Yes, that's correct.

Q. If you would please turn to page five of UPX126, which is the slide in the attached presentation that's marked page four. It ends at the bottom in Bates number 7240.

A. Yes.

Q. Do you see the side entitled: Deal Overview?

A. Yes.

Q. The first section in this deal overview slide on --

it's a summary of deal terms that were in effect at the time between Google and Apple, right?

A. Yeah, I think that's my understanding from this, yeah.

Q. And the second main bullet, do you see it says: "What Apple wants"?

A. Yes.

Q. So looking at the second sub bullet in that section, what Apple wanted was: "For Google to be one of two possible choices for search provider (not default). User required to choose search provider prior to using browser."

So Apple wanted to offer its users a choice screen to select their default search engine in Safari, correct?

A. This was for a new version of Safari they were planning to launch for Windows. And I think in that context -- so this is for launching Safari for Windows, what they called Safari for PCs in the slide. I think at one point, they were considering an implementation which would offer a choice screen, yes.

Q. If you would please turn to UPX137. UPX137 is also in evidence, and Your Honor saw this document with Ms. Braddi.

Do you see at the top of UPX137 that this document reflects notes from an EMG meeting on June 4th, 2007?

A. Yes, it seems so. I don't think I was at the meeting, but yeah, it seems so.

Q. If you would turn to the second page of UPX137,

there's a section titled: Apple IE Browser with Mr. Shardell's name in parens?

A. Yes.

Q. So this is the meeting where Mr. Shardell presented the slides that we were just looking at in UPX126?

A. I can't be fully sure, but it seems a reasonable thing to assume.

Q. The date on UPX126 was the same as that reflected in the notes in this e-mail. And you were present for this discussion of the Apple IE browser?

A. I don't recall the meeting, but I'm on that list, so yes.

Q. And as reflected in the notes, this June 4th, 2000 (sic) EMG meeting was a discussion about Apple's request to offer a choice screen, right?

A. Sorry, it's not clear to me that's the topic of the meeting.

Q. Okay. If you look at the bottom of the second page of UPX137, it says: "Apple wants" -- withdrawn.

It says: "Google will be one of two possible choices for search provider (not the default)".

Do you see that?

A. Yes.

Q. So looking at page three of UPX137, during this discussion about Apple's request for a choice screen, someone

asked: "How much difference default status makes?"

Do you see that? It's about a third of the way down the page. It's also on your screen, if that's easier for you to see.

A. Yes.

Q. Do you recall if that was -- if you were the individual who asked: "How much difference default status makes?"

A. I'm sorry, it's such a long time ago.

Q. The answer was: "Typically 75 percent take rate. Defaults have strong impact."

So Google considered the impact of defaults in weighing Apple's request to implement a choice screen, right?

A. Two separate things. I mean, the 75 percent take rate, I don't have context around it. Different people always had different opinions, and I'm happy to talk about it. But did we consider -- sorry, did we consider defaults to be valuable, is that your question?

Q. Google considered the impact of defaults in weighing Apple's request to implement a choice screen?

A. Yes, we've been very, very clear, I think it was perfectly fine for Apple to implement a choice screen. But I think in this context, for Safari on Windows, they wanted to implement a choice screen, but asked for the rev share terms to apply from the other deal where we are set as the default.

Obviously these are not two similar situations, and so we would take that into account.

Q. And one of the things that Google took into account when evaluating Apple's request regarding the choice screen was that defaults have strong impact, correct?

A. We do commercial deals associated with setting as default. And if it's the user choice screen, and it's not something we would do a commercial deal with, we are fine with the implementation.

Q. You see reflected in the notes of this discussion of Apple's request for a choice screen that defaults have strong impact, correct?

A. In the notes it states that, yes.

Q. And looking further down, there's a section entitled: Outcome. Do you see that?

A. Yes.

Q. So the result of this discussion was to tell Apple no default, no rev share, right?

A. For Safari on Windows, that's consistent with my recollection, that our existing deal was consistent with the default implementation, and we would be happy to do that. But they could choose what they want to do, it's just the same current deal terms wouldn't apply, yes.

Q. I'd like to stay on Apple, but switch gears slightly.

THE COURT: Ms. Bellshaw, if I can interrupt you. We're

approaching 11:00, so why don't we take our morning break, if you're switching topics. We will break until 11:15.

Mr. Pichai, I'll just ask you please not to discuss your testimony with anyone during the break, all right?

THE WITNESS: Thank you.

THE COURT: Thank you, everyone.

(Recess taken at 10:59 a.m.)

(Back on the record at 11:16 a.m.)

THE COURT: Ms. Bellshaw, whenever you're ready.

BY MS. BELLSHAW:

Q. Thank you, Your Honor.

Mr. Pichai, for years, Google has been concerned that Apple might start its own search engine, right?

A. I've thought about competition from everyone, so no different. So Apple was one of the possible competitors, yes.

Q. Google has discussed the possibility of Apple starting its own search engine internally?

A. We had seen, I think it was maybe a few years ago, some reports of Apple -- there were press reports about Apple crawling the web and developing an index. So that moment was the moment we internally had conversations that they may be possibly building a search engine.

Q. And Apple has at least some search capabilities, right?

A. Yes. I mean, search is such a broadly defined word.

Can you clarify what you mean by search capabilities?

Q. Sure. So, for example, Apple can use its Suggestions product to answer some Safari queries on its own rather than sending them to Google?

A. That's correct, yeah.

Q. And I think you just referenced, but you're aware that Apple has built a web index?

A. I'm not aware. I read press reports speculating or reporting that Apple may be possibly building an index.

Q. You're aware of public reports that Apple built a web index?

A. Yes.

Q. And you have been concerned about Google Search employees leaving for Apple, right?

A. I mean, I'm concerned about -- search is where we have our best -- in general, I feel our search and artificial intelligence teams have some of the best talent at Google, so I would be concerned about those employees leaving to any companies, including Apple.

Q. You've had specific concerns about Google Search employees leaving for Apple, right?

A. Not in an unusual way, no.

Q. Mr. Pichai, I'd like to direct your attention to UPX1092. And Your Honor, UPX1092 is in evidence.

Mr. Pichai, UPX1092 is an e-mail from you to some of your

colleagues at Google with the subject: Ben G. and Search. Do you see that?

A. Yes.

Q. And at the e-mail at the bottom -- so the first e-mail in the chain of UPX1092, is an e-mail from you dated April 16th, 2019?

A. That's correct.

Q. So the -- in the first sentence of your e-mail you write: "Loss of talent."

You were referring to loss of search talent?

A. I'm summarizing Ben Gomes, Mr. Ben Gomes, who headed search at that time, had come to meet me. So I'm sending a note back to people operations summarizing what his concerns were.

Q. And Mr. Pichai, just for the record, there are some redacted statements on UPX1092 that involve sort of more personnel, so I'm not going to ask you about any of those statements. You're obviously welcome to refer to them if it's relevant to your response, but I won't be asking you about those specifically.

A. Thank you.

Q. Focusing on the bottom e-mail, your e-mail in UPX1092, there's a dash line and it says: "JG now recruiting." Do you see that?

A. That's correct.

Q. And that refers to Google's former head of search, Mr. Giannandrea?

A. That's correct.

Q. And Mr. Giannandrea left Google for Apple, right?

A. That's correct.

Q. And after leaving Google for Apple, Mr. Giannandrea was recruiting Google search employees, correct?

A. That's what Mr. Ben Gomes was telling me.

Q. Looking at the bottom paragraph of your e-mail in UPX1092, you wrote: "I need monthly reports of all losses to key competitors on an ongoing basis."

Do you see that?

A. Yes.

Q. So you were asking for monthly reports for Google employees who left to go to key competitors, correct?

A. That's correct.

Q. And then in your sentence, you go on: "If anyone from search to Apple, please e-mail me directly on every individual case."

Do you see that?

A. Yes.

Q. So when employees left for other competitors, you were receiving monthly reports, right?

A. I'm not sure I received those reports, but that's what I'm seeing in the e-mail.

Q. But you gave specific instructions to be notified directly for each individual search employee who left Google for Apple, correct?

A. That's right. And here, search refers to Ben Gomes' team who was heading the search and a few other teams, yeah. So this is Ben Gomes coming -- Mr. Ben Gomes, expressed to me concern, and he has called out specific people. One of them was at Apple, but others I don't think are. He was bit concerned about loss of talent, and wanted my help in helping retain people. I've always -- I definitely consider it as part of my job to help retain our most valuable employees. And so, yeah, that's the context of this.

Q. So Mr. Gomes was head of search at this time in 2019?

A. That's correct.

Q. And Mr. Gomes was concerned about Google search employees leaving for Apple, right?

A. No, no, overall. Gabe and Shashi -- Gabe didn't leave for Apple. I don't know where Shashi left. I don't think -- Shashi left his team internally to some other team at Google, now that I recall. He was just concerned about a loss of talent, because I think he had just recently come into this new role after JG had left. So it was a new role, he was concerned about loss of employees, and so he asked for my help, I offered to help.

Q. And one of the ways that you offered to help was you

asked to be notified directly about every individual Google employee who left from search to go to Apple, right?

A. That's what I'm saying in this e-mail, that's right, yeah.

Q. I think you said earlier that Google has 180,000 employees; is that right?

A. That's correct.

Q. You don't get a notice when each of those 180,000 employees leaves Google, right?

A. No, and neither did I after this e-mail on anybody who left to Apple.

Q. We can set that one aside. Switching topics but staying with Apple, you referenced Safari Suggestions earlier.

Do you recall that?

A. Yes.

Q. What is Safari Suggestions?

A. It's their product, but the way I understand it is as users type in Safari's box, they offer suggestions -- Apple offers suggestions of what the users could complete or could navigate to.

Q. And you've discussed Safari Suggestions with your staff at Google, right?

A. Yes, I'm sure.

Q. And who is Tim Cook, just for the record?

A. I've heard of him. Mr. Tim Cook is CEO of Apple.

Q. And the 2016 ISA between Apple and Google included a requirement that you and Mr. Cook meet every year, right?

A. That's correct, it was part of the agreement, yes.

Q. And the intention is to meet every year to discuss the ISA, the agreement between Google and Apple?

A. I think it laid a framework for us to meet. It didn't always work that way. But, yes, that was the intent behind it.

Q. And these meetings are known as CEO check-ins?

A. I guess so, yeah.

Q. You and Mr. Cook had a CEO check-in to discuss the ISA in 2018, right?

A. I would need -- I can't be sure of the date, but I do recall meeting Mr. Cook specifically. Particularly, there was a moment in which they had raised a set of concerns, and so we had a follow-up meeting with respect to that.

Q. In advance of your meetings with Mr. Cook, your team prepares briefing materials for you, right?

A. That's correct.

Q. And you rely on knowledgeable members of your team to prepare these briefing materials?

A. Yes, that's correct.

Q. If you would please turn to UPX2050. UPX2050 is a document entitled: Draft Materials for 12/19 Sundar/Tim Meeting.

Do you see that?

A. Yes.

Q. So these were a draft of the materials prepared by your team for your December 19th, 2018 meeting with Mr. Cook, correct?

A. Sorry, this is 12/19 -- sorry, December 19th, 2018, yes. Okay, it makes sense, yes.

MS. BELLSHAW: Your Honor, I'd move to admit UPX2050 into evidence.

MR. SCHMIDTLEIN: No objection.

THE COURT: It will be admitted.

(Exhibit UPX2050 admitted into evidence)

BY MS. BELLSHAW:

Q. On the first page of UPX2050, do you see there's a small heading labeled: Apple's Position?

A. Yes.

Q. And it says in the first bullet: "Apple is concerned about Safari revenue growth deceleration in 2018."

Does that refer to the concern that you described earlier that Apple had, that its search revenue on Safari wasn't growing as quickly as Google's publicly reported overall revenue?

A. That's correct.

Q. If you would turn to page two of UPX2050, there's a section entitled: Recommended Response. So your team prepared a recommended response to Apple's concern about Safari revenue

deceleration, right?

A. That's correct.

Q. Looking at the third bullet in this recommended response, it says: "We have been concerned for some time that search traffic cannibalization may be occurring on Apple devices via a few factors. Primarily by Safari's Suggest, but possibly also through Siri."

So the search traffic cannibalization there refers to queries that Apple is answering on its own rather than sending to Google?

A. Yes, I assume so, yeah.

Q. And you were aware of the concern at Google about this search traffic cannibalization?

A. Not in a big way. You know, all of this was brought to my attention in the context of competing teams had been working. But given that there was a meeting I was about to have with Mr. Tim Cook, I think the team told me what the concerns were. I actually asked them to explain to me what the discrepancy was, so this document is their recommended response. But I just tried to understand the facts so that I could prepare for the meeting.

Q. So your team had been working on this issue with Google for a few years, and this is --

A. I presume you mean Apple?

Q. Yeah, sorry. Your team at Google had been working on

this issue with Apple for a few years, and this is the point where it rose to your attention, correct?

A. Yeah, to me. It's coming to my attention because Mr. Cook had asked for a meeting, and I was going to go meet with him with my team. And that's the context in which they were giving me context for why the meeting -- what is the origin of the meeting, and briefing me on it.

Q. So if Apple uses Safari Suggestions to answer commercial queries rather than send those queries to Google, that costs Google revenue, right?

A. It could explain the possible discrepancy between what Apple is seeing as -- the question they were asking was why -- to be very clear, there were a bunch of factors, because they were looking at our publicly reported numbers. And their claim at the time was they didn't see the same revenue growth. That was explainable due to a bunch of factors: Different geographic mixes of where Apple works versus where the rest of our products and services work; foreign exchange differences.

And one possible source -- not one possible, one source was we don't get all the queries from Apple, so only the queries they choose to send us. And some of them would be commercial queries. So, for example, as the document says, if the user typed engagement ring, right, these are highly commercial queries. Over many years, we've learned when people type engagement ring, their intent is to shop for an engagement

ring, and that's what the Google search results page is designed to help them with.

In Apple's case, they are answering with a suggestion which answers what is an engagement ring, which is not what the user is looking for. So it's both a poorer user experience, and those kind of queries explain the commercial differences. And Mr. Cook was trying to understand the source of differences. At least in my meeting, that's the context in which it came up.

Q. And when Apple gives a user an answer to what is an engagement ring, rather than routing that commercial query to Google, that costs Google revenue, the revenue that Google might earn if a user clicked on an ad for engagement rings?

A. In this case, it costs both Apple and Google revenue in the shared context of this deal.

Q. Looking at the next bullet in UPX2050, it states: "Google has been vocal to Apple about query cannibalization concerns for the past two years. We even included a provision in the most recent agreement to protect against further cannibalization."

And the most recent agreement there refers to the 2016 ISA?

A. That's correct.

Q. And it says "protect." So the ISA provision that Google included was to protect Google from answering queries on

its own?

A. No.

Q. The provision referred to is the substantially similar provision that you discussed earlier, correct?

A. Yeah, this refers to what I spoke earlier about, our concerns that given we are doing a commercial deal around default placement, potentially sending queries to rival providers -- as an example, for commercial queries to Amazon, we specifically capture in the agreement Apple can do things like Safari Suggestions. It's completely up to them to improve their user experience the way they see fit.

Q. And Apple's ability to improve the user experience on iPhones is subject to this substantially similar provision, correct?

A. That's not my understanding. My understanding is that the substantially similar provisions covers Apple sending queries to rival providers to Google, and that's what that covers. It has nothing to do with -- and we clearly called it out in the agreement, that Apple can improve its own services, and so they can choose whatever they want to do with it.

Q. So the purpose in including the substantially similar provision in the 2016 ISA was to protect against further cannibalization, correct?

A. It was to very specifically -- and that's what we talked through with them, and it was in the context of we are

paying for a default deal with a rev share, so we need to have some notion of what that value is. And it depends on are they going to send queries to us or to rival providers, right. So that's what we are talking about.

And so the substantially similar refers to being similar to how the default is implemented with respect to other rival providers, other competitive providers. It specifically allows Apple -- which is handled in a separate section about Apple can choose to do what they want to improve their products and services. And that was very, very clear between me and Mr. Cue.

Q. I want to be clear that I got an answer to my question, which was that Google included the substantially similar provision in the ISA -- in the 2016 ISA to protect against further cannibalization, correct?

A. No, not -- I mean, it depends on -- that line is too general, and that's not what the substantially similar language says.

Q. That's what's written here in the briefing document that your team prepared for you, correct?

A. There is a line there, but I negotiated the agreement directly with Apple, and that's not how the agreement was done.

Q. Mr. Pichai, if you would please turn to UPX617. UPX617 has been admitted into evidence, Your Honor.

Looking at UPX617, do you see there's a middle e-mail from

Donald Harrison?

A. Yes.

Q. And who is Mr. Harrison?

A. Mr. Harrison is president of our global partnerships.

Q. And he's one of your direct reports?

A. He's not, he reports to Mr. Phillipp Schindler, our chief business officer.

Q. And is Mr. Schindler one of your direct reports?

A. That's correct.

Q. And do you see that Mr. Harrison is circulating to your executive team notes from your 2018 CEO check-in meeting with Mr. Cook?

A. It's not -- I can't see who all he has sent it to, but I can see he's sending an e-mail summarizing the meeting.

Q. If you look at the to and copy lines in UPX617, do you see there are some of your members of your executive team, and then also others like Joan Braddi?

A. Yeah, that's correct, but I don't know whether Jerry added them or he's just replying also.

Q. Looking at Mr. Harrison's e-mail, he starts: "Very good conversation last night with Tim, Eddy, Peter."

That's Tim Cook, Eddy Cue and Peter Stern of Apple?

A. That's correct.

Q. So Mr. Cue and Mr. Stern also attended the 2018 meeting with Mr. Cook and yourself?

A. That's how I remember it, yes.

Q. Looking about halfway down that first paragraph on UPX617, Mr. Harrison wrote: "Tim's overall message to Google was, 'I imagine us as being able to be deep, deep partners, deeply connected where our services end and yours begin.'"

Do you recall Mr. Cook describing Apple and Google's deep, deep partnership during this meeting in 2018?

A. I think we spoke a lot about -- it was very clear to me in the meeting that Mr. Cook deeply valued about their user experience in the context of iPhones and in the context of Safari, and I deeply valued about our user experience. And there was a shared understanding that this journey in Safari, the two companies are delivering a user experience which needs to work together seamlessly. So for sure we ended up speaking about that.

Q. So you recall Mr. Cook saying that the partnership would be connected where Apple's services end and Google's begin?

A. Very specifically about the experience in Safari, right. I mean, we fiercely compete in many, many areas, so I think it would be tough to call that. But he's referring to in Safari, as users are typing in, Apple can offer suggestions, can do stuff. But when they choose to send to us, that the experiences to the user feels like they don't feel a seam there. That's what he's talking about.

Q. And there's nothing in the notes here about your meeting in 2018 that limit Mr. Cook's message to the use of Google and Safari, correct?

A. Could you clarify that, please?

Q. Sure. So these -- UPX617, these are notes of your meeting with Mr. Cook, correct?

A. This is Don's version of the meeting we had -- of our two-hour meeting we had, yeah.

Q. These are Mr. Harrison's notes of your meeting that he attended with you?

A. That's right, his impression of the meeting, yes.

Q. And there's nothing in Mr. Harrison's notes of Mr. Cook's message to Google about Apple and Google being "deep, deep partners, deeply connected where our services end and yours begin," that limits that partnership to Safari, correct?

A. I remember my conversation with Mr. Cook. We were very, very specifically talking -- pretty much the whole meeting was an in-depth discussion of -- the meeting started -- you know, it was a tense meeting which became better as it went along, because they thought they weren't getting the money they should. And we clarified why, we explained why, and so the meeting went well. And as part of the meeting, once we understood, there were times I think Tim felt they weren't getting the user experience right in certain cases. And I gave

the earlier example of engagement rings. I think those are cases in which both of us felt we were letting the users down or something like that, so we talked about working together as deep partners to make that experience better.

Q. And my only question, Mr. Pichai, is that that limitation on Mr. Cook's comments, that he's referring only to the user experience in Safari, that's not reflected in the notes, correct?

A. Yeah, as written, it's not.

Q. Looking at the next paragraph on UPX617, at the end there's a statement attributed to you. Mr. Harrison wrote: "Sundar also strongly stated that you send us queries, and we do our best to answer these and monetize. Always in good faith, and because our incentives are aligned. Please trust this."

You conveyed this message to Mr. Cook?

A. Not in those words, but it's a summary of our conversation, yes.

Q. During your meeting with Mr. Cook and Mr. Cue, you discussed Apple's diversion of queries away from Google using Suggestions, correct?

A. It came up as -- one of the explanations we covered for the possible source of revenue differences they were attributing to was that some of the queries, you know, Apple were not sending to Google, and that explained part of the

difference.

Q. If you would turn the page and look at page two of UPX617. Part of the way down, you'll see a reference to notes, and then it appears to be a slightly rougher version of Mr. Harrison's notes from the 2018 meeting.

Do you see that?

A. Yes.

Q. About halfway down the notes, there's a reference to Safari Suggestions. Do you see that?

A. Yes.

Q. And then below that, in the next bullet it says: "Our vision is that we work as if we are one company."

Did you say this to Mr. Cook or did Mr. Cook say this to you?

A. I mean, I don't recall myself saying that line. And I think Mr. Cook -- if you read a bit earlier, there's a line where he talks about: "Please tell us if you think we are doing dumb things." And so we definitely got into the examples. He asked us to -- Mr. Cook wanted to really understand, you know, like is the user experience working well the way Google sees it. And so we definitely had an in-depth discussion around that. And I think he was very motivated to try and work together to find the right experience for our joint users in that product experience.

Q. And did you agree with this vision, that Apple and

Google work as if we are one company?

A. No.

Q. And there's nothing in the notes to reflect that you or anyone else at that meeting disagreed with that vision of Apple and Google working as one company?

A. I don't recall that moment in the meeting where we -- I mean, we fiercely compete on so many products, there has been a lot of tension, moments of mistrust between the two companies. I mean, the teams across both sides were nervous going into this meeting, so there was some, what I would call, irrational exuberance coming out of the meeting after what was a difficult meeting. But it was -- the meeting was tense at times. We continued to have moments of tension between the two companies. So it's tough for me -- we build Android, they build iPhones. We compete every day in the marketplace on that and many, many other products.

Q. Did the competition between Google and Apple on smartphones come up during this meeting where Apple and Google were discussing working as if we are one company?

A. I mean, no, we didn't talk about our competition on these platforms in this context.

Q. This discussion was just about working as one company in search, right?

A. No, this discussion was very, very specific to them trying to understand what was the source of the revenue

difference. It was an in-depth discussion of what are all the possible contributors which could explain the revenue difference between the two companies. And we discussed various things, one of which was the experience in Safari, and what they do when it comes to us, and whether that could explain the difference.

And Mr. Cook, as part of that, wanted to understand what we thought was a good user experience; he specifically asked for it. And we spoke through it, and then he said: "We need to work together to make sure we are getting that experience right." That's how I remember it.

Q. Looking at the end of this one vision bullet point in UPX617, do you see where it says: "We could extend the term of the deal so you guys don't worry about it. It would be an additive thing from a query experience. Decided to put a Google search app in, and do it for 20 years together."

Did you give that message to Mr. Cook?

A. I think this is a different product we are talking about. One of the things -- he asked about what all could possibly improve the experience, could maximize the value of the deal they have with us. In that context, we said one of the things that works well on Android which drives increased usage is a Google search application, right -- what we call as the Google search widget on Android. So I proposed that we could build a Google search application for iOS. And there was

a context as to if you build a product and they would consider shipping it, we will be committed to supporting the product for many, many years.

Q. After this meeting, Apple and Google extended the ISA before it expired without renegotiating any of the terms, right?

A. I think we -- I wasn't directly involved on the back and forth on the 2021 agreement, but my understanding is we both mutually felt the deal was working well and we renewed it.

Q. So the ISA extension in 2021 was part of this vision of Apple and Google working together as one company in search?

A. No.

Q. And as CEO, you approved the extension in 2021?

A. Yes, I did.

Q. So we talked a little bit earlier about the payments that Google makes to its search distribution partners. Do you know how much Google paid its Android partners under the RSAs last year?

A. No.

Q. Do you understand the magnitude of those payments, even if not the exact figure?

A. I'm sure. We have a good sense of our traffic acquisition costs across, and I'm aware of it, but not at a specific level of what happens in RSAs. I haven't been involved with RSAs for a very long time.

Q. Do you have an understanding as to how much Google paid Apple for the Safari default last year?

A. Yeah, at a high level, yes.

Q. Google paid Apple billions of dollars more than to all of Google's Android partners combined in revenue share payments, correct?

A. How we structure revenue share agreements, the payments depend on performance. I think it's important to understand the Apple ecosystem works differently from the Android ecosystem. In the Apple ecosystem, Apple is both the OEM and they have control over their telecom channels. Whereas on the Android side, the amount is shared between the OEM partners and the telecom partners. So that accounts for a big part of the difference.

Secondly, Apple sells more high end devices in the U.S. It's very, very popular at the higher segments of the market, so it drives more usage which results in more payments. So we structure revenue share agreements, and it depends on performance. And Apple gets performance both on its behalf, and they are the single source on their side. On the Android side, it's divided between a bunch of players.

Q. But if you add up all of the payments to Android partners together in one bucket and compare that to the payment to Apple last year under the ISA, the payment to Apple under the ISA was billions of dollars more than the bucket that is

all of the Android partners combined, correct?

A. I'm actually not sure of the numbers there.

Q. Do you have a sense that Apple receives significantly more in revenue share than all of Google's Android partners combined?

A. Your Honor, I would need to know what's -- you know, it's not clear to me.

THE COURT: If you have a general sense, Mr. Pichai, that's fine. If you don't know the answer, then we can move on.

THE WITNESS: In a general sense, Apple does get -- receive more payments compared to an Android OEM, but that is due to a set of underlying factors.

BY MS. BELLSHAW:

Q. And when Google calculates how much to offer Apple under the ISA, what percentage of revenue share, Google doesn't consider how those payments affect Apple's ability to compete against Android, right?

A. We are -- our ISA agreement is about us doing the deal for default placement of Google search, and so we think about how it impacts Google search, yes. That's our main consideration.

Q. So you think about Google search separate from the competition between Apple iOS and Android?

A. That's correct, yeah.

Q. Just a few questions following up on testimony that you gave earlier. The MADA benefits Google, right, in addition to any benefits to partners?

A. It benefits users, it benefits developers, it benefits Android OEMs to be able to compete against Apple. It provides a distribution for our revenue generating services, including Google Search and Google Play. And it also helps us support the business model of -- because we provide Android for free, and we invest tens of thousands of engineers to compete with Apple. It helps provide the business model to support innovation on Android.

Q. And the MADA also benefits Google directly, correct?

A. As I just mentioned, yes. You know, it helps generate revenue through our core products, like Google Search and Google Play.

Q. One benefit of the MADA is the distribution of Google search, right?

A. That's correct.

Q. And the MADA license includes 11 applications, right?

A. That sounds about right, yeah. I can't be exact --

Q. Approximately?

A. Yeah, that's right, approximately.

Q. And Google monetizes most, if not all, of those applications, right?

A. Not always true, but definitely monetizes some of the

applications there.

Q. So, for example, the MADA license includes the Play Store app and the YouTube app?

A. That's right. It also includes Google Calendar which we don't directly monetize.

Q. And Google makes money from the Play Store, right?

A. That's correct.

Q. And Google also makes money from YouTube?

A. That's correct.

Q. And Google makes money from some of the applications like Gmail or Drive where users pay for additional storage?

A. That's correct.

Q. You would agree that each OEM and carrier that signs a MADA or an RSA has a goal of ensuring that users have a good experience on their devices, right?

A. That's correct.

Q. So even without the MADA, OEMs and carriers -- OEMs would still work to ensure that users have a good experience on their devices, right?

A. I think, yes, OEMs are trying to compete and win in the marketplace. But they definitely have constraints, and they're making a lot of trade-offs. Some of them are much smaller in size competing with Apple, so they definitely value the work we do to enable a coupling experience out of the box.

Q. But you would agree even absent signing a MADA or an

RSA, OEMs have an independent incentive to work to ensure that users have a good experience on their devices?

A. It's complicated, because as I was earlier answering the question on security updates, you know, empirically, many OEMs weren't fully completing the security updates even though that would result in a direct user experience.

Q. And Mr. --

A. Because they have cost trade-offs, and they're trying to trade-off. So they have an incentive, but they also have incentive to do other -- they're trading off amongst various incentives.

Q. But my question is a yes or no. Even without the MADA and the RSA, OEMs would still have an incentive to ensure that users have a positive experience on their devices, right?

A. Yes.

Q. And there's no reason that Google couldn't provide a separate financial incentive for OEMs and carriers to push through security upgrades outside of the RSA, correct?

A. You could structure it, but again, we need to have a business model to support Android, right. We are competing against Apple working with a set of OEMs. Android's free. We also pay them money to get everyone to -- just a base alone as a way to make it make sense as a business model.

Q. But Google could provide a separate financial incentive for security upgrades outside of the RSA, correct?

A. Sure, we could structure it that way.

Q. As product manager -- switching gears a little bit. As product manager of Chrome, you were involved in browser distribution, right?

A. That's correct.

Q. Most PC computers ship with Windows and Internet Explorer pre-installed?

A. Yes.

Q. And for years, Google has paid PC desktop manufacturers and software companies to distribute Chrome on Windows computers, correct?

A. Yes, we compete with other players, including Microsoft, to do that.

Q. And one of the ways you get distribution for Chrome is to enter into distribution deals where Google financially incentivizes PC desktop manufacturers and software developers to distribute Chrome?

A. Yes. I was much more involved in the earlier days, but I haven't been involved with that part of our business for almost -- for multiple years now, but that's my understanding.

Q. This is something that Google did back in 2008 when Chrome was first released?

A. Yes.

Q. And to your understanding, Google still has these Chrome distribution deals today?

A. That would be my understanding, yes. We didn't do the deals in 2008 maybe, I'm not exactly sure about the timing. I think it was a while later we started doing that, yeah.

Q. But it's been a while?

A. Yeah, that's right.

Q. Google's Chrome distribution agreements were not exclusive, right?

A. I don't remember the details of all the agreements. I was not directly in the -- I was building the product more. I was involved, but not at that level of specificity always.

Q. So generally, Google's distribution agreements with, for example, PC manufacturers like Dell or HP were for Chrome to be a non-exclusive browser default, right?

A. I would need to refer back to -- I don't remember the specific details of how on personal computers. Because I think IE was installed on the computer, so I don't think it could be exclusive would be my understanding, yeah.

Q. So because IE was installed on the computer, Chrome couldn't be the exclusive browser distributed on PC computers, right?

A. Yeah, I think. But we would ask for a default, for it to be a default browser, to pay -- to install and to be default. We had various types of arrangements, but a common way would be that, yeah.

Q. And when Chrome was being distributed as a default

browser, that means that it would be the first browser to open up when a user clicked on a web link, right?

A. If they clicked on a web link, yes, that's correct.

Q. Or Chrome could be distributed as a default browser meaning that it would be the first browser to open up if a user clicked on like a URL link or something, right?

A. Yeah, same as web link, yes.

Q. And you would agree that being set as the default in these distribution deals helped Chrome gain market share on Windows computers against Internet Explorer?

A. We did the distribution deals to get enhanced promotion. I think it was one of the many factors which contributed to Chrome's growth, yes.

Q. I'm sorry, I didn't hear you. It was one of the factors that contributed to what?

A. One of the many factors which contributed to Chrome's growth.

Q. These default distribution deals were a factor that helped -- that contributed to Chrome's growth against Internet Explorer on Windows computers?

A. Yes. I think it was -- it was a much better product which helped, I think, but promotion also played a role.

Q. I'd like to ask you a question about DX23, which Mr. Schmidtlein handed up to you earlier. The study referenced in DX23 was a study of users who switched from Internet

Explorer to Chrome, correct, that was at least part of it?

A. That's correct.

Q. And Google was not set as the default search engine in Internet Explorer, correct?

A. I'm trying to understand the timing of it. 2010, I can't say that from this e-mail. I think it's people upgrading from IE to Chrome. But they may have had the default search in IE set to Google too, so it's not really clear.

Q. The default out-of-the-box on Internet Explorer at this time in 2010 would not have been set to Google on Internet Explorer, right?

A. Yes, but that's not what this is talking about, right. This is talking about migrate -- users just switching from IE to Chrome. It may not be the out-of-the-box IE experience.

Q. No, I understand. I'm just asking as a predicate fact, that the users who were using Internet Explorer before they switched to Chrome, their defaults in Internet Explorer wouldn't have been set to Google unless they took independent steps to make that change, correct?

A. Not necessarily. To our earlier conversation, it could have been a distribution deal we had done with that specific OEM where the default search might have been set to Google.

Q. So Google entered into distribution agreements with OEMs in this time in 2010 that would set Google as the default

search engine in Internet Explorer?

A. Possibly, yeah.

Q. The study referenced in DX23, that study was intended to measure the impact to Google of users switching to Chrome, correct?

A. That's right, yeah.

Q. The study did not measure the number of searches that a user conducted on any search engine after, correct?

A. We wouldn't -- the way the study is done, we would only see what's coming to us. So we don't have visibility into what people are doing with respect to other search engines.

Q. So what this study measured was after a user switched from Internet Explorer to Chrome, what was the increase in search queries they did on Google, correct?

A. Google. And they could have been a prior Google user on Internet Explorer.

Q. But that's not what this study was intended to measure?

A. No, but it was intended to measure that, too. It's basically -- it cannot detail that difference. All this is saying is, looking at our logs of someone who switched from IE to Chrome, we saw -- for the cohort of users who switched, we see an increase in usage. That includes people who were using Google prior in IE, right. It includes people who weren't using Google in IE, maybe now use Google in Chrome. It

includes people who were maybe using Google and came to Chrome, possibly could be -- have switched to some other search engine. It includes all of that.

Q. So if a user was switching, for example, on Bing in IE before switching to Google, what the study would measure is the increased number of searches that were done in Google after they switched their browser to Chrome, correct?

A. That's correct.

Q. It doesn't compare the number -- overall number of searches that the user was conducting?

A. I think it is -- not the overall across other providers, no.

Q. So if I searched -- if I conducted a hundred searches on Bing when I was using Internet Explorer, and I switched to Chrome and conducted a hundred searches on Google, that would look like a pretty big increase in my number of search queries in this study?

A. Yes, but it would also include if I were in IE and I was doing 50 searches on Google, and I switched to Chrome and I did a hundred searches, it would count that increase, too. So it's all in there. And to be very clear, I'm trying to just look at a 2010 study from this e-mail alone, like I don't have the underlying mechanics of what the study involved. So I'm trying to answer the best I can.

Q. Thank you, Mr. Pichai. You can set that document

aside. Switching topics again, you are familiar with the concept of civil discovery in litigation, right?

A. So what's the phrase, again?

Q. Civil discovery in litigation?

A. I'm not exactly familiar with the phrase civil discovery, but I'm familiar with the phrase discovery, yes.

Q. You understand that when Google is involved in litigation, it produces documents to the other side as part of discovery?

A. Yes.

Q. And sometimes Google produces your documents in discovery?

A. Yes.

Q. You understand that some documents can be withheld in civil discovery if they're protected by the attorney-client privilege?

A. Yes.

Q. And you've received training on legal privileges at Google, right?

A. Not -- I've received training on a bunch of topics which includes that, yes.

Q. The training you've received at Google includes, among other topics, legal privileges?

A. I've received, broadly, legal training, right, about what is antitrust law, how should we do mergers and

acquisitions. So in that context I've received broad training, yeah.

Q. And where you are seeking legal advice, you mark documents with attorney-client privilege, right?

A. If I'm seeking legal advice, I would typically usually mark the document attorney-client privileged and ask Mr. Kent Walker, our chief legal officer, for advice.

Q. But that's not the only time that you use the label attorney-client privilege on your e-mail communications, right?

A. There have been occasions where I've just marked them privileged to indicate it's confidential.

Q. You have marked documents attorney-client privileged, even when you're not seeking legal advice, to indicate that the documents should remain confidential?

A. Occasionally. Confidential as in the internal context of the company, not from a legal discovery process.

Q. And you mentioned Mr. Walker. He is Google's chief legal officer?

A. That's correct.

Q. So sometimes you add Mr. Walker to e-mails and mark them privileged, even when your goal was to maintain the document as confidential rather than seeking legal advice?

A. No, no, no. If I want Mr. Walker's legal advice, that's when I would CC Mr. Walker and I would ask for advice.

Q. So there have been times where you put Mr. Walker's

name on an e-mail and asked for advice when you weren't really seeking legal advice, but rather to keep the document confidential, correct?

A. No, normally I would mark those just like privileged or something like that. But if I wanted Mr. Walker's advice, I would add him and ask him for advice.

Q. But it's possible that you have in the past put Mr. Walker's name on an e-mail and asked for legal advice when you weren't actually seeking legal advice, and just wanted to indicate that a document was confidential?

A. That's not how I used the provision here.

Q. Mr. Pichai, I'm going to hand you a copy of your deposition.

MS. BELLSHAW: May I approach, Your Honor?

THE COURT: You may.

BY MS. BELLSHAW:

Q. Mr. Pichai, you were deposed over two days in this litigation, correct?

A. That's correct.

Q. So I'd like to direct you to the second transcript dated April 6th, 2022, page 514. And if you could let me know when you're there.

A. 51...

Q. 514.

A. Yes, I'm there.

Q. If I can direct your attention to page 514, lines four through 13. Were you asked this question and did you give this answer:

"Question: Sure. So there may have been some times when you accidentally put Mr. Walker's name and asked for advice when you weren't really seeking legal advice, but you were seeking confidentiality for the document, correct?"

A. That's correct.

Q. "Answer: It's a possibility."

Did you give -- were you asked that question, and did you give that answer?

A. Yes, this is accurate as to how I answered.

Q. You can set that aside, thank you.

THE COURT: What was the page again on that, Ms. Bellshaw?

MS. BELLSHAW: 514, Your Honor.

THE COURT: Thank you.

MS. BELLSHAW: It's lines four through 13.

THE COURT: Okay.

BY MS. BELLSHAW:

Q. Mr. Pichai, you're familiar with Google's internal instant message or chat features, correct?

A. Yes.

Q. These have gone by various names over the years, including Google Talk and Google Hangouts?

A. That's correct.

Q. And you know what an off history chat is?

A. Yes.

Q. Until February of this year, the default preservation setting for many chats at Google was history off, correct?

A. That's correct.

Q. And that means that the chat was deleted after 24 hours, correct?

A. That's my understanding, yes.

Q. Years ago, Google's chat retention policy defaulted to history on, correct?

A. I can't be fully sure, but I recall it being so, I think. But I'm not fully sure.

Q. When a chat is set to history on, it's automatically preserved for months unless a user deletes it, correct?

A. That's correct.

Q. In September of 2008, an e-mail was sent to all Google employees announcing that Google was changing the default setting from history on to history off, correct?

A. I'm not aware of what happens -- remember 2008.

Q. I'd like to direct your attention to UPX1101.

A. Sorry, in the first binder?

Q. Yes. UPX1101, if you look at the first e-mail in the chain, which is the second one on the first page, this is an e-mail from Bill Coughran and Kent Walker dated September 16th, 2008.

Do you see that?

A. Yes.

Q. And Mr. Walker and Mr. Coughran addressed their e-mail to Googlers?

A. Yes.

Q. And that was a common salutation for company-wide e-mails?

A. Yes.

Q. So this e-mail would have gone out to all Google employees in 2008, correct?

A. Yes.

Q. And that would include you?

A. Yes.

MS. BELLSHAW: Your Honor, I'd move to admit UPX1101 into evidence.

MR. SCHMIDTLEIN: No objection.

THE COURT: It will be admitted.

(Exhibit UPX1101 admitted into evidence)

BY MS. BELLSHAW:

Q. Mr. Pichai, who is Bill Coughran?

A. Bill Coughran, he was at the time one of our -- one of the members of our -- I think at the time, he was one of our senior leaders in engineering, and might have been a member of our management team at the time.

Q. And Mr. Walker, we've discussed him, but at the time

he was general counsel at Google?

A. I think so, yes.

Q. And since sending this memo in September of 2008, he's been promoted to chief legal officer at Alphabet?

A. In 2008?

Q. Since 2008?

A. Oh, since 2008, yes.

Q. Looking at the beginning of Mr. -- is it Coughran?

A. Coughran.

Q. Mr. Coughran and Mr. Walker's e-mail, they wrote: "As you know, Google continues to be in the midst of several significant legal and regulatory matters, including government review of our deal with Yahoo!."

That deal with Yahoo!, that was under review in 2008 by the Department of Justice Antitrust Division?

A. I was building Chrome at the time, I didn't pay attention to all these things, yeah.

Q. Looking at the bottom of that first paragraph, Mr. Walker and Mr. Coughran make two requests and announce one change in their e-mail, correct?

A. Can I take some time to read through it? Sorry, it's in real small font.

Q. Sure. And it might be a little bigger on the screen, if that's helpful.

A. Yeah, thank you.

(Witness reviews document)

A. Yes.

Q. So Mr. Walker and Mr. Coughran make two requests of Google employees and announce one change, correct?

A. That's correct.

Q. Looking at the next line, the first request is to: "Please write carefully and thoughtfully. We're an e-mail an instant messaging culture, we conduct much of our work online."

Do you see that?

A. Yes.

Q. And Mr. Coughran and Mr. Walker, there's a second request at the bottom of that paragraph: "Second, remember that these same rules apply not just to Gmail, but also to Google Talk and other forms of electronic communication."

Do you see that?

A. Yeah.

Q. And they explained that: "Google ends up reviewing millions of pages of its employees' communications as part of producing documents in regulatory and litigation matters, and we're working together to streamline and simplify that process."

Do you see that?

A. Yes.

Q. And then they make a request of Google employees to streamline and simplify that process, correct?

A. Yes.

Q. "To help avoid inadvertent retention of instant messages, we have decided to make off the record the Google corporate default setting for Google Talk."

So Google announced that it was switching the default in chats to history off, correct?

A. That's what it seems so, yes.

Q. And Google switched the chat default to avoid the retention of instant messages, correct?

A. I didn't make the decisions, I wasn't involved in communicating this at the time. I think there has been concern that we really focused on building great products and services, and our employees should be very responsible to what's disclosed. It's possible that sometimes our employees use things for humor. We have 1,000,000 groups within Google. They, completely outside of the teams they are involved with, can write as if they're consumers of the product, can speculate.

So we had a sense that we want to tell people your comments could be misconstrued or misunderstood. And to the extent anything involves legal advice, you should be working with our trained legal team to get that advice before you do something.

Q. Google recognized its expected discovery obligations, and one response was to automatically delete chats after 24

hours, correct?

A. This is a decision from the executive management group at that time, so that's what the decision seems to be, yes.

Q. And those chats may have otherwise been collected and produced in litigation discovery and in regulatory matters, correct?

A. I would assume so, yes.

Q. And the decision to make this change to Google's chat default to history off was made by Google's lawyers?

A. I literally am not -- I mean, I can clarify, again, I was working -- was not part of the executive management group. I wasn't privy to the decision process at that time.

Q. Well, Google maintained this policy for the next 15 years until February of this year, right?

A. That's correct.

Q. So Google has maintained this policy since the time that you became CEO?

A. Yes.

Q. And you never took any steps to change the policy to set Google chats to default to history off, correct?

A. You know, no, this was not something I worked on, yeah.

Q. I'd like to direct your attention back to UPX172. That's the letter from Google to Microsoft that we looked at earlier. If you look at the bottom of the third page --

A. Sorry, could you clarify the exhibit number?

Q. Oh, sorry, 172.

A. Yes.

Q. So looking at the bottom of the third page and the top of the fourth: "After advocating for a choice screen, Google warned Microsoft about the potential for litigation if the parties were unable to resolve Google's concerns," correct?

A. Sorry, which part of the document?

Q. So it's at the very end of page three. It says: "Finally, although Google hopes that legal action will not be necessary, we recognize that it is a foreseeable possibility."

Do you see that?

A. That's correct.

Q. And then Google requested that: "Microsoft take care to retain all past and future records relating to any plans to tie search to any Microsoft product or otherwise deprive consumers of a competitive choice in search," right?

A. Yes.

Q. Correct?

A. Yes.

Q. Google wanted to make sure that Microsoft preserved important records related to the dispute, correct?

A. Yes.

Q. And in 2005, Google understood the importance of preserving records for litigation?

A. Yes, I think so.

Q. And three years later, in 2008, Google adopted a policy of deleting chats every 24 hours?

A. I mean, I can only speak to how I've always -- any area of a legal hold, you know, how the documents are used, I don't discuss anything substantively on Google chat associated with anything to do with a legal hold, because I'm aware of the importance of this thing.

Q. As CEO, you knew that all Google employees, even those under a litigation hold, had their chats default to delete after 24 hours, correct?

A. I was aware, you know, when I became CEO this is how it worked. This was not an area I was focused on, yeah.

Q. As CEO, you also understood that Google has an obligation to preserve documents in connection with litigation, correct?

A. Yes, and I rely on our chief legal officer and the legal teams to make sure, you know, they are thinking through how best to do that.

Q. And as CEO, you never took any steps to change the policy to delete chats after 24 hours in order to ensure that Google was meeting its obligations to preserve documents for discovery?

A. This was not a change, yeah, that came to my attention or I considered.

Q. You use chat to communicate with others at Google, right?

A. Yes.

Q. Google's policy of automatically deleting chats after 24 hours applies to one-on-one chats; is that correct?

A. Yes, that's correct.

Q. So there are some group chats that are automatically set to history on?

A. Yes.

Q. And those chats are preserved for longer than 24 hours unless someone changes the setting to history off, correct?

A. That's correct.

Q. And sometimes you ask for your group chats to be set to history off, correct?

A. Very rarely, I think, yeah.

Q. Rarely, but it does happen?

A. I couldn't recall one, but in the deposition there was one chat which I think you all asked me about. So that was the first time I recall doing so.

Q. If you would please turn to UPX973. Mr. Pichai, UPX -- oh, I'll give you a moment. 973.

A. Maybe I'll go off this, I'm not able to find it here.

Q. Okay. Mr. Pichai, UPX973 reflects a chat between you and a colleague at Google on October 12th, 2021, correct?

A. Yes.

MS. BELLSHAW: Your Honor, I'd move to admit UPX973 into evidence.

MR. SCHMIDTLEIN: No objection.

THE COURT: It will be admitted.

(Exhibit UPX973 admitted into evidence)

MS. BELLSHAW: Your Honor, just for your purposes, I wanted to note that UPX973 is one of the documents that was in the binder that we passed up to you.

THE COURT: I have it. Does Mr. Pichai have it?

MS. BELLSHAW: He does. I just wanted to make sure you knew that it was part of the binder we passed up to you about a week ago for the evidentiary admission.

THE COURT: I see, I understand. Okay.

BY MS. BELLSHAW:

Q. Mr. Pichai, looking at UPX973, do you see in the first message you ask Ms. Singer for a link to your leadership circle?

A. Yeah, this is an external event for our Google Cloud business that I was publicly speaking. That's the leader circle, yes.

Q. The leader circle refers to your leadership team, right?

A. No.

Q. It doesn't?

A. This is -- Emily Singer is my communications person,

and I was doing a Cloud event. The leader circle, the reason I'm aware is we recently did one. And we do annual Cloud Next events. We just finished the leader circle event for that one, too. So this is an external event I'm speaking on behalf of our Google Cloud platform publicly.

Q. So looking at the second message that you sent in UPX973, you wrote: "Can we change the setting of this group to history off."

Do you see that?

A. Yes.

Q. So you understood that group chats like this would be preserved unless you took steps to turn history off, correct?

A. That's correct, yeah.

Q. October 2021 is approximately one year after the complaint in this litigation was filed, right?

A. I don't know the exact dates, but I'll take your word for it.

Q. At the time of this chat in October of 2021, you were under a litigation hold for this case?

A. Yes.

Q. Despite being under a litigation hold, you preemptively asked for the chat for this meeting to be set to history off, correct?

A. This is -- had nothing even close remotely to anything covered by this litigation. I'm getting ready for an external

event. I don't recall the specifics, but normally I would do this if I were about to comment on something of a personal nature about some person. So I think they were planning the speaker list for the event, about to ask my input, so I was about to comment on who I thought would be a good speaker or not. That's what I vaguely recall.

Q. So your recollection is that this meeting was for an internal chat about the leader circle that you were giving externally?

A. Ms. Emily Singer prepares me when I'm publicly speaking outside. This is to our top Cloud customers, Google Cloud platforms customers, so it's a public event I'm doing. And so we're going through the speaker lineup, the moderator, who's going to ask me. So it's things like that.

Q. So the meeting that you were asking for the link, that was for an internal discussion about a public speaking event; is that correct?

A. That's right.

Q. And so you were asking in UPX973 to change the setting of that internal group chat to history off, correct?

A. That's correct.

Q. And then nine seconds after you make that request, to change the setting of the internal group chat to history off, you deleted that request, correct?

A. I cannot -- it's not -- I don't recall both asking and

deleting it in detail. It doesn't seem that I deleted it, because it, again, says that, and it looks like the conversation never got deleted.

Q. So you don't know if there are other chats where you asked them to be set to history off, correct?

A. No, but my sense is just like you found this, if there were any other chats, you would -- you know, maybe it would get discovered.

Q. Well, if the setting of the chat was for history off, that chat would have been deleted after 24 hours, correct?

A. No, no, but -- sorry, are you asking are there other occasions where I asked also can we change the setting of this group to history off? If I did that on a chat which had history on, you would have found it. I think this is literally the only time.

Q. But if you had made that request orally, there would be no written record of your request to turn a chat history off?

A. Sure.

Q. So it's possible that there are other chats where you ask the history to be set to off, correct?

A. I don't recall.

Q. You don't recall, but it's possible?

A. Yes, sure, it's possible.

Q. And if there are other chats that you asked to be set

to history off, you don't know what the subject matter of those chats were, sitting here today?

A. I take great care to comply with all litigation holds. I never use chat in the context of discussing substantive discussions about any of these material topics.

Q. But if you had had substantive conversations on a chat set to history off, that would not have been preserved, correct?

A. That's correct. I didn't do that, but you're right.

MS. BELLSHAW: Thank you, Mr. Pichai. I have no further questions.

THE COURT: Thank you, Ms. Bellshaw.

All right, Mr. Cavanaugh -- well, let me ask you, how long are you anticipating?

MR. CAVANAUGH: Probably about 30 minutes, Your Honor.

THE COURT: Let's go ahead and take lunch then.

So Mr. Pichai, we're going to take our lunch break now. We'll return to resume at 1:30. Same instruction as before, please do not discuss your testimony during lunchtime. Thank you, sir.

See everybody at 1:30.

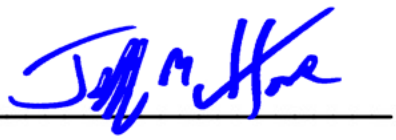
(Lunch recess taken at 12:29 p.m.)

C E R T I F I C A T E

I, **Jeff M. Hook, Official Court Reporter,** certify that the foregoing is a true and correct transcript of the record of proceedings in the above-entitled matter.

October 30, 2023

DATE



Jeff M. Hook

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