

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA, ET AL.,)	
)	
Plaintiffs,)	
)	
vs.)	CV No. 20-3010
)	Washington, D.C.
)	November 8, 2023
GOOGLE LLC,)	9:43 a.m.
)	
Defendant.)	Day 37
)	Morning Session

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

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1 P R O C E E D I N G S

2 COURTROOM DEPUTY: All rise. The Court is now in
3 session; the Honorable Amit P. Mehta now presiding.

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

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

9 Kenneth Dintzer for the DOJ.

10 William Cavanaugh on behalf of Plaintiff States.

11 John Schmidtlein on behalf of Google.

12 THE COURT: All right. Good morning, everyone.
13 Sorry for the late start, we just had an issue this morning
14 that lasted longer than expected.

15 All right. So ready to begin this morning?

16 MR. SCHMIDTLEIN: Good morning, Your Honor.

17 I think, as I had previewed yesterday, there are
18 two deponents who we anticipate playing either later today
19 or tomorrow that there are proposed redactions or, you know,
20 portions. That would be for Mr. Levy from Facebook and
21 Mr. Ezell from AT&T. We've been in conversations both with
22 the government and with counsel for the third parties. And
23 I've got those to hand up to you if you want to take a look
24 at them --

25 THE COURT: Okay, sure.

1 MR. SCHMIDTLEIN: -- during the day today. And if
2 any issues need to be addressed, we can take a look at it
3 later.

4 THE COURT: Yeah, I'm happy to take a look at it
5 during a break.

6 All right. So anything we need to talk about
7 before we proceed with witnesses this morning?

8 Okay. Ready with your next witness.

9 MR. SCHMIDTLEIN: Yeah, Google calls Jamie
10 Rosenberg, and Mr. Popofsky will be handling the direct.

11 THE COURT: Okay.

12 COURTROOM DEPUTY: Please raise your right hand.

13 (Witness is placed under oath.)

14 COURTROOM DEPUTY: Thank you.

15 THE COURT: All right. Mr. Rosenberg, welcome.

16 THE WITNESS: Good morning.

17 THE COURT: Good morning.

18 MR. POPOFSKY: Good morning, Your Honor.

19 Mark Popofsky, Ropes and Gray on behalf of Google.

20 May I proceed?

21 THE COURT: You may.

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JAMIE ROSENBERG, WITNESS FOR THE DEFENDANT, SWORN

DIRECT EXAMINATION

BY MR. POPOFSKY:

Q Good morning, Mr. Rosenberg.

A Good morning.

Q Would you please state and spell your name for the record?

A Jamie Rosenberg. J-a-m-i-e, R-o-s-e-n-b-e-r-g.

Q And by whom are you employed?

A I'm currently a part-time advisor at Google.

Q And when did you assume that part-time advisor role?

A About a year ago.

Q And let's go back in time. When did you join Google?

A I joined Google in summer of 2010.

Q And very briefly, what were your duties at Google during that initial phase of your employment?

A For the first several years I was at Google, I -- from about 2010 to 2016, I was working on our content ecosystem, what is now known as Google Play.

Q And did there come a time when your role at Google changed?

A It did.

1 In 2016, my role changed from being responsible
2 for Google Play to being responsible for running the
3 business of Android and Google Play and the teams associated
4 with that.

5 Q And in that new position, which I believe was VP
6 of business and operations for Android and Google Play, what
7 responsibilities, if any, did you have for MADA and RSA
8 negotiations with Android partners?

9 A The partnership teams that worked -- that
10 negotiated those agreements with partners reported to me.
11 I also had in my organization a strategy team that helped us
12 work through the strategy for those agreements and
13 associated analysis.

14 Q And did there come a time when your role changed
15 yet again?

16 A Yes.

17 In 2019, I evolved from that role to a role where
18 I was responsible for a strategy function for our platforms
19 and ecosystems organization.

20 Q Now, when you took on that strategy role --

21 A Yes.

22 Q -- were you still overseeing the teams that were
23 negotiating MADAs and RSAs?

24 A No. Those teams no longer reported to me from
25 that time forward.

1 Q And from mid-2019, when did you then transition
2 into this part-time advisor role?

3 A About a year ago at this time.

4 Q So late 2022?

5 A Yes.

6 Q And now going back to the way-back machine before
7 2010, can you please tell His Honor your educational
8 background and what your positions were before you joined
9 Google?

10 A Sure.

11 I got my undergraduate degree at the University of
12 North Carolina, Chapel Hill.

13 After undergrad, I worked for five years at the
14 NBA league office in New York on a variety of things. I was
15 a sportswriter in college, worked on the Daily Tar Heel, was
16 hired by the NBA in the publicity department. I got very
17 interested in technology and interactive things. And so the
18 last couple of years I was there, I'm dating myself a little
19 bit, but I was responsible for launching NBA.com.

20 Then I left the NBA and went to business school at
21 Stanford.

22 And then after business school, went to work in
23 venture capital in Silicon Valley for three years.

24 One of the investments I worked on was a company,
25 a startup, called Danger, which was -- which had developed

1 one of the very early smartphones, and I was so excited
2 about what they were doing that I left the venture capital
3 job and joined Danger. I ended up being there for eight
4 years, the last two of years which were inside of Microsoft
5 because we had been acquired by Microsoft. And that brought
6 me to 2010 when I joined Google.

7 The connection between Danger and Google is that
8 the founding CEO of Danger was Andy Rubin, who subsequent to
9 Danger, was the founder of Android, and he was at Google at
10 the time, and so Andy brought me into Google to help him
11 with Android.

12 Q And what, if anything, excited you about joining
13 Google in 2010?

14 A I loved the vision for Android.

15 I got passionate about smartphones and mobile
16 working at Danger, but it was hard. It was hard to do it
17 with the way the industry was structured at the time. It
18 was hard to do it as a startup. It was hard to do it with
19 the prevailing technology and platforms that were there.

20 So we had this amazing product experience and a
21 vision for what it could do, but we could only scale it so
22 much as a startup, and -- under those circumstances.

23 I loved the vision of Android to be really
24 something that Andy developed with all the learnings from
25 Danger about how to do a mobile platform in a way that could

1 really achieve broad results for users.

2 Q And we're going to circle back to that.

3 Looking back at your time working on Android at
4 Google, Mr. Rosenberg, what is your understanding as to the
5 reasons why Google has continued to invest in Android over
6 all those years?

7 A Well, Google is an Internet company. And the
8 ability for our products and services to be useful to users
9 is really predicated on the Internet working well and being
10 available and widely available.

11 Computing technology is one of the core
12 capabilities that our services rely on to perform well and
13 to serve users. And so in investing in Android, the extent
14 that we're able to improve, extend computing, then that
15 helps our services and it's frankly good for our business,
16 too.

17 Q Now, looking back to the mid-2000s, a time you
18 said you were working in the industry, what was it about the
19 mobile ecosystem, mobile world, mobile landscape that held
20 back the vision you just described of improving access to
21 the Internet?

22 A Well, during that time, the landscape was highly
23 fragmented. You had some platforms out there. You had some
24 examples of early smartphones, but every implementation
25 tended to be different, every phone, whether it was because

1 of a carrier or because of a particular manufacturer,
2 because of the underlying platform, every phone had a
3 different set of characteristics, and also a different
4 mechanism for distributing a website or an app to that
5 phone.

6 And so if you were a developer of an app or a
7 publisher of a website, it was enormously challenging to go
8 around to all of these individual entities, work with their
9 respective walled gardens and get distribution for your
10 product; and so that put an overhang on innovation, it put
11 an overhang on the capabilities that could come to users.

12 I experienced this firsthand at Danger. We had an
13 amazing product. One of my responsibilities was to run
14 the app store there. And my proposition to developers was,
15 you develop an app for this device, I can get you
16 distribution on this device but nothing else. So we had a
17 couple dozen developers, we had a couple hundred apps,
18 that's as much as we could achieve.

19 Q Now, from the perspective of your time working on
20 Android from 2010 to 2022, how, if at all, has Android
21 helped solve those twin problems that you described of
22 fragmentation and walled gardens?

23 A Well, Android itself is an open source operating
24 system and so it was developed with a couple of key
25 principles in mind. Being open source, it was customizable.

1 It was something that someone could take with its underlying
2 capabilities and then build on top of and add capabilities
3 to.

4 But it had a set of consistent capabilities that
5 enabled for a strong developer experience, enabled
6 developers to really harness the power of the devices it was
7 running on.

8 Android also enabled customization. And so doing
9 something in a consistent way at the operating system level
10 for a manufacturer didn't necessarily mean they couldn't
11 differentiate themselves for competitors, and so this was
12 the needle that I think was thread very cleverly as to how
13 to create a consistently strong underlying platform for
14 developers' capabilities but continued to have the
15 opportunity to differentiate.

16 I also think the fact that there was no license
17 fee for Android helped encourage manufacturers to adopt the
18 platform. The prevailing platforms at the time carried
19 license fees, so there was an economic benefit that allowed
20 them to invest that money in other things, whether it was R
21 & D or building their brands, innovating in other ways.

22 Q If the open source Android license is free,
23 Mr. Rosenberg, how does Google make money on Android?

24 A We make money on Android through the services that
25 we deploy on top of the platform.

1 Q Can you give the Judge some examples.

2 A Search is an example. Play is an example. Our
3 app store. Those are the primary examples.

4 Q And how, if at all, Mr. Rosenberg, has Android
5 expanded the availability of Search for mobile users?

6 A Well, Android has a set of underlying
7 capabilities. Manufacturers have a lot of flexibility in
8 terms of what sort of devices they build with those
9 capabilities.

10 One of the things that's been very rewarding to
11 see is how manufacturers have been able to build really high
12 quality devices at low prices, far lower than other premium
13 smartphones.

14 And so with Android, you actually have a broad
15 spectrum of the most premium devices but also devices that
16 more price-sensitive consumers can afford, both in this
17 country and also in developing countries around the world,
18 devices that could be \$100 or less, and that has really
19 greatly expanded access to the Internet for a lot of people.

20 Q You mentioned other premium devices. Does Apple
21 offer some of those devices?

22 A Apple does, yes.

23 Q And do Apple and Android compete in mobile
24 platforms and mobile devices in the United States?

25 A Absolutely.

1 Q How would you characterize the level of intensity
2 of that competition during your time working on Android?

3 A From my perspective, it was as intense as it gets.
4 That was -- our primary focus was how to drive preference
5 for Android devices compared to iPhones.

6 Q And how has Android, Mr. Rosenberg, sought to
7 differentiate itself from Apple in that intense competition?

8 A Well, we have -- one of the ways, as we talked
9 about, is by fueling choice, fueling choice of devices,
10 fueling the opportunity for multiple different entities to
11 innovate, rather than having all the innovation rest with a
12 single company.

13 And in doing to that, we have felt that these
14 different manufacturers could bring interesting devices to
15 users, broaden the choice, as I talked about, potentially
16 reach market segments that iPhone wasn't able to reach
17 because of its pricing and then also enable great
18 experiences on those devices.

19 Q And how would you characterize the state of
20 competition with Apple and mobile during your time working
21 on Android?

22 A Well, it was -- it was pretty intense. Frankly,
23 you know, Apple was formidable and very strong, particularly
24 in the U.S. It has made strong gains over the years with
25 U.S. consumers.

1 MR. POPOFSKY: Your Honor, I'd like to hand out
2 some binders if I may. May I approach?

3 THE COURT: Sure. Of course.

4 BY MR. POPOFSKY:

5 Q Now, you've been handed a binder of exhibits,
6 Mr. Rosenberg, and they're in numerical order so you'll be
7 jumping around a little bit and they have little numbers on
8 the side as you'll see and I'll be calling those out.

9 I'd like you to look at a document that's numbered
10 DX135.

11 MR. POPOFSKY: And, Your Honor, this is in
12 evidence. And we can put it up on in the screen, Allen.
13 Thank you.

14 BY MR. POPOFSKY:

15 Q Let me know when you're there, Mr. Rosenberg.

16 A I'm here.

17 Q All right.

18 Why does Google conduct what is called here a U.S.
19 devices switcher analysis?

20 A Well, as I described, one of the goals of the
21 Android team was for consumers to prefer to use Android
22 devices instead of iPhones.

23 This type of analysis was something we would do
24 from time to time to look at the rate of users switching
25 from Android phones to iPhones or vice versa.

1 Q And why is that important?

2 A Well, more users switching from iPhones to Android
3 phones means that Android is growing. More users switching
4 from Android phones to iPhones means the reverse.

5 Q Please turn to page 15 of that document. It ends
6 in the Bates number 038.

7 And it's also going to be up on the screen for
8 your convenience, and let me know when you're there.

9 A Okay.

10 Q Please tell the Court, Mr. Rosenberg, what, if
11 anything, this illustrates about Apple-Android competition
12 in the United States?

13 A What this is showing is -- this is showing the
14 dynamic when Apple started to keep prior generation iPhones
15 on the market in order to target lower price segments of the
16 market. And this was a response to Android having more
17 affordable phones than iPhones that were available because
18 iPhone was focused on the premium segments.

19 So what Apple did is they kept their prior
20 generation iPhones available at lower prices. And what this
21 is showing is that that was a successful strategy in -- for
22 some quantities, in switching users from Android to iPhones.

23 Q Indeed, do you see where it says, "Cheaper iPhones
24 are luring away Android users"?

25 A I see that.

1 Q Now, Mr. Rosenberg, how, if at all, has Apple
2 offering cheaper iPhones to lure away Android users, how is
3 that indicative of the nature of competition between Apple
4 and Android in the United States?

5 A I think we watch each other closely. We respond
6 when we see the other one innovating or having success in
7 certain areas, and I think it's an example of -- one of many
8 examples of how there's a back-and-forth between the two
9 companies around attracting users in the market.

10 Q And do users like you and me who use smartphones,
11 benefit from lower price devices?

12 A Yes. I think so, yes.

13 Q Have Apple and Android also competed on non-price
14 dimensions to benefit users?

15 A Yes, there have been product dimensions as well.

16 MR. POPOFSKY: Your Honor, I'd like to hand up a
17 demonstrative at this time.

18 THE COURT: Sure.

19 MR. POPOFSKY: I'll also be putting it up on the
20 screen, this is called DXD32 for the record.

21 BY MR. POPOFSKY:

22 Q Mr. Rosenberg, did you work with counsel in
23 preparing this demonstrative?

24 A I did.

25 Q And we see here it's called, "Android innovations

1 later adopted by Apple"?

2 A Yes.

3 MR. POPOFSKY: Let's turn the page, if you would
4 do that for me, Allen.

5 BY MR. POPOFSKY:

6 Q What is this showing?

7 A This is showing some UI features of the Android
8 operating system that were developed and launched on Android
9 and then some number of years later, appeared in some form
10 on iOS.

11 Q And when you say UI, Mr. Rosenberg, what do you
12 mean?

13 A User experience.

14 Q The one on the left is called the home screen
15 widgets. Can you explain that for the Court?

16 A Yeah, a widget is basically an extension of an
17 application that you can install on the home screen of the
18 device, so sometimes we call it the launcher, and it
19 provides a subset of the functionality of the application.
20 So if you want to be able to do something quickly like
21 advance the music track for a play list you're listening to
22 rather than having to open the application and find that
23 function, you can just tap the functionality of the widget.

24 Q Does it make access to that feature more
25 convenient?

1 A It does.

2 Q Let's go forward.

3 Are these yet more examples?

4 A Yes.

5 Q And are these examples of innovations pioneered on
6 Android that Apple later adopted?

7 A Yes, they are.

8 Q And going forward to the next slide, does this
9 appear to put all those things we just described on a
10 timeline for the convenience of the Court?

11 A Yes, it does.

12 Q Now, can some of these innovations make easier
13 access to Search?

14 A Yeah, they can. They can.

15 Q Let's look at an example of that. What's this
16 slide about?

17 A This slide is showing three different examples of
18 widgets from search applications. There's one from Bing,
19 there's one from DuckDuckGo, there's one from Google.

20 Q And how, if at all, do these make access to Search
21 easier for users?

22 A Well, instead of finding the application somewhere
23 on the device and opening it up, each of these widgets, even
24 though they have slightly different designs, each of these
25 widgets allow for the initiation of a search directly from

1 the home screen.

2 MR. POPOFSKY: You can put that down, Allen.

3 Thank you.

4 BY MR. POPOFSKY:

5 Q Has competition between Android and Apple in the
6 United States, Mr. Rosenberg, led to mobile devices with
7 longer battery life?

8 A It has.

9 Q And how, if at all, do users of Search benefit
10 from that set of innovations?

11 A Well, longer battery life on the one hand means
12 that a device is more likely to last through the day, more
13 hours in the day when the device is live and available to do
14 things with.

15 I think also, the confidence that longer battery
16 life brings encourages people to be more intensive in their
17 usage because they know that being intensive in their usage
18 won't drain their battery before they have time to charge
19 their device again.

20 Q And has competition between Apple and Android in
21 the United States led to mobile devices with larger screen
22 sizes.

23 A Yes. In fact, Android was a pioneer of the larger
24 screen size, and Apple eventually adopted larger screen size
25 devices, and these have now become incredibly popular.

1 Q And how, if at all, does a larger screen size help
2 a user of Search?

3 A Well, a larger screen, as with many activities, it
4 allows for more robust display of search results, allowing
5 for more results to appear on the screen for the screen to
6 get closer to approximate maybe what results you might see
7 on your PC monitor.

8 THE COURT: Could I ask a quick question. I'm
9 sorry to interrupt.

10 MR. POPOFSKY: Go for it.

11 THE COURT: Just going back to the slide comparing
12 the search widgets, I guess the Apple iOS home screen that
13 you've got here displayed on the right doesn't include a
14 Google Search widget. Is it possible on an Apple phone to
15 install a Google Search widget on the home screen.

16 THE WITNESS: I assume it would be possible.
17 I'm not an expert.

18 I know that Apple implements Google Search in a
19 different way on its devices, but the same -- Google as a
20 developer on iOS should have access to the same capabilities
21 that these other companies do.

22 THE COURT: Okay. Thank you.

23 MR. POPOFSKY: Great.

24 BY MR. POPOFSKY:

25 Q So I'd like to turn to the MADA. Are you familiar

1 with the MADA, Mr. Rosenberg?

2 A I am.

3 Q What is it?

4 A The MADA is an agreement by which we license a
5 collection of Google software and applications to
6 manufacturers building Android devices.

7 MR. POPOFSKY: I'd like to put up on the screen a
8 document that's in evidence, Your Honor, UPX129.

9 BY MR. POPOFSKY:

10 Q Do you see that, Mr. Rosenberg?

11 A I do.

12 Q You also have it in your binder, if you would
13 like, but we're only going to look at one page of that, it's
14 page 4903. It's right in the beginning of the document.

15 Now, Mr. Rosenberg, what role, if any, does the
16 MADA play in helping Android compete with Apple in mobile in
17 the United States?

18 A Well, on the product side, it does three things.
19 First, it provides for a collection of high quality apps
20 that are available out of the box when you start up this
21 device, and these apps serve a lot of key functions on the
22 mobile phone. Apple has a similar collection of apps that
23 it preloads on iPhones.

24 The fact that those apps are available
25 consistently across Android gives users confidence that they

1 can try multiple types of Android devices for multiple
2 manufacturers and have consistency in their experience. For
3 example, their apps coming back to them or their bookmarks
4 in Chrome being available right away. And so there's an
5 aspect of it, of the consistency of this that helps in the
6 consideration and choice of a broader range of devices and
7 switching among those devices.

8 We also have provisions in MADA with respect to
9 security and partners keeping devices up to date with
10 security updates, and so there's a security promise that we
11 feel strongly that these partners need to be able to make to
12 their users.

13 And then finally, MADA, some of the apps we
14 distribute in MADA do generated revenue for us, and that is
15 part of what enables us to continue to invest in the
16 platform and the ecosystem that we cultivate around it.

17 Q What is the license fee for the MADA?

18 A There's no license fee.

19 Q And how, if at all, does the zero license fee for
20 the MADA help Android OEMs compete with Apple in the
21 United States?

22 A Well, it's -- just as with the underlying Android
23 operating system, the Android OEMs get a lot of key
24 functionality without having to invest directly in that
25 themselves, and so they get -- they get an operating system

1 and they get a strong baseline experience.

2 And what that does is it enables them to innovate
3 in other ways, innovate on the hardware, innovate on
4 differentiating their experience, their user experience in
5 other ways.

6 So in that sense, it helps free up some of their
7 resources for other things.

8 Q Now, Mr. Rosenberg, if the OS is free and the MADA
9 is free, how does Google make money on the MADA?

10 A Well, some of the services that we distribute in
11 the MADA, most notably Search and Google Play, make money
12 for us.

13 Q And are there placement terms associated with the
14 MADA for licensees?

15 A There are, a few.

16 Q How, if at all, do those placement terms, which
17 the Court has heard much about, play into that idea of
18 creating a financial model for Google for Android?

19 A Those placement terms create, you know, a quick
20 and well-lit path for users to engage in some of those
21 activities, whether it's being able to search through the
22 widget, whether it's being able to quickly find the Google
23 Play Store to get more apps for your device. And so they're
24 both a convenient to -- a convenience to users and they also
25 help encourage use of these services.

1 Q Let's turn briefly to revenue share agreements
2 with OEM and carrier partners, which also is discussed on
3 this slide. A similar set of questions, Mr. Rosenberg.

4 What role, if any, do those revenue share
5 agreements with OEM and carrier partners play in help
6 addressing the challenges of competing with Apple in the
7 United States and mobile that you've described?

8 A On the product side, the revenue share agreements
9 have some additional terms around placement and promotion of
10 some of our services, particularly Search and Chrome, which
11 we think are best in their class and help for a strong
12 device experience, and so there's a product motivation
13 there. There is a business motivation there. Those
14 services or access points create revenue for us and there's
15 a motivation to grow those businesses.

16 There's also some additional requirements in our
17 RSAs around security, and that's -- so we reinforce, again,
18 the need to make a strong security proposition to users.

19 And this also -- as this slide says, it gives us a
20 mechanism to fund the ecosystem, to invest with our partners
21 in providing a strong overall proposition and having the
22 resources to make both their products and their go-to-market
23 execution competitive with what we see from Apple.

24 Q Why does Google seek preinstallation exclusivity
25 for Google Search in revenue share agreements,

1 Mr. Rosenberg?

2 A Well, for the reason I mentioned, I think on the
3 product side, we think Search is best in class. We think
4 that it's a great experience to promote Google Search to end
5 users on these devices. It's an important business for us.
6 We want to grow that business.

7 And we want our partners to have in line aligned
8 incentives in growing that business with us and growing
9 Android with us in this reinforcing mechanism.

10 MR. POPOFSKY: Your Honor, I'd like to pass out
11 yet another demonstrative, if that's okay.

12 THE COURT: Sure.

13 BY MR. POPOFSKY:

14 Q This one is DXD33.

15 And we can put it up on the screen, Allen.

16 This one is called "Illustrative MADA-compliant
17 device configurations." Did you work with counsel on this
18 one, too, Mr. Rosenberg?

19 A I did.

20 Q Let's turn to the page that's page 3 --

21 If you could do that for me, Allen.

22 -- do you see this device on the screen?

23 A I do.

24 Q Do you understand it to be a hypothetical device?

25 A Yes.

1 Q What is this illustrating for the Court?

2 A This is illustrating for the Court some of the
3 product configurations that are both technically possible
4 but also allowed under the terms of the MADA.

5 Q And if we go to the next page, is this showing the
6 same thing for a foldable device?

7 A Yes.

8 Q Would this be a device on which Google would be
9 interested in paying any or significant revenue share?

10 A No.

11 Q Why not?

12 A It's a pretty cluttered product experience.
13 It's confusing. It's giving users multiple ways
14 to do multiple things. And it's not promoting Search and
15 promoting that best-in-class experience or promoting Chrome
16 in the way that we would want to.

17 Q Would you view the device and this configuration
18 an effective iPhone fighter?

19 A I'm wouldn't.

20 THE COURT: I'm sorry. An effective iPhone what?

21 MR. POPOFSKY: Fighter. An effective device in
22 fighting against the iPhone, Your Honor.

23 THE COURT: Got you.

24 THE WITNESS: No, I think relative to the
25 simplicity of taking an iPhone out of the box and having a

1 far less cluttered experience, I don't think this would
2 stand up to that very well.

3 BY MR. POPOFSKY:

4 Q Would Android face even more challenges in
5 competing with Apple in the United States, Mr. Rosenberg,
6 without the MADAs and the RSAs as are presently configured?

7 A Yes, I believe so.

8 Q Why?

9 A Well, I think because we wouldn't have this
10 strong, consistent out-of-box experience with this
11 collection of applications. We probably wouldn't be able to
12 cultivate as robust of a developing ecosystem without the
13 reach of Play necessarily.

14 We wouldn't have a funding mechanism for the
15 ecosystem with the revenue share agreement that we have and
16 wouldn't have a way to be able to invest as significantly as
17 we do.

18 And we wouldn't have some of the other hygiene
19 terms, I would say, and quality terms that we have in those
20 agreements.

21 Q And by hygiene terms, what do you mean?

22 A Like security, for example, or updatability.

23 Q I neglected to ask you in our discussion of the
24 MADA, does the MADA distribute application programming
25 interfaces that developers use, that is third-party

1 developers, to write applications to Android?

2 THE COURT: I'm sorry, can you repeat the
3 question?

4 MR. POPOFSKY: Sure.

5 BY MR. POPOFSKY:

6 Q Are you familiar with an API, Mr. Rosenberg?

7 A Yes.

8 Q What is an API?

9 A API stands for application programming interface.

10 Q And what is the purpose of an application
11 programming interface?

12 A It's most commonly referred to a bridge between an
13 application and some underlying capability of the operating
14 system or the hardware.

15 Q Now, does the Android OS have APIs that are
16 exposed to developers that let them write applications with
17 capabilities?

18 A Yes.

19 Q Do developers have the option to add APIs on top
20 of those operating system APIs?

21 A You mean manufacturers?

22 Q Yes, manufacturers.

23 A Yes, manufacturers do.

24 Q And does Google also distribute its own
25 proprietary set of APIs?

1 A Yes, we do.

2 Q What do you distribute those APIs through?

3 A We distribute those APIs through what we call
4 Google Play Services.

5 Q And is that part of the MADA?

6 A Yes, it is.

7 Q And how, if at all, does the distribution of
8 Google Play Services help Android compete with Apple in the
9 United States?

10 A Well, those APIs include additional functionality
11 where developers can use a portion of Google capabilities
12 directly from their apps, and so it helps enrich their apps.

13 Q I'd like to swing back to the MADA for a little
14 bit of a deeper dive for a few minutes.

15 If we could put up UPX140, which is in evidence,
16 and go to page 5 of that document ending in 7817, and blow
17 that up, Allen.

18 Are you there, Mr. Rosenberg?

19 A Yes.

20 Q Do you see this chart?

21 A I do.

22 Q Can you please explain to the Court what it is.

23 A This is a summary, at least in that time frame, a
24 summary of the key terms in MADA organized thematically.

25

1 MR. POPOFSKY: And, Your Honor, this is UPX140,
2 the page ending in 7817; a little bit into it.

3 THE COURT: Okay.

4 BY MR. POPOFSKY:

5 Q Now, this chart on the right-hand side, the yellow
6 pillar says, "11 apps GMS mandatory."

7 What does that mean?

8 A That refers to the suite of applications that I've
9 been talking about.

10 That was the list at the time. It's changed
11 slightly since then.

12 Q And does a suite mean that if a MADA licensee
13 wishes to put one of these services on a device, they put
14 all those services on a device?

15 A Yes.

16 Q What is your understanding, Mr. Rosenberg, of the
17 reasons Google distributes what are called the mandatory GMS
18 services as a suite?

19 A Well, as I said, this collection of apps provides
20 a very strong experience out of the box on an Android
21 device, whether that refers to browsing the web, downloading
22 an app, making a search, navigating. I mean, these are all
23 really important experiences on a smartphone, important
24 experiences on iPhones. It gives Android a really strong
25 baseline in that regard.

1 Also, a lot of these apps work well together. So,
2 for example, you can -- if you initiate a search in the
3 Search app and there's a location, you can then very quickly
4 pivot over to the maps app and there's some nice
5 interactions that happen there when the apps are together.

6 Q And how, if at all, does distribution of these
7 services as a suite help a user who wants to switch from a
8 Motorola Android device to a Samsung Android device?

9 A It gives them confidence that, for a certain set
10 of really important things, those things will be there as
11 they switch from device to device.

12 So, for example, Google Play will restore the apps
13 that they might have downloaded on the prior device on the
14 next device they start up. Chrome, if you sign in, will
15 have your bookmarks there. Google photos will have your
16 photos. Gmail obviously will have your email. And so it
17 allows for users who use these apps, it allows them to
18 confidently move from device to device and know the
19 experience will be consistent.

20 Q And what role, if any, does distributing these
21 services as a suite play in the economic model for Android
22 you previously described?

23 A Well, some of these apps, as I mentioned, are
24 revenue generating for us, and so being able -- knowing that
25 they're going to be on every phone where a partner chooses

1 to work with us, gives us the confidence that we'll have
2 revenue from that device and be able to continue our
3 investment in the platform and in the ecosystem at the same
4 levels.

5 Q And could Google achieve all those objectives you
6 just identified and all those user benefits of distributing
7 these apps as a suite if OEMs could pick and choose which
8 individual services they put on a given MADA device?

9 A No, we couldn't.

10 Q Why not?

11 A Well, I mean, that's sort of antithetical to the
12 consistency point I made, where if it's inconsistent, which
13 apps are available on which devices.

14 If the experience of bringing your apps or your
15 content from one device to the next isn't there, then
16 that -- it makes it harder, impossible for us to fulfill
17 that proposition.

18 If we don't have the business model that we have,
19 we can't invest at the same levels in advancing Android
20 itself or cultivating the developer ecosystem that we
21 cultivate around the platform.

22 Q And I recognize the Court hasn't heard about the
23 MADA for some time so I'll ask you. Do MADA licensees have
24 the choice to install the GMS suite in a device by device
25 election?

1 A Yes.

2 For any individual device, they can choose to make
3 that a MADA device or not.

4 Q Do MADAs, in your understanding, have any
5 requirement that a partner set Google Search as the default
6 search service for the device?

7 A No, they don't.

8 Q Do MADAs, in your understanding, require a partner
9 to set Chrome as the default browser for the device?

10 A No, they don't.

11 Q Do you have an understanding as to whether the
12 MADA has terms that provide pre-installation exclusively to
13 Google Search?

14 A It doesn't.

15 Q Or to Google Chrome?

16 A No.

17 Q Or to any other Google service?

18 A No.

19 Q Are you aware of examples, Mr. Rosenberg, where
20 your MADA licensees, the OEMs, have pre-installed on devices
21 applications to perform functions similar to some of the
22 mandatory GMS services?

23 A Yes, it's quite common actually.

24 Q Can you give the Court some examples?

25 A Well, many Android devices have more than one app

1 store.

2 As an example, many Android devices have more than
3 one web browser, some have multiple email clients. Those
4 are just a handful of examples.

5 Q Does Samsung have its own app store?

6 A It does.

7 Q What is it called?

8 A It's called the Galaxy store.

9 Q And where does Samsung typically place that on its
10 mobile devices?

11 A Typically on the default home screen of the
12 device.

13 Q And where is the Play Store on -- the Google Play
14 Store on those same devices?

15 A Also on the default home screen of the device.

16 Q Does Samsung have its own browser?

17 A Yes.

18 Q Does it pre-install that browser on its flagship
19 Galaxy phones?

20 A Yes.

21 Q Have you heard of a Microsoft device called the
22 Surface Duo?

23 A I have.

24 Q Does the Surface Duo install on the default home
25 screen of that device an access point to Microsoft's search

1 service Bing?

2 A I believe so, yes.

3 Q Let's take a look at document -- in evidence,
4 Your Honor -- DX207, which is in your binder, Mr. Rosenberg.

5 And we're also going to put the pages that are
6 pertinent up on the screen.

7 You might want to actually leaf to this one, it's
8 near the beginning. And let me know when you're there.

9 A Okay.

10 MR. POPOFSKY: And let's go to the second page of
11 that, Allen, if we can.

12 BY MR. POPOFSKY:

13 Q What is your understanding of this document,
14 Mr. Rosenberg?

15 A I believe based on the timing as well as the
16 language on the slide, that this was an analysis of the UI
17 of the Surface Duo before its initial launch.

18 Q And your understanding is that these were -- the
19 user experience that Microsoft proposed to release into the
20 marketplace?

21 A Yes.

22 Q Let's go to near the end of that document, it's
23 called DX207.29 on the bottom of the page, the 29th page of
24 the document. It ends in Bates number 7526.

25 And let me know when you're there.

1 A Okay.

2 Q Do you see in the upper right corner in yellow, it
3 says, Surface Duo default launcher?

4 A Yes, I see that.

5 Q What do you understand that to mean?

6 A That means basically the primary home screen view
7 that you see when you boot up the device.

8 Q And it says right under that, "Swipe down to
9 trigger Bing search"?

10 A Yes, I see that.

11 Q What is your understanding of that?

12 A So that was something that an innovation that
13 Microsoft did on the UI where you could swipe down on one of
14 the panels of the screen and initiate a search in Bing by
15 doing that.

16 Q And how, if at all, does that show the innovative
17 ways that a MADA licensee can provide access to a non-Google
18 Search services notwithstanding the presence of the Google
19 Search widget on a MADA device?

20 MS. BELLSHAW: Objection, Your Honor.

21 THE COURT: I'll sustain it. If you can rephrase
22 the question, please.

23 BY MR. POPOFSKY:

24 Q Sure. What does that tell you about how Microsoft
25 had options to promote Bing?

1 A Well, I think it's an example of how there were
2 other ways to innovate on quick access to capabilities on
3 the phone. This was a particular way that Microsoft thought
4 of to be able to give users quick access to their search.
5 It was certainly -- it was possible on a device license
6 under MADA.

7 Q And do you have an understanding as to whether the
8 Duo launched with this feature?

9 A It did.

10 MR. POPOFSKY: Okay. You can take that down,
11 Allen.

12 BY MR. POPOFSKY:

13 Q This Court has heard testimony, Mr. Rosenberg,
14 about a provision in the MADA that pertains to instructing
15 users about changing certain out-of-the-box settings of a
16 MADA device. Are you generally aware of that provision?

17 A Yes. Not the actual wording but I'm aware of the
18 provision.

19 Q And what is your understanding of the purpose of
20 that provision?

21 A The purpose of the provision, the spirit of it is
22 not to frustrate the goals of the agreement, the goals of
23 the agreement are the device comes out of the box, there's a
24 certain experience with Google services that is licensed and
25 a handful of placement requirements.

1 And so whatever the technologies might be to
2 prompt, encourage, immediately encourage someone to try to
3 change that, whether it's in the setup flow or with a
4 notification or something that would kind of contravene the
5 spirit of what we were after, understanding that users had
6 plenty of ways they could decide to change that initial
7 configuration.

8 Q Are you aware of a dispute with a MADA licensee
9 arising over that provision during your time working on
10 Android?

11 A I'm not.

12 Q Mr. Rosenberg, do you have an understanding of
13 whether a MADA licensee can provide instructions on their
14 website on how to remove a widget such as a Google Search
15 widget from a MADA device?

16 A They can.

17 Q And could a MADA licensee provide instructions on
18 their website how to change the default settings in Chrome
19 from Google Search to a search rival?

20 A It can.

21 Q And could a MADA licensee, consistent with that
22 agreement, provide instructions on their website how to
23 install a DuckDuckGo search widget?

24 A It can.

25 Q An exhibit we looked at earlier -- and I don't

1 want to put it back up, Allen -- referred to the MADA being
2 subject to change in the EEA region, that was UPX140.

3 Mr. Rosenberg, do you have an understanding of how
4 the MADA changed for licensing for devices distributed in
5 Europe after the EC Android decision?

6 A Yes, after the EC Android decision, the MADA
7 evolved to be play plus eight of the apps in the suite but
8 not Search and not Chrome.

9 Q And was there an option to license Search and
10 Chrome separately?

11 A Yes.

12 Q And was there a license fee for those separate
13 licenses for Search and Chrome?

14 A No.

15 Q Was there a license fee for the remainder of the
16 MADA which I believe was called the EMADA?

17 A Yes.

18 Q Why was there a license fee for the play
19 plus eight that did not include Search and Chrome?

20 A Well, as I talked about before, having the suite
21 distributed together with the expectation that we have of
22 revenue from some of the apps in the suite, that was our
23 business model for investing in Android, investing in the
24 ecosystem.

25 If those revenue generating apps weren't reliably

1 there, then we still had to realize the business model and
2 so we put a license fee on the remainder.

3 Q Now, you talked about the importance of the zero
4 royalty to the MADA model in general. Do you recall that?

5 A Yes.

6 Q Did MADA licensees, the EMADA licensees in Europe,
7 have an opportunity to earn back that license fee through --
8 anyway?

9 A Yes, we, with the Search and Chrome licenses, we
10 also separately offered for each of those apps, a placement
11 fee to place the apps consistent with the terms of the MADA
12 when they were all in there together.

13 Q So just so the Court understands, you would offer
14 a placement bounty to put Chrome in the Google apps folder?

15 A Yes.

16 Q And you would pay a bounty to put the Google
17 Search app in the folder and the Google Search widget on the
18 default home screen?

19 A Yes.

20 Q And was the net effect to replicate how a MADA
21 device would look in the United States?

22 A Yes, it could, if the OEM opted into all of those
23 things.

24 Q Was the netting out of that fee you charged for
25 the EMADA on the one hand and the placement bounties on the

1 other hand, was it back to the zero royalty structure or was
2 it different?

3 A It was slightly positive for the OEMs.

4 Q And why was that?

5 A This whole change was a huge operational change
6 for them. It was actually a hardship. They had to manage
7 their device configurations differently, the money had to
8 actually change hands in both directions when it hadn't
9 before, that implicated a whole new operational process on
10 their side. Sometimes there were tax implications they had
11 to deal with in certain countries. And so we were
12 acknowledging that it was -- it was a burden, and we were
13 trying to slightly help them with that burden if we could.

14 Q And -- strike that.

15 Focusing on the period between the implementation
16 of this EMADA structure and when you left your strategy role
17 in late '22, what is your understanding, if any, as to
18 whether any Android OEM in Europe that licensed the EMADA
19 declined to also license Search and Chrome?

20 A I'm not aware of that happening.

21 Q Do you have an understanding of whether the
22 European Commission, after requiring Google to unbundle the
23 MADA, later required a choice screen for both Google Search
24 and Google Chrome?

25 A Yes, it did. That eventually became part of the

1 remedy.

2 Q And, Mr. Rosenberg, how, if at all, does the
3 number of setup screens a user has to work through in
4 setting up a device impact Android's ability to compete?

5 A Well, I think in general, you know, every --
6 everything that encumbers the Android product experience,
7 more cognitive load that you put on users, is just another
8 way that Android is different from iPhone and that makes
9 iPhone look like a simpler and easier choice.

10 So now, rather than having a device that, like an
11 iPhone, you take it out of the box and it has a certain set
12 of functionality, now users are -- step through a set of
13 choices which, again, it just -- it just encumbers the
14 process. I couldn't qualify for you what the impact to that
15 is.

16 Q Now, let's swing, now that we've romped through
17 the MADA, back to the revenue share agreements. What is the
18 relative importance, Mr. Rosenberg, of carrier and OEM
19 search revenue share agreements in the United States?

20 A The carrier agreements are far more important in
21 that most of the search revenue share in the United States
22 is paid to carriers.

23 Q And when you assumed your new role overseeing the
24 negotiations of these RSAs in May of 2016, as a general
25 matter, recognizing agreements can differ, what was the

1 general obligation that a U.S. carrier partner had to earn
2 search revenue share?

3 A The primary obligation was pre-installation
4 exclusively.

5 Q And did there arise a time in the 2017, '18 time
6 frame when a set of these agreements with carrier partners
7 were up for renewal?

8 A Yes.

9 Q I'd like to look at document UPX287 in your
10 binder.

11 This document, Your Honor, also is in evidence.
12 And should be up on the screen.

13 Can you tell the Court as a general matter, what
14 this document is, Mr. Rosenberg, and why it was prepared.

15 A This document was a slide deck prepared for a
16 meeting with T-Mobile.

17 It was customary for us to meet with the big
18 carriers in the U.S. on a regular basis. Those meetings
19 could cover a variety of topics, product-related marketing
20 or promotion related.

21 In this particular time frame because we were
22 re-negotiating the RSA, the RSA was one of the topics in the
23 meeting. Typically, when we had a meeting, we came in with
24 a set of slides and walked through slides as we covered
25 different topics.

1 Q And was a similar document prepared for other
2 carriers with whom you were holding renegotiations at the
3 time?

4 A I believe so, yes.

5 Q Let's turn to a slide that's in a section of the
6 deck called "Revenue share discussion."

7 Let's go to Slide 407, Allen, if we can.

8 And some of the numbers on this slide,
9 Mr. Rosenberg, are redacted, so I caution you not to say
10 them out loud, but trying to keep the courtroom open, we're
11 going to navigate through that and give some significant
12 detail on it.

13 At this time, were the carriers search revenue
14 share agreements working, in your view, to promote Android
15 competition with Apple in the United States?

16 A Not as well as they should.

17 Q Do you believe they were working to some degree?

18 A To some degree, they were. They were allowing us
19 to provide funding to the ecosystem and promoting our Search
20 product.

21 Q And do you see here, it has two charts, which
22 we're not going to display publicly but I'm going to
23 describe in general terms.

24 A I have to say, and I can see on His Honor's
25 screen, I don't think we have the --

1 Q Why don't you look then in your binder because you
2 have the full document, and why don't you turn to page 407
3 of UPX287.

4 Take a moment to do that so we can do this right.

5 A Okay.

6 Q You've got the paper there, Mr. Rosenberg?

7 A Yes.

8 Q And I can say this. The chart on the left is
9 called "Shared revenue"; is that correct?

10 A Yes.

11 Q And the chart on the right is called "Android
12 users"?

13 A Yes.

14 Q And both those numbers are going up?

15 A Yes.

16 Q Which one is going up more steeply?

17 A The shared revenue number is going up much more
18 steeply.

19 Q And can you tell the Court what that was designed
20 to convey to T-Mobile when you presented this to them?

21 A Yes.

22 It was designed to convey to them that, to the
23 extent that these revenue share agreements were meant to
24 align them on growing Android with us, because of the model
25 that, you know, as they grow Android, we collectively

1 participate in economics from that, frankly, we felt we were
2 doing our part more than they were doing their part.

3 We were improving our Search product, improving
4 monetization from the product, generating more money for
5 them on each device; but the commensurate growth in their
6 Android base was much smaller, and so there was something
7 about this that was not motivating them or they were not
8 executing on what we felt was part of their responsibility
9 under the agreement.

10 Q So, again, focusing on the left chart, "Shared
11 revenue," does the upward trajectory of that chart, just so
12 we're clear, Mr. Rosenberg, reflect a change in a search
13 revenue share percentage or a change in the dollars a
14 partner is earning holding that revenue share percentage
15 constant?

16 A The percentage didn't change. It was the dollars
17 that's the partner was earning.

18 Q And focusing on the statement on the slide, "More
19 revenue per device in 2016 versus 2015 due to the Google
20 investments in product" --

21 Do you see that?

22 A Yes.

23 Q -- how does that relate to the testimony you just
24 gave about the upward slope of that curve?

25 A Well, that's how the math would work, that if

1 Search were generating more revenue per device, then the
2 total revenue curve, if you will, or the total revenue
3 growth, would be higher than the growth of devices.

4 Q So let's go to Slides 4 to 409. And, again,
5 there's one thing redacted on this slide, Mr. Rosenberg, you
6 need to keep that open, if you don't mind, just so you keep
7 it in your mind.

8 A Yep.

9 Q And let me know when you're there.

10 A Okay.

11 Q All right.

12 You described some things about the revenue share
13 agreement that were not working.

14 Were changes made to the proposed structure of the
15 carrier revenue share agreements in the 2017, 2018 time
16 frame to address those concerns?

17 A Yes, there were some.

18 Q And what did the bold items on this chart reflect
19 in that connection?

20 A The bold items reflect the key changes in the
21 agreement in that time frame.

22 Q And we're going with to talk about a few of them,
23 but were these, in essence, new things you were asking the
24 carrier partner to do?

25 A Yes.

1 Q The bolded items?

2 A Yes.

3 In terms of supporting these product
4 configurations on their devices.

5 Q And we have several pillars here; Search,
6 Assistant, Security, and User Experience?

7 A Yes.

8 Q And because we have a redacted number, I'm going
9 to ask this question, Your Honor, very carefully and in this
10 way.

11 If, Mr. Rosenberg, you assume that the redacted
12 revenue share percentage remained the same between the
13 expiring agreement and the new agreement with these
14 incremental obligations, does that mean Google was seeking
15 to ask partners to do more for fewer RSA dollars?

16 A No, that -- it does not.

17 Q Why not?

18 A Because, I mean, we were aspiring to pay them as
19 much or more if we continued to innovate on the search
20 product. What we were asking for was for this investment
21 that we were making that seemed to continue to have upside,
22 we wanted them to support some of the things that were
23 really important to us. You know, all of these are product
24 things that we felt would keep the devices competitive with
25 iPhones.

1 Q In that connection, I'm going to ask you about the
2 red security pillar, and the Court has heard some about that
3 already in this trial.

4 Just to describe the landscape, how does updating
5 the security on an Android device in your hand or mind work
6 on the Android side?

7 A Well, at a high level, an operating system
8 launches, bad actors find vulnerabilities in the operating
9 system. The way to address those is often with a patch that
10 patches a part of the underlying OS or the experience to
11 address the vulnerability.

12 In the Android ecosystem, it was complicated
13 because the responsibility to get a patch all the way out to
14 end users, it needed to involve multiple companies
15 coordinating. It was very different from how it works on
16 iPhone, where Apple can sort of control that end to end.

17 What we have to do, Android would develop the
18 patch. A lot of times our chip partners, our SOC partners,
19 like a Qualcomm, would have to do some integration with the
20 patch into its firmware. The OEM would then have to
21 integrate the patch into the build for the device. And
22 then, quite often, it was the carrier who had the overall --
23 the over-the-air delivery system that would deliver the
24 patch to the end user's device.

25 So the -- and I'm probably skipping some steps for

1 simplicity, but the flow had to go through all of those
2 entities.

3 Q And why at this time was it important to add
4 security requirements to the carrier RSA agreements?

5 A This had become a pretty existential issue for
6 Android. We had had, I believe, and I don't recall the
7 specifics, but we had had a pretty high-profile security
8 incident in the year or two prior to this time period.

9 Apple used that and, you know, ongoing to seed
10 doubt in its marketing about the security of Android and the
11 security of Android devices, and we felt like, as an
12 ecosystem, we needed a strong answer to that.

13 We had actually a very strong security design, we
14 just had to execute on a bunch of things operationally to
15 get there.

16 Q And was a similar set of requirements eventually
17 included in OEM RSAs as well?

18 A Yes.

19 Q Why wouldn't a partner, whether it's an OEM or a
20 carrier, have self-motivation to put out timely security
21 updates for its users?

22 A They generally had motivation. They didn't always
23 have urgency or they didn't necessarily share our urgency.
24 Or sometimes we ran into big company stuff where the team
25 that we worked with had a partner understood the value but

1 there was another part of their organization that they had
2 to, you know, change the priorities of. And we just needed
3 to use these agreements to reinforce how important this was
4 to us. It really kind of a pre-condition of doing business,
5 if you will.

6 Q Is there a cost to an OEM or carrier partner of
7 updating security for devices out in the field?

8 A This did bring with it a cost. It brought with it
9 costs on the engineering side, on the integration side, the
10 operations side, the customer support side. It had a cost
11 through the system.

12 Q Was any consideration given, given the importance
13 of this issue, to simply have a separate agreement where you
14 tell the partners, hey, we'll pay you an amount of money if
15 you spend the resources needed to upgrade those devices out
16 in the field with security patches?

17 A No.

18 Q Why not?

19 A Because this wasn't like an engineering
20 work-for-hire thing, like. That was -- this was a far more
21 strategic thing than that.

22 And, you know, we had hoped that, over time, all
23 of these partners would eventually build the operational
24 capability and the priority and the room in their business
25 models to handle this.

1 But we decided that it was important in this time
2 frame to send a message to the whole ecosystem that a
3 pre-condition for doing business with us, whether it's
4 licenses to our apps or our highest value commercial
5 agreement, was to make a strong commitment to security on
6 Android devices.

7 THE COURT: Just a question.

8 Mr. Rosenberg, was there any consideration of
9 modifying or amending the MADA to include this new security
10 update requirement?

11 THE WITNESS: We did that as well, actually. We
12 made a change in the MADA, and that was -- it was a bit
13 lighter weight, I would say. In that time frame, we
14 understood that there was a big operational change these
15 partners were going through. But we did add language in the
16 MADA with respect to security.

17 We were able to put a more stringent requirement
18 in the RSA when we were putting economics behind the deal.
19 So it was a little bit belts and suspenders, we did both.

20 THE COURT: Okay.

21 MR. POPOFSKY: Sorry, Your Honor.

22 THE COURT: Go ahead, Counsel.

23 MR. POPOFSKY: I didn't mean to interrupt you.

24 THE COURT: No. Go ahead.

25

1 BY MR. POPOFSKY:

2 Q When you added those later security requirements
3 to the MADA, did Google still believe or not believe that
4 having a mechanism to incentivize partners to have even more
5 security and more timely security was important through the
6 RSA?

7 A Yes, for sure.

8 Q The blue column includes Chrome in the hot seat
9 and default. In general terms, why was that incentive added
10 in this RSA renewal cycle?

11 A A couple of reasons.

12 One, Chrome, we felt, was the best browser
13 available on Android devices. It was the strongest answer
14 we could put forward on Android to Safari, which Apple had
15 invested in significantly on iOS, made for a great web
16 browsing experience.

17 The second is that Chrome was an important access
18 point for Search. It monetized better than other browsers
19 on Android, and so there was a business reason to promote
20 Chrome as well.

21 Q And looking at this chart, Mr. Rosenberg,
22 particularly the blue, the green, the red boxes, as a
23 general matter, were those terms adopted into 2017, 2018
24 time frame in revenue share agreements with carrier partners
25 who were up for renewal at that point?

1 A In general, yes.

2 Q And was there an expectation that adopting these
3 new requirements would help Android devices be more
4 competitive with Apple and mobile in the United States?

5 A That was certainly part of the motivation, yes.

6 MR. POPOFSKY: You can take that down, Allen.

7 THE COURT: Could I ask question, just a
8 clarification. I think I know the answer to this, but to
9 confirm, when the condition of installing Chrome is the
10 default, can you explain what that means?

11 THE WITNESS: Well, that means that the operating
12 system has kind of an underlying notion of a web session
13 being initiated. And so when Chrome is the default browser,
14 it means that when a web session wants to be initiated
15 somewhere, the operating system will send that to Chrome.

16 THE COURT: So, for example, if there's a link in
17 an email --

18 THE WITNESS: Right.

19 THE COURT: -- you click the link and it's going
20 to open up in a Chrome browser.

21 THE WITNESS: Right.

22 THE COURT: Got you. That's what I thought.
23 I just wanted to confirm. Thank you.

24 BY MR. POPOFSKY:

25 Q And just to follow that up -- Your Honor -- under

1 the MADA is there any requirement that the default browser
2 be Chrome?

3 A No.

4 Q Now, with respect to the 2017, 2018 time frame,
5 what carrier partners had new agreements signed at that
6 time?

7 A In the U.S.?

8 Q Yes, in the U.S. Thank you.

9 A T-Mobile, Sprint and AT&T.

10 Q Why not Verizon?

11 A Verizon's agreement had an unusually long term.
12 It was signed sometime prior to 2016. I don't know exactly
13 when, but it didn't expire until 2020. Whereas, those other
14 agreements had expired recently prior to that 27 [sic], 2018
15 time frame.

16 Q And with respect to those three partners, Sprint,
17 T-Mobile, and AT&T, Mr. Rosenberg, was pre-installation
18 exclusively for Google Search a significant item of
19 discussion during those renewal negotiations?

20 A No, it wasn't.

21 Q Was the setting of Google Search as the default in
22 Chrome an item of discussion in those renewal negotiations
23 with those partners?

24 A No, it wasn't.

25 Q Do you recall whether during the renewal

1 discussions with those partners, any partner identified a
2 Search rival they wanted to install on an RSA device?

3 A I don't recall, no.

4 Q This Court has heard testimony, including
5 yesterday, about the concepts of platform-wide and
6 device-by-device RSAs. Are you familiar with that?

7 A Yes.

8 Q Without going into the details of a particular
9 structure one partner had or another, do you recall whether
10 the question of whether the structure would be device by
11 device or platform was an issue of significant discussion
12 during any of those renewals?

13 A I don't believe it was, no.

14 Q Let's fast-forward a bit to the 2021 renewal cycle
15 with carriers.

16 MR. POPOFSKY: And, Your Honor, I think I can
17 squeeze this in before the morning break?

18 THE COURT: Sure.

19 BY MR. POPOFSKY:

20 Q To remind the Court, by that time, had your role
21 changed in Google?

22 A Yes, I was -- in that time, I was in the strategy
23 role, no longer managing the partnership teams.

24 Q And similar question to where we were with the
25 2017 negotiations, Mr. Rosenberg. Was Google entirely

1 satisfied with the performance of the search RSAs at that
2 time?

3 A No, not entirely satisfied.

4 Q Why not?

5 A We continued to see the same dynamic, which is
6 that we were providing a lot of investment in the ecosystem
7 but we were continuing to struggle in terms of Android
8 versus iOS share.

9 Q And at a very high level, what, if anything, did
10 Google do in the carrier RSA negotiations that were
11 undertaken in the 2020, 2021 cycle to rectify that concern?

12 A In those negotiations, we essentially broadened
13 the commercial framework. We broadened the commercial
14 framework to -- in addition to the -- basically, the product
15 requirements that we had around the revenue share dynamic,
16 we also added basically a go-to-market deal that would allow
17 us to redirect or apportion some of this investment towards
18 specific go-to-market activities, and that had provisions
19 for teams from Google and the carrier collaborating on those
20 activities. We saw how strong Apple was in that regard and
21 we felt like we needed to lean in more as Google to -- on
22 the marketing side and have some skin in the game and by
23 directing some investment there.

24 Q Now, the Court has heard testimony, again, I don't
25 want to say the numbers, that there was a nominal lowering

1 of the revenue share percentage as a general matter in the
2 2021 agreements; is that correct?

3 A The percentage, yes.

4 In that revenue share construct.

5 Q Does a lower revenue share percentage for the next
6 deal, Mr. Rosenberg, mean fewer dollars in absolute terms
7 than a higher revenue share under the expiring deal?

8 A Not necessarily.

9 Q Why?

10 A It depends on the multiplier.

11 Q Under the new construct that was signed in 2021,
12 could the carrier partners earn even more under the new
13 multi-deal structure than they would have had the single
14 search rev share construct continued at the prior revenue
15 share percentage?

16 MS. BELLSHAW: Objection, leading, and counsel is
17 testifying.

18 THE COURT: On that question, I don't think that's
19 accurate.

20 That's overruled. Go ahead.

21 THE WITNESS: Sorry, can you repeat the question?

22 BY MR. POPOFSKY:

23 Q Do you need me to repeat it?

24 A Yeah.

25 Q Sure.

1 A Sorry.

2 Could the carrier earn more?

3 Q Earn more than if the prior deal had continued
4 unchanged?

5 A Yes.

6 Q That's all I intended to ask.

7 And did you believe there was still a role for the
8 search RSA in enhancing Android's ability to compete with
9 Apple in the United States under that new construct?

10 A Yes, for sure.

11 MR. POPOFSKY: We're switching topics, Your Honor.
12 This would be a good time for a break.

13 THE COURT: Can I just ask one question?

14 You say that under the new deal structure in 2021,
15 that the overall revenue share total could still have gone
16 up from the past. Can you just provide a little bit more
17 color on why that might be the case?

18 THE WITNESS: So it was still possible for us,
19 similar to the chart you saw for T-Mobile, it was still
20 possible for us to improve and, in fact, I believe we have,
21 per device, search monetization, such that the absolute
22 dollars could go up, and especially if the partner also did
23 a good job of increasing its Android device base, those were
24 some multipliers that even with the lower revenue share
25 number, could have yielded a higher total dollar amount.

1 THE COURT: In other words, what you're saying is
2 if they sold more Android devices, the overall rev share
3 would have gone up because the amount of search would have
4 gone up.

5 THE WITNESS: Right. And if we improved Search
6 itself, at the same time. Yes.

7 THE COURT: Right. Okay. Thank you.

8 All right. So let's take our morning break.
9 We will resume at 11:15.

10 Mr. Rosenberg, I'll just ask you not to please
11 discuss your testimony with anyone during the break. Thank
12 you, sir.

13 COURTROOM DEPUTY: All rise.

14 This Court stands in recess.

15 (Recess from 10:58 a.m. to 11:16 a.m.)

16 COURTROOM DEPUTY: All rise. This Honorable Court
17 is again in session. Be seated and come to order.

18 THE COURT: Please be seated, everyone.

19 Mr. Popofsky, whenever you're ready.

20 MR. POPOFSKY: Thank you, Your Honor.

21 BY MR. POPOFSKY:

22 Q Are you ready, Mr. Rosenberg?

23 A Yes, I am.

24 Q I'd like to turn to Samsung.

25 From 2016 to 2019, Mr. Rosenberg, what was your

1 role, if any, with respect to Google's MADA and RSA
2 discussions with Samsung?

3 A Well, the team that worked with Samsung, the
4 partnership team that worked with Samsung and negotiated
5 those agreements was in my organization.

6 Q And what was your role in connection with Samsung,
7 if any, after you switched positions in 2019?

8 A I was still involved in some leadership
9 discussions with Samsung, my strategy team, from time to
10 time, supported exercises related to the Samsung
11 relationship.

12 Q And during your time working with Samsung, did you
13 have occasion to meet with senior Samsung executives from
14 time to time?

15 A Yes.

16 Q This Court heard testimony earlier in this trial
17 about a Samsung discussion in 2016 relating to the placement
18 of the Google Search widget. Do you recall whether Samsung
19 asked Google to remove the Google Search application from
20 the MADA?

21 A It did not.

22 Q Do you recall whether Samsung indicated, at that
23 time or any other, that Samsung wanted to pre-install a
24 search service in lieu of or in addition to Google in the
25 United States?

1 A No, I don't.

2 Q How would you characterize the tenor of the
3 relationship between Google and Samsung during your time
4 working on Android?

5 A I would say it was passionate, it was like a
6 relationship between close family members. We were -- we
7 knew we were in it together for the long haul. We had lots
8 of discussion about lots of things, lots of passion on both
9 sides about how to get done what we wanted to get done
10 collectively. Certainly certain things that we were each
11 interested in as well. But it was -- we were very close
12 collaborators, and with that, comes all the passion that
13 you'd expect.

14 Q Is it fair to characterize Samsung as one of
15 Google's most important Android partners?

16 A Absolutely.

17 Q And do Google and Samsung compete also with
18 respect to Android?

19 A Yes, in some cases.

20 Q Can you give me examples, if any, of how Google
21 and Samsung compete with respect to apps or services offered
22 on Android devices?

23 A Well, there are instances where Google has a
24 product or service and Samsung has a similar product or
25 service. Like, Samsung has a web browser, we have Chrome,

1 we have the Play Store, Samsung has the Galaxy store. Those
2 are a couple of examples.

3 Q And do Samsung and Google compete with respect to
4 Android hardware?

5 A Yes. I think the teams in those areas would say
6 so; specifically, the Pixel Google device, which wasn't our
7 team but the Pixel Google device and Samsung devices would
8 be considered alternatives to each other.

9 Q And in your mind, Mr. Rosenberg, are those
10 examples of Samsung competing with Google indicative of a
11 company that fears retaliation for competing with Google?

12 A No, I wouldn't think so.

13 Q Beyond MADAs and RSAs, do Samsung and Google
14 collaborate in improving Android's ability to compete with
15 Apple in the United States?

16 A Yes, quite often.

17 Q Can you give the Court a few examples?

18 A Sure.

19 There are examples like Samsung has innovated on
20 the hardware side. We have invested in improvements to the
21 Android operating system to enable Samsung's hardware
22 innovation. A recent example of that was foldable devices.
23 Samsung had the vision and technology to produce phones with
24 foldable screens. We helped with some operating system
25 changes to help take advantage of that, help applications do

1 interesting things in that context.

2 Also, more recently, we collaborated with Samsung
3 on smart watches. Samsung uses the Wear OS platform on its
4 Galaxy watch. That was a very close collaboration between
5 our companies.

6 Q I'd like to turn very briefly to revenue share
7 agreements with Samsung.

8 Was a new revenue share agreement with Samsung
9 negotiated and signed in 2020?

10 A Yes.

11 Q And at very a high level, because I don't want to
12 go into anything that's under seal, what structural changes,
13 if any, were made to the Samsung RSA structure at that time?

14 A Well, similar to what we talked about with
15 carriers at a high level, we broadened the commercial
16 framework. There was a deal that was focused on revenue
17 share, search revenue share. There was a deal that was
18 focused on product improvements. And there was a deal that
19 was focused on go-to-market collaboration.

20 Q Did you call the search revenue share agreement
21 Deal 1?

22 A Yes.

23 Q Did you feel or not feel that the search revenue
24 share agreement Deal 1 had a role to play in enhancing
25 Apple-Android competition under this new structure?

1 A Yes, we did.

2 Q Now, with respect to that --

3 THE COURT: I'm sorry --

4 Q -- RSA Deal 1 --

5 THE COURT: I'm sorry to interrupt.

6 MR. POPOFSKY: Go ahead, Your Honor.

7 THE COURT: I want to confirm.

8 This is the 2021 --

9 THE WITNESS: Samsung was 2020.

10 THE COURT: 2020. Okay. Sorry. Thank you.

11 MR. POPOFSKY: 2020.

12 BY MR. POPOFSKY:

13 Q With respect to that new revenue share agreement
14 that was negotiated in 2020, Mr. Rosenberg, what I'm going
15 to call Deal 1. Do you understand that?

16 A Yes.

17 Q With respect to that aspect of this new
18 constellation of agreements, was there a modification made
19 to the revenue share for new devices in Europe in the wake
20 of the resolution of the EC Android matter?

21 A Yes, there was.

22 Q And without getting too specific, can you tell the
23 Court at a high level what that change was and the reasons
24 for it?

25

1 A Yes.

2 The underlying philosophy of these revenue share
3 agreements is to pay the partners for configuration
4 decisions that are under their control. With the ultimate
5 remedy in Europe, a couple of the things that were in the
6 choice or control of the OEMs moved to the choice and
7 control of users; specifically, the search provider in the
8 widget and the default search engine in Chrome.

9 And as such, whereas in the past we might have
10 paid a partner to choose Google there for promotion or to
11 enhance the promotion of those access points, because that
12 was no longer under the partner's control, it didn't make
13 sense for us to pay.

14 Q And, again, focusing on that 2020 search revenue
15 share agreement, and the Court heard much about this now
16 seven weeks ago, so just a little reminder, was or was not a
17 new incentive added with respect to Chrome for U.S. devices?

18 A For -- in the Samsung agreement?

19 Q Yeah.

20 A Yes, there was.

21 Q And why, if at all, was that important for
22 competing with the iPhone?

23 A So Chrome -- as I said before, we felt that Chrome
24 was the strongest browser we could put forward on an Android
25 device, it was very popular with U.S. users.

1 Samsung had interest in its own browser. The
2 carriers were interested in Chrome. We offered Samsung an
3 incentive to support the carriers' wishes and promote Chrome
4 in the hot seat on those devices.

5 Q And without getting into any more specifics, would
6 you characterize that incentive as big or small?

7 A It was small relatively.

8 Q With respect to this new constellation --

9 THE COURT: Excuse me, I'm sorry to interrupt you
10 again.

11 MR. POPOFSKY: Sure. Go for it.

12 THE COURT: Let me just be go back to the European
13 situation again and the post EU Android settlement.

14 What ended up happening to the rev share in those
15 contracts? Did it drop to zero. Did it -- was it reduced
16 by some percentage?

17 THE WITNESS: In those contracts, basically we
18 focused the rev share payment on a third-party browser being
19 set, where Google could be set as default so that was still
20 within the partner's control.

21 So, for example, if Samsung chose to install its
22 own browser in the hot seat on devices in Europe, then they
23 were able to set the default as Google, and then that's
24 something we could pay them on.

25 So there were a couple things, but I would say

1 generally speaking, the revenue that we were able to pay
2 partners on those devices went way, way down.

3 THE COURT: Okay. Thank you.

4 BY MR. POPOFSKY:

5 Q And to be clear as a general matter,
6 Mr. Rosenberg, in Europe, were you still paying revenue
7 share on the Google Search widget in Europe after the EC
8 Android decision?

9 A No.

10 MR. POPOFSKY: Does that answer Your Honor's
11 question?

12 THE COURT: It did.

13 MR. POPOFSKY: Thank you.

14 BY MR. POPOFSKY:

15 Q With respect to the new constellation of Samsung
16 agreements, was it your objective to pay the partner more,
17 pay the partner less, keep it the same? What's your
18 perspective on that?

19 A I would say that it -- I mean, my personal point
20 of view and what I think ultimately is reflected in these
21 agreements was, we wanted to invest at the same levels or
22 more.

23 We wanted to drive more improvements to the
24 products that we thought would make the products more
25 competitive with iOS, and we also wanted to create an upside

1 mechanism, where the partner could earn even more by
2 stronger performance in the market.

3 And as one example, without going into details,
4 there's an upside mechanism around iOS switching
5 contemplated in the go-to-market agreement. And so, you
6 know, there were -- we wanted to set it up so that we would
7 be thrilled to be paying more because then we would be
8 seeing better outcomes.

9 Q And when you say pay more, is that relative or not
10 to have the prior deal continued unchanged?

11 A Right, relative to renewing the prior deal as is.

12 Q So I'd like to switch gears a little bit.

13 We've discussed changes to the carrier revenue
14 share agreements in 2020 a little while ago. We're going to
15 return to a document called UPX150.

16 MR. POPOFSKY: Before I put it on the screen,
17 Your Honor, this was a document that the Justice Department
18 used with Ms. Kartasheva where you had a ruling about what
19 was unsealed the other day. We unfortunately don't quite
20 have the final transcript yet, so we've done our best to map
21 what you ruled on the stand to the document. I'm going to
22 hand out a lighter redacted version of that document.

23 THE COURT: Okay. Thank you, Counsel.

24 MR. POPOFSKY: I will put this version up on the
25 screen as well.

1 BY MR. POPOFSKY:

2 Q All right, Mr. Rosenberg. Let me know when you're
3 there.

4 You have the document before you?

5 A Yes.

6 Q All right.

7 I'd like to look at your email of November 5th,
8 2020, at the bottom of the page.

9 Do you see the first sentence you write is, "I've
10 been thinking about our new approach to the U.S. carrier
11 RSAs, both in the context of today's BC review as well as
12 the revised structures for AT&T and VZ, Verizon."

13 Do you see that?

14 A Yes.

15 Q Can you please tell the Court the context in which
16 you wrote that sentence?

17 A Well, we were -- when it references "today's BC
18 review," they were -- there was a review later in that day
19 about, I think, some aspect of the T-Mobile RSA, and it was
20 a review with BC as our senior most deal review committee in
21 the company.

22 Oftentimes going into these meetings, if I was
23 part of a team bringing a deal to the meetings, I would try
24 to anticipate in advance what questions we might get. I
25 might send emails out to the team to help prepare answers to

1 those questions so that we have them at the ready. I think
2 that's what was happening here with the question to Anna.

3 Q And with respect to the revised structures for
4 AT&T and Verizon, what is your understanding of where things
5 stood at that time with respect to the carrier renewal
6 discussions?

7 A I think they were in the process of being
8 negotiated with the partners, but those deals didn't get
9 done until 2021.

10 Q And with respect to the rev share that was being
11 contemplated that would be extended to partners in
12 negotiations, were discussions, as you remember them, just
13 beginning or in some intermediate step or well along? Where
14 were they on the timeline at this point?

15 A I'm not sure.

16 I think they were in fairly early stages but they
17 were happening.

18 Q And what was the issue that caused you to send
19 this question to Ms. Kartasheva so you would be prepared for
20 the BC meeting?

21 A Well, we were -- the context was that in the new
22 commercial framework that we were thinking about, as we
23 discussed, we took the -- the framework contemplated more
24 than one deal. In the revenue share detail itself, we took
25 the revenue share percentage down in that deal, that created

1 opportunity for us to provide funding to the other
2 objectives that we had in the overall commercial framework.

3 And so the question was really about, in doing
4 that, would we be exposing ourselves to risk in some way
5 that that deal would no longer be competitive for the things
6 it was trying to achieve.

7 Q Indeed, you asked at the end of this email that
8 you wanted to analyze whether you were "increasing the
9 chances that our economics on those devices are not
10 competitive versus what rivals are offering."

11 Do you see that?

12 A Yes.

13 Q What was your concern?

14 A The concern is that, I mean, we knew that -- that
15 rivals were out there, we knew that they would -- they might
16 be interested in competing for these devices -- these deals
17 or these terms. We wanted to make sure that our offer to
18 partners continued to be competitive and continued to enable
19 us to achieve the objectives we had with that deal.

20 Q Let's go to Ms. Kartasheva's response at the top
21 of the document, which is received a little bit later that
22 same day.

23 Do you see that?

24 A Yes.

25 Q Now, looking in that email today, do you find

1 Ms. Kartasheva's response to the question you posed
2 persuasive?

3 A I see some issues with it.

4 Q Can you explain that to the Court.

5 A Well, if you look at point one, when it talks
6 about MADA and the widget and 60 percent of the revenue,
7 I don't think that fully takes into account the types of
8 things we saw, for example, on the Surface Duo, where there
9 could be other innovations that partners could do. Even if
10 the Google Search widget is there, there could be other
11 innovations that partners could do with rivals to create
12 ways to access Search. So I think that was sort of based on
13 a static set of assumptions that may or may not have been
14 true.

15 Q And when you look at the .2, and, again, I don't
16 want you to say the name of the redacted partner, but how,
17 if at all, does that point relate to what you said about the
18 level of persuasion of this analysis?

19 A Well, that refers to, without going into
20 specifics, where in an OEM RSA, we paid a small incentive to
21 support a carrier who would want to put Chrome in the hot
22 seat and may have that as a term in an agreement with us.
23 But the primary economics of putting Chrome in the hot seat
24 was the deal with the carrier. And so a rival, even if
25 there was a small incentive with this OEM, if the rival made

1 a compelling deal to the carrier, then that would probably
2 prevail and the carrier would make that happen in its
3 discussions with the OEM.

4 Q And looking at that .2, that 30 percent of revenue
5 today, do you regard that as contestable or incontestable by
6 Search rivals?

7 A It would be for those reasons.

8 So if a rival was able to make an offer that would
9 put another browser in the hot seat that was set by default
10 to another search provider, then that revenue would
11 absolutely be available.

12 Q So just so the record is clear, do you view that
13 as a contestable access point or an incontestable access
14 point?

15 A Contestable access point.

16 Q Do you recall any further discussion or
17 consideration of this document after you received it?

18 A No.

19 MR. POPOFSKY: And we can take it down, Allen.

20 BY MR. POPOFSKY:

21 Q Are you aware of that analysis playing any role in
22 decision to move forward with the new revised revenue share
23 percentage to carriers in the United States in 2021?

24 A No.

25 Q Let's switch gears for the second-to-last time.

1 MR. POPOFSKY: And I appreciate Your Honor's
2 patience.

3 BY MR. POPOFSKY:

4 Q You've given some testimony over the course of the
5 morning on some of the factors, Mr. Rosenberg, that Google
6 considers in adjusting the revenue share agreement --
7 percentage, rather, to propose to OEM and carrier partners.

8 Does Google, in the ordinary course, as far as you
9 know, calculate the incremental revenue a particular RSA is
10 expected to produce?

11 A No, I don't believe so.

12 Q What is your understanding of why not?

13 A I don't know how we would do it.

14 There are so many factors that go into how a
15 device is used, how a particular service on a device is
16 used, what the network conditions might be, what the user
17 context might be. It would be very hard to isolate for that
18 one factor alone.

19 Q And would it be feasible, in your review, to throw
20 away the existing search revenue share agreement and
21 reconstruct it to pay a partner based on how much revenue a
22 device generates and dispense with default pre-installation
23 or exclusivity requirements?

24 A No, I don't think that would make business or
25 product sense for us.

1 Q Why not?

2 A Because part of the -- well, for what I just said,
3 there's the operational complexity, but also, additionally,
4 there's a presumption in these revenue share agreements that
5 we're investing behind what we believe is a very strong
6 out-of-box experience that helps these devices be
7 competitive with iPhone, we're investing in a deterministic
8 way and at a certain level to enable our ecosystem partners
9 to compete or to promote Android devices, we're investing
10 with ambition to grow our businesses. It just doesn't feel
11 like we could achieve all those objectives with that type of
12 structure.

13 Q How would you expect the absence of placement
14 default or pre-installation exclusivity in an Android search
15 revenue share agreement to affect the revenue share
16 percentage that Google is willing to extend to partners?

17 A If we did an agreement with the absence of those,
18 I wouldn't expect that we would pay at the same level.

19 Q What would the level be, higher, lower?

20 A Lower. Sorry, we would pay less.

21 Q And, again, without naming anything too specific,
22 can you think of any real world examples of that?

23 A Yes.

24 One of the examples is Europe. As we've
25 discussed, where we -- some of those provisions aren't

1 present, and as a result, we don't pay.

2 There's another example is in the agreement with
3 one of our carrier partners, there is a tier that doesn't
4 contemplate search exclusivity, and for that tier, there's a
5 rev share number that's far lower than the rev share number
6 for when search exclusivity is present.

7 Q And how, if at all, would offering a significantly
8 lower revenue share percentage to an OEM or carrier partner
9 in the U.S. affect Android's ability to compete with Apple?

10 A It's less investment. Less investment in the
11 system. Less motivation by the partner to promote Android
12 devices.

13 Q You mentioned earlier a go-to-market agreement.
14 Do you remember that?

15 A Yes.

16 THE COURT: Mr. Popofsky, can I interrupt?

17 I'm sorry to keep doing this but can we go back to
18 Europe for a second.

19 I think we've seen evidence that even after the
20 choice screen was offered, Google's general share in nearly
21 all of the countries was about the same even with the choice
22 screen.

23 Can you give me any insight into how that change
24 impacted the Android versus iOS competition that you've
25 described as benefiting from the RSA?

1 THE WITNESS: Well, I think some of the longer
2 term effects we have yet to see.

3 I think that the experience you describe happens
4 after someone has chosen an Android device. So it doesn't
5 speak to with less money in the system, have the partners
6 done less to promote their devices, have they done less to
7 market their devices. It doesn't speak to, you know, what
8 did the user think about that experience and would they be
9 motivated to get another Android phone versus an iPhone,
10 would it change their propensity. I mean, these are some of
11 the things we're worried about. I don't think we've seen it
12 play out long enough yet.

13 THE COURT: And when was the choice screen
14 implementation, was that 2021? Sorry, I can't remember the
15 date.

16 THE WITNESS: I don't recall specifically.

17 MR. POPOFSKY: I believe, Your Honor, I can
18 represent it was 2019.

19 THE COURT: 2019. Okay.

20 THE WITNESS: Yeah.

21 THE COURT: And has there been any trend in
22 your -- even -- I know it's a short time period, but have
23 you noticed any impact on the sale of new Android devices
24 since that change?

25 THE WITNESS: I haven't tracked that closely.

1 I think, you know, what I'll say is that the -- I mean, the
2 momentum that iPhone has is global, and particularly in some
3 of the, you know, western European markets that have a lot
4 of -- similar to the U.S., iPhone continues to be very
5 strong.

6 THE COURT: Okay. Thank you.

7 MR. POPOFSKY: Your Honor presaged the question
8 I was going to ask so I might as well ask it now.

9 BY MR. POPOFSKY:

10 Q You've talked about some of the changes, not only
11 to the RSA model in Europe where you're paying less on
12 certain access points, but also to the MADA with the EMADA,
13 are you concerned, recognizing you left the Android business
14 in 2022, of how those changes will affect the trajectory of
15 Android long term?

16 A Yes, I think that to the extent that these were
17 important investment vehicles for us and also important
18 vehicles to drive a product experience, that we felt good
19 about, we don't have those anymore to the same extent, so it
20 is a concern that the investment levels won't be there in
21 the same way.

22 Q And one last RSA question before we shift to our
23 final topic, Mr. Rosenberg.

24 You mentioned the go-to-market agreement?

25 A Yes.

1 Q Why not scrap the search revenue share agreement
2 and just put all your eggs in the go-to-market agreement?

3 A A couple reasons.

4 I mean, those agreements are, they're really meant
5 to -- they're meant to kind of foster a collaboration
6 operational dynamic, create some incentives for outcomes,
7 but they're very cumbersome operationally, they require lots
8 of discussion and debate on the deployment of funds and
9 their -- it's a difficult mechanism to scale in the way that
10 the simplicity of a search revenue share term can scale,
11 where there's direct alignment of two businesses, as one
12 does better, the other does better. It has optional
13 simplicity to it. And so that feels like the foundational
14 piece.

15 And then with go to market, we -- we're trying to
16 cultivate this additional muscle of collaboration, but it
17 has less deterministic effects in terms of outcomes.

18 Q I'd like to switch to our final topic together,
19 Mr. Rosenberg.

20 I asked you some questions much earlier in this
21 examination about some Android software innovation, I'd like
22 to further explore that area.

23 Are you aware of whether the Android OS runs on
24 devices that are not smartphones or tablets?

25 A Yes, it does.

1 Q Can you give the Court some examples.

2 A There are lots of examples, I'm learning about
3 more every day. But Android runs in cars, on TVs, on
4 watches, on gym equipment, on inflight entertainment
5 systems. Actually, yesterday I walked from my hotel to go
6 to lunch, it was like a counter-service place, I went up to
7 a self-service kiosk to order, that was running Android,
8 which was cool, it never gets old to see that. But I'm
9 always running into devices of different types that have
10 Android on them.

11 Q And are you aware of Apple deploying its iOS
12 family of operating systems on a comparable range of
13 devices?

14 A No, I don't.

15 Q How about Microsoft, does it license Window [sic]
16 for a comparable range of devices?

17 A No, it doesn't.

18 Q Do MADA's signatories have significant
19 opportunities to offer innovative and differentiated GMS
20 devices, both in terms of software and hardware?

21 A Yes, they do.

22 Q Do RSA partners have opportunities to offer
23 innovative and differentiated devices that are enrolled in
24 your search revenue share agreements, both in terms of
25 hardware and software?

1 A Yes, they do.

2 MR. POPOFSKY: We have one last demonstrative,
3 Your Honor.

4 May I approach?

5 THE COURT: Uh-huh.

6 MR. POPOFSKY: This one, for the record, is DXD35.
7 And, Allen, if you could put that one up on the
8 screen.

9 BY MR. POPOFSKY:

10 Q This one's entitled "Android differentiation."
11 Do you see that, Mr. Rosenberg?

12 A I see that.

13 Q Did you work with counsel in preparing this
14 demonstrative?

15 A I did.

16 Q Let's go to the first slide and give the Court a
17 moment to dwell on that one.

18 And while the Court takes a look, can you tell the
19 Court what this is showing.

20 A This is showing innovation on the hardware side
21 and what we call form factor which is kind of the physical
22 shape and design of the device. It's showing on the bottom,
23 a range of different shapes, form factors, sizes of Android
24 devices that our various manufacturing partners built and
25 launched in this time frame, including large screen devices,

1 small screen devices, foldable devices, devices that had
2 keyboards, devices that didn't have keyboards.

3 Q And what is above the timeline?

4 A Above the timeline is showing the range of form
5 factors on iOS in the same time frame, the range of shapes
6 and sizes of iPhones in the same time frame.

7 Q And what contrast, if any, is being made on this
8 slide?

9 A There's a much broader range on Android than there
10 is on iOS.

11 Q Let's turn the reel. What does this slide show?

12 A This is an example of a large-screen device.

13 Q And I -- scratch that.

14 Could these be offered by MADA partners?

15 A Yes.

16 Q Could these be enrolled in a search revenue share
17 agreement?

18 A Yes.

19 Q What does this show?

20 A This shows very small-screen devices.

21 Q I notice on the right side, Mr. Rosenberg, the
22 Palm phone, PVG100 from 2018, there doesn't appear to be any
23 folders. Can you explain why to the Court?

24 A Yes.

25 This was a situation where we were interested in

1 the experimentation that Palm was doing with a device this
2 size. We wanted to support that innovation and be flexible.
3 Their initial user experience for the device didn't
4 contemplate folders so we were flexible on that requirement
5 in the spirit of supporting the innovation they were trying
6 to do and the differentiation they were trying to achieve.

7 Q Let's turn to page 6. What is this depicting?

8 A This is depicting how Samsung innovated on
9 extending the screen around the sides of the device, not
10 just on the kind of -- the main face of the device but the
11 screen would bend around the side, and they did some
12 interesting UI elements with that side panel, as they called
13 it.

14 Q Is this a MADA device?

15 A Yes.

16 Q Could it be enrolled in a revenue share?

17 A Yes.

18 Q Let's go to Slide 7.

19 What does this convey?

20 A This is examples of how OEMs were innovating on
21 screen resolution on these various devices.

22 Q And these form factor innovations, do they concern
23 solely hardware or do they also at times include software
24 elements?

25 A Sometimes they include software elements as well.

1 Q What is shown here on Slide 8?

2 A This is what I mentioned before, the foldable
3 display, foldable phone, where the screen itself is
4 bendable, which allows the phone to fold in half and
5 basically have an experience on the -- in this case, on the
6 outside of the device and then you can fully unfold the
7 phone and it has a larger screen experience on the inside of
8 the device.

9 Q Did Samsung make this a MADA device?

10 A Yes.

11 Q Could it be enrolled in an RSA?

12 A Yes, it could.

13 Q This is the Surface Duo?

14 A Yes.

15 Q And we've talked about that one extensively
16 before, correct?

17 A Yes.

18 Q And you mentioned to the Court swipe-down access
19 to Bing?

20 A Right.

21 Q What does this Slide 10 show?

22 A This is another type of foldable device, this one
23 from Motorola. And they it folded the screen on a different
24 access. So the differentiation in this case was that the
25 phone could get to a very small size in folded state and

1 then could open up to regular phone size in unfolded state.

2 Q I see -- in the second image, do you see the
3 Google Search widget there below the fold?

4 A Yes.

5 Q And does this device have an outside screen?

6 A Yes, I believe so.

7 Q Could Motorola, if it so chose, but a competing
8 search widget on the outside screen?

9 A Yes, I believe so.

10 Q Is this a MADA device?

11 A Yes.

12 Q Could it be enrolled in an RSA?

13 A Yes.

14 Q Please tell us about Slide 11, Mr. Rosenberg.

15 A This is a phone that Asus has built that is
16 optimized for the gaming use case. And so capabilities
17 like -- they've invested in capabilities like battery life,
18 like display size and display resolution, the ability to
19 have a really high frame rate when games are being played.
20 And then they market this specifically to gamers. And as
21 you see, also the ability for accessories to attach to the
22 device for controls and additional screen capability.

23 Q Is this a MADA device?

24 A Yes.

25 Q Could it be enrolled in an RSA with Asus?

1 A Yes.

2 Q Cameras, please tell us about Android and cameras.
3 We have two slides on that here with cameras and then here
4 with Zoom, 12 and 13?

5 A Yeah.

6 A camera is an area of a lot of energy and
7 innovation on Android. It's also an area where iPhones are
8 very strong. It's taking pictures is -- and videos is a key
9 use case of a mobile phone.

10 OEMs are constantly looking to innovate on the
11 camera experience and this is an example of several of them
12 doing that.

13 Q You see on this page the Samsung Galaxy S4 Zoom?

14 A Yes.

15 Q What was the innovation, if any, of this phone?

16 A Well, here, they added an actual mechanical zoom
17 feature on the back of the phone.

18 Q Could be a MADA device?

19 A Yes.

20 Q Could be enrolled in an RSA?

21 A Yes.

22 MR. POPOFSKY: Last slide, Your Honor.

23 BY MR. POPOFSKY:

24 Q What does this show, Mr. Rosenberg?

25 A This was Samsung -- well, Samsung innovating on

1 MS. BELLSHAW: Your Honor, may I proceed?

2 THE COURT: You may.

3 - - -

4 CROSS-EXAMINATION

5 BY MS. BELLSHAW:

6 Q Good morning, Mr. Rosenberg.

7 A Good morning.

8 Q My name is Meagan Bellshaw, and I represent the
9 United States.

10 I had just a couple of questions following up on
11 the last topic that you were discussing with your counsel.

12 So I think, based on the demonstrative that we
13 just saw, I'm correct that Android is available on devices
14 that don't have any search capability at all, right?

15 A Open source Android, yes.

16 Q And that includes TVs, Pelotons, you mentioned the
17 cash register at your local coffee shop?

18 A Close enough, yes.

19 Q And so Google makes Android available even though
20 there's no search on those devices, right?

21 A We make Android available -- open source Android
22 available, yes.

23 Q So I'd like to ask you a question about another
24 recent topic that you just discussed with your counsel, and
25 I'm going to hand you up a document.

1 MS. BELLSHAW: Your Honor, may I approach?

2 BY MS. BELLSHAW:

3 Q And, Mr. Rosenberg, I've handed you up what is
4 UPX162.

5 And do you see that UPX162 is a June 18th, 2019,
6 email from Michael Murphy to others at Google, including
7 yourself?

8 A Yes, I see that.

9 Q And the subject of UPX162 is, deal review -- "BC
10 deal review, agenda for Wednesday, June 19th, and Thursday
11 June 20th."

12 Do you see that?

13 A Yes, I see that.

14 Q And the BC stands for business council?

15 A Yes.

16 Q And the business council is a group of Google
17 executives who approve the Google agreements, like the RSA
18 and the MADA?

19 A They approve agreements that meet certain
20 thresholds.

21 Q Including RSAs and MADAs that are of a certain
22 dollar amount?

23 A Yeah.

24 In this context, what they would typically do is
25 approve a framework, and then the teams would go

1 individually negotiate them, they wouldn't necessarily have
2 to approve every individual deal.

3 Q So the business council will approve a framework,
4 for example, for an RSA with maybe some parameters where
5 teams have flexibility to negotiate in advance of the teams
6 taking those out to negotiate with independent partners;
7 is that right?

8 A Yes, that's one of the things BC might do. They
9 also may be consulted during the course of negotiations if
10 the team is recommending that the parameters change.

11 Q So if you would please turn -- or, sorry.
12 Do you see the first sentence of UPX162 starts
13 with, "We have two topics scheduled for BC review this
14 week"?

15 A I see that, yes.

16 Q And then a little farther down, there's an agenda,
17 and the second line mentions the Google distribution on
18 Android framework?

19 A Yes, I see that.

20 Q So if you would turn to the attachment of UPX162,
21 it starts on the document -- or it starts with the page with
22 the Bates number ending in 9290.

23 Are you there, Mr. Rosenberg?

24 A Yes.

25 Q And this is a summary document that was approved

1 and sent to -- or prepared and sent to the BC regarding this
2 new Google distribution on Android framework, right?

3 A Yes, it would be customary to send a document like
4 this for review by the BC members before the meeting.

5 Q And if you look on the sort of first box, there's
6 a box labeled "Representatives."

7 Do you see that?

8 A Yes.

9 Q And then you're listed among the deal
10 representatives, correct?

11 A Correct.

12 Q The Jamie Ro. is you?

13 A Yes.

14 Q So this is a proposal that was sent to the
15 business council on how and why your team was seeking to
16 update the Android RSAs, correct?

17 A It was a proposal on -- that included the details
18 of the framework, it included aspects of the rationale, it
19 included some financial analysis, as I see here.

20 Q And if you look sort of at the last row in that
21 top box, there's a box that says, "Region"?

22 A Yes.

23 Q And it indicates that the region is "Global"?

24 A Yes.

25 Q So this was a proposed framework for a worldwide

1 deal with an OEM partner, correct?

2 A I would modify that. I would say that this was a
3 proposal for a certain collection of OEMs, primarily Chinese
4 OEMs, and global was in reference to that it was meant for
5 all the territories that those OEMs ship into. So it
6 actually, not much of this is applicable to the U.S., but
7 I mean, we can certainly talk about it.

8 Q Okay.

9 You mentioned the OEMs that it applies to.
10 So if you look down in the "Ask," and some of this is
11 confidential -- or Google has indicated that some of this is
12 confidential, so I'll just ask you not to say any of the
13 information that's in the red boxes.

14 But do you see the top of the "Ask" in the sort of
15 third line there, or second line there, "This ask applies to
16 non-Samsung OEMs," right?

17 A Yes.

18 Q So the ask at this time in 2019 was to -- and
19 I'm not going to read the exact dollar figures -- spend a
20 certain amount in total in 2020 and then, parens, and
21 there's a dollar figure that indicates that total is over
22 the current trajectory of the existing deal, right?

23 A Yes.

24 Q So the ask is to spend in total, in 2020, a dollar
25 amount over the current trajectory of the existent deal

1 growing to -- and then there's another revenue figure
2 there -- or another dollar amount there. Do you see that?

3 A Yes.

4 Q And in parens, again, there's a dollar figure that
5 indicates that that is also an increase over the current
6 deal, correct?

7 A I assume that's what that means, yes.

8 Q So it was an ask to increase the amount of spend
9 over the current deal in 2023 across Search and Play for
10 carriers and non-Samsung OEMs to secure platform protections
11 for Search, Play, and critical app protections on more
12 devices.

13 Do you see that?

14 A I see that.

15 Q So, all right, I think I misspoke earlier and I
16 asked if this just applied to non-Samsung OEMs, but it
17 actually applied to both carriers and OEMs other than
18 Samsung, correct?

19 A I'm just looking at the -- yes, there was an
20 aspect of this that applied to carriers as well, but I don't
21 believe U.S. carriers were included here.

22 Q So just to -- because I think I was a little
23 jumbled going through what the redactions.

24 Sort of at a high level, the ask here is to
25 increase the total spend, in the amount of the dollar

1 figures that are redacted here, across Search and Play in
2 these carrier and non-Samsung OEM global RSA agreements,
3 right?

4 A Yes.

5 I think what this is saying is that with respect
6 to these partners and the markets they serve and, again,
7 because I don't believe U.S. carriers or Samsung were
8 contemplated here, very little of this is about the U.S.
9 market, but I think what this is in reference to is a
10 comparison of, you know, had we renewed the agreements that
11 were in place on their existing terms by comparison, this
12 new framework would contemplate this additional investment.

13 Q Right.

14 And if you look at the -- under rationale, which
15 is the next box down, I think you're right that this isn't
16 just about the U.S. market because the first rationale
17 that's listed here under Search and Assistant is EC ruling
18 created opportunity for rivals to secure full search
19 exclusivity on devices in EEA.

20 Do you see that?

21 A I see that.

22 Q So the EC, that ruling, that refers to the ruling
23 by the European Commission that you referenced in your
24 direct testimony?

25 A Yes.

1 Q And the EEA is the European economic area?

2 A Yes.

3 Q So one rationale for increasing RSA spend to
4 partners was the European ruling, correct?

5 A That's listed as under the rationale section.

6 What I would also say is that we were asking for a
7 lot more in these agreements from partners on the product
8 side and proposing to invest behind those additional asks as
9 well.

10 Q Okay. Great. You can set that one aside.
11 Thank you.

12 So I would like to follow up on a question that
13 your counsel asked you about UPX150 and that was the email
14 exchange between yourself and Ms. Kartasheva.

15 Do you recall that?

16 A Yes.

17 Q And I think on direct, you testified that you
18 disagreed with Ms. Kartasheva's characterization in her
19 email response to you about, I guess, the suggestion that
20 the widget and Chrome revenue would not be contestable or
21 attainable by a, you know, another search partner?

22 A I think what I said is that, as I look at it
23 today, I see gaps in that assessment or that perspective.

24 I actually don't think -- Anna and I had further
25 discussion on this at the time and I don't remember that at

1 the time that the email was sent.

2 Q And you never wrote Ms. Kartasheva an email back
3 saying that you disagreed with any of her analysis in
4 UPX150, right?

5 A I didn't.

6 As I said before, we were preparing to field
7 potential questions that we might get asked in this review
8 and that's the context in which I was asking for her for
9 this.

10 Q If you -- actually let me pass you up a binder.

11 MS. BELLSHAW: Your Honor, may I approach?

12 THE COURT: Yes.

13 BY MS. BELLSHAW:

14 Q Mr. Rosenberg, I'd like to direct your attention
15 to UPX1108 in your binder.

16 And 1108 is an email from -- the top email is an
17 email from Ruth Porat to yourself, copying Mr. Pichai and
18 others at Google, dated July 2017.

19 Do you see that?

20 A I see that.

21 MS. BELLSHAW: And, Your Honor, UPX1108 has
22 already been admitted into evidence.

23 BY MS. BELLSHAW:

24 Q And looking at the bottom email, there's an email
25 from you to Ms. Porat and Mr. Pichai.

1 Do you see that?

2 A I see that.

3 Q And Mr. Pichai is the Google CEO and Ms. Porat is
4 the CFO?

5 A Yes.

6 Q And she's actually now the CFO of Alphabet?

7 A Yes, I believe so. But she may have recently
8 evolved from that role.

9 Q Okay.

10 In your email to Ms. Porat and Mr. Pichai, you're
11 providing an update on the recent Samsung revenue share
12 negotiations, right?

13 A Yes.

14 Q And you write, "Hiroshi asked that we provide you
15 with a quick summary of where we are with the Samsung search
16 revenue share deal in case you need it as context for
17 earnings. Status is below and we've also attached a deal
18 summary here in the deck we reviewed with Sundar, Philipp,
19 and JG in early May."

20 Philipp, that refers to Philipp Schindler as the
21 chief business officer?

22 A Yes.

23 Q And then JG, is that Mr. Giannandrea?

24 A Yes.

25 Q So if you would turn to next -- page 3 of UPX1108,

1 you'll see the deck that was linked to in your email to
2 Mr. Pichai and Ms. Porat.

3 Sorry. And then actually if you would turn to the
4 next page, you'll see an agenda for that discussion.

5 Do you see that?

6 A I see that.

7 Q So in your presentation to Mr. Pichai that you're
8 forwarding on in the email in UPX1108, you started by
9 providing an update on Samsung's MADA, correct?

10 A Yes.

11 Q And at the time the MADA included both the Google
12 Search widget -- or it included the Google Search widget on
13 the default home screen, correct?

14 A Yes.

15 Q And then it also included a requirement that
16 Chrome be preloaded on to the device in the Google folder?

17 A Yes.

18 Q Will you turn to Slide 6 of UPX1108. It's the one
19 ending in Bates number 6924. And a lot of this is redacted,
20 so I'm going to do my best to navigate around that.

21 If you look at the title of the slide, it's "MADA
22 access points (GSA and Chrome) contribute vast majority of
23 search revenue on Samsung devices."

24 Do you see that?

25 A Yes.

1 Q And then in the chart, there's a percentage
2 reference that is search revenue that's generated on Chrome
3 and GSA, correct?

4 A Yes.

5 Q And that's the percentage of revenue that's
6 generated by searches in Chrome and GSA, which as we just
7 discussed, are both part of the MADA?

8 A Yeah, this is the revenue -- on Samsung devices
9 that come from those access points, I believe that this
10 measurement was likely taken on Samsung devices that were
11 also covered by the prior RSA.

12 Q And these numbers are accurate, correct?

13 A It was six years ago, but I don't have reason to
14 dispute them.

15 Q You would expect that numbers included in a
16 presentation to Mr. Pichai and Ms. Porat to provide them
17 information for -- that they might need for the earnings
18 would be accurate?

19 A I would hope so, yes.

20 Q And these numbers are from a few years earlier but
21 they're fairly close to the numbers that Ms. Kartasheva
22 calculated in her email, correct?

23 A I'd have to go back and look at that.

24 Q That's okay. I can withdraw the question.

25 A Okay.

1 Q So you would agree that Chrome and GSA account for
2 a vast majority of the search revenue Google generates on
3 Samsung devices, correct?

4 A Yes, according to this analysis, that seems to be
5 the case.

6 Q Okay. You can set that one aside. Thank you.

7 You talked about the Microsoft Duo a few times,
8 including that Bing search is available on the Duo when the
9 user swipes down, correct?

10 A Yes.

11 Q But the Google search widget is preloaded on the
12 default home screen on the Duo, correct?

13 A Yes.

14 Q And Google would not grant Microsoft a waiver in
15 its MADA negotiations to excuse Microsoft from the
16 requirement that the Google Search widget be preloaded on
17 the default home screen, correct?

18 A We always endeavor to apply the terms of our MADA
19 consistently to all of our partners.

20 Q So is that a yes, that Google would not grant
21 Microsoft a waiver from the requirement that the Google
22 Search widget be preloaded on the default home screen on the
23 Duo?

24 A Correct, we wouldn't have granted a waiver on that
25 requirement.

1 Q So users can, on a Microsoft device, can find the
2 Google Search widget immediately on their home screen,
3 correct?

4 A Yes.

5 Q And so the reason that Microsoft, one reason
6 Microsoft may have chosen to preload Bing as a swipe-down,
7 which is a little bit harder to find, is that the Google
8 Search widget was already on the default home screen, right?

9 A I don't know what Microsoft's thinking was.
10 I imagine they would have evaluated a bunch of options,
11 including putting their own widget on one of the screens of
12 the device which they could have done and ultimately they
13 determined that the gesture that they designed was the one
14 that worked best for them.

15 Q And the Duo is the only MADA device in the
16 United States with more than one search provider preloaded
17 on the device, right?

18 A I couldn't say that categorically. It is an
19 example of a device in the United States with more than one
20 search provider preloaded.

21 Q So I'd like to ask you a few questions about the
22 Google Play Store.

23 THE COURT: I'm sorry, can I interrupt?

24 MS. BELLSHAW: Yes.

25 THE COURT: You can't say with any certainty but

1 let me ask, can you recall any other devices that have been
2 preloaded with multiple search services?

3 THE WITNESS: I'm not aware of any.

4 THE COURT: Okay. Thank you.

5 BY MS. BELLSHAW:

6 Q The Google Play Store launched in 2012 or 2013; is
7 that right?

8 A Yes.

9 Sorry, Your Honor. I did think of another
10 example.

11 On Verizon devices on the plus one screen, it's
12 preloaded with Yahoo! mobile experience which has access to
13 Search.

14 THE COURT: I heard about that yesterday.
15 Thank you.

16 THE WITNESS: Sorry to interrupt.

17 BY MS. BELLSHAW:

18 Q So Google Play Store launched in 2012 or 2013;
19 is that right?

20 A In a way, as that brand, Google Play was the
21 ultimate evolution of Android Market, which was the original
22 app store on Android. In 2012, we rebranded it as Google
23 Play.

24 Q When did the Android Market launch?

25 A Android Market launched with the very first

1 Android device, I believe, back in 2008.

2 Q And then you had responsibility for the Google
3 Play Store when it was rebranded around the 2012, 2013 time
4 period?

5 A Yes.

6 THE COURT: Sorry, just make sure I understood
7 you.

8 So Google -- Android Market was the original
9 iteration and then it just was rebranded as the Google Play
10 Store?

11 THE WITNESS: Correct.

12 THE COURT: Thank you.

13 BY MS. BELLSHAW:

14 Q You would agree that having a successful app store
15 preloaded on a device is very valuable to an OEM, right?

16 A I think it's a really important feature of the
17 device. It provides a window for users to find other apps
18 and functionality for that device.

19 Q And it's important for users to be able to find
20 other apps and functionalities when they're using a
21 smartphone device?

22 A Yes.

23 Q That really adds to the user experience?

24 A I think for some users.

25 Some users engage with additional apps quite a

1 bit, others may not as much.

2 Q A modern smart phone can't be commercially
3 successful without a way to let users find and download
4 applications, right?

5 A I mean, my personal opinion is that it is an
6 important part of the experience to be able to find and
7 download additional apps.

8 Q Would you agree that a modern smartphone can't be
9 commercially successful if it can't offer that ability to
10 its users?

11 A I think it would be harder. I don't know that we
12 have seen an example of that. But I think it would be a lot
13 harder to be as compelling in that case.

14 Q The Google Play Store is the only significant --
15 or the only app store of any significant size that is
16 available for OEMs to license in the United States, right?

17 A I'm just trying to parse your question.

18 Q I can break it down for you if that's easier.

19 A Okay.

20 Q So I think you talked about -- so, well, let me
21 withdraw.

22 The two largest app stores in the United States
23 are the Google Play Store and the Apple App Store, right?

24 A Yes.

25 Q And the Apple App Store is not licensable outside

1 of Apple, correct?

2 A Correct.

3 Q So in terms of the, like, large successful app
4 stores that are available for an OEM to license, Google Play
5 Store is the only one in the United States, right?

6 A There are other app stores available for OEMs to
7 license. I can't speak specifically to their size. I think
8 it's fair to say that Google Play is the biggest.

9 Q Google Play Store has more than 2 billion users?

10 A I think that's correct, yes.

11 Q And around 2 million applications?

12 A That sounds about right. I'm not up on the most
13 current data there.

14 Q And the Google Play Store has millions of
15 developers who have put applications into the Play Store,
16 right?

17 A It's a very large number of developers. I assume
18 it's in the millions at this point.

19 Q And the vast majority of Android apps that are
20 available in the United States are available through the
21 Play Store, right?

22 A I think if you're talking about Android apps for
23 smartphones, I would think that most of them are available
24 in the Play Store.

25 Q If not all, at least a very high percentage of

1 Android apps for smartphones are available in the Google
2 Play Store?

3 A Yes, I think that's fair.

4 Q To be successful, an app store needs both users
5 and developers, right?

6 A Yes.

7 Q Having a critical mass of users attracts
8 developers to the app store, right?

9 A Yes.

10 I think, as with any marketplace, if you're a
11 seller, you want to go to a marketplace that has buyers.

12 In this context, it's developers and users, so one
13 of the things that makes Play interesting to developers, in
14 addition to the functionality of Play itself, is the access
15 to users.

16 Q Developers don't want to spend money to put their
17 apps in stores with no users, right?

18 A I wouldn't necessarily agree with that.

19 Q Okay.

20 And users want a store where they can download
21 their favorite apps and find new ones, right?

22 A That seems fair, yes.

23 Q If I could direct your attention to UPX2106.

24 UPX2106 is a slide deck entitled "Amazon
25 competitor deep dive," dated April of 2017.

1 Do you see that?

2 A I do see that.

3 Q You oversaw the partnership and operations team
4 for the Play Store at this time in 2017?

5 A Yes.

6 Q And you likely saw this presentation when it was
7 created?

8 A I probably did, yes.

9 MS. BELLSHAW: Your Honor, I move to admit
10 UPX2106.

11 MR. POPOFSKY: No objection, Your Honor, except to
12 the extent that this involves embedded hearsay.

13 THE COURT: Okay. So it will be admitted.

14 MS. BELLSHAW: Thank you.

15 (Plaintiffs' Exhibit UPX2106
16 received into evidence.)

17 BY MS. BELLSHAW:

18 Q So this slide deck is about, at a high level, a
19 potential competitive threat from Amazon to the Google Play
20 Store, right?

21 A Yes.

22 I think it's a -- it is an analysis of where
23 Amazon was with its app store. I think it was prompted by
24 something Amazon was doing specifically in Japan with its
25 app store.

1 Q If you would please turn to page 14 of UPX2106.
2 It's the slide ending in Bates number 3590.

3 The title of this slide is "Need to focus on
4 making Play user and developer loyalty a rational and
5 attractive proposition."

6 Play there refers to the Google Play Store?

7 A Yes.

8 Q And then the slide provides some context which
9 reads, "Amazon, JP" -- is that Amazon Japan?

10 A Yes, I assume so.

11 Q "Amazon Japan lacks critical mass of users and
12 developers today. If they can achieve either, we believe
13 this will create a virtuous cycle drawing in more users and
14 developers."

15 So for an app store, having a critical mass of
16 users and developers creates a virtuous cycle, right?

17 A It's what we talked about. I think for any
18 two-sided marketplace, sellers and buyers coming to the
19 marketplace in increasing quantities, that can reinforce the
20 growth of the marketplace.

21 Q And once this virtuous cycle starts spinning, that
22 draws in even more users and developers for the reasons that
23 we've been discussing?

24 A I think that's what's implied by the language
25 here.

1 Q If I could direct your attention to the notes at
2 the bottom of the slide.

3 The first sentence is "Play benefits from network
4 effects."

5 Do you see that?

6 A I see that.

7 Q And then it goes on to describe those network
8 effects, "As users come to Play because we have by far the
9 most compelling catalog of apps/games, developers come to
10 Play because that's where the users are."

11 So "network effects" is another way of describing
12 this concept of virtuous cycle?

13 A It's a similar concept, probably has a slightly
14 different technical definition, but it's, I think, another
15 way to articulate the dynamic I mentioned of users
16 attracting developers, developers attracting users.

17 Q And in the next sentence it says, "Amazon will
18 struggle to break those network effects."

19 So because you need both users and developers to
20 be a successful app store, Google Play's competitors,
21 including Amazon, struggle to break Google Play's network
22 effects, right?

23 A You know, I don't know that I would agree with the
24 language as it's written here.

25 The fact is we had been investing for years in

1 building Google Play, in cultivating developers and working
2 with developers all over the world. We had been investing
3 for years in making users aware of Play and the app
4 offering.

5 I think, you know, Amazon would have to decide to
6 make that level of investment to achieve what we had
7 achieved.

8 Q But these network effects, as described on Slide
9 14 in UPX2106, makes it more difficult for Google Play
10 Store's competitors to compete and build their own competing
11 application store, right?

12 A I think when you're endeavoring to build a
13 marketplace, that marketplace is thriving when it has a lot
14 of buyers and sellers.

15 It's achieving the business objectives of the
16 marketplace. It's achieving the ecosystem objectives of the
17 marketplace.

18 I think, you know, the relationships that we had
19 for Play, both on the user side and the developer side, were
20 non-exclusive. I think someone could have decided to make
21 the investments at the levels we had made. They would have
22 to achieve the same marketplace dynamic we were able to
23 achieve with Play, but it was possible to do.

24 Q And outside of Europe, the only way an OEM can
25 load Play Store on an Android device is by signing a MADA,

1 right?

2 A Also in Europe, the OEM can load Play by signing a
3 MADA.

4 Q My apologies.

5 So, globally, the only way that an OEM can load
6 Play Store on an Android device is by signing a MADA?

7 A Yes, that's correct.

8 Q You can set that one aside. Thank you.

9 THE COURT: All right, Ms. Bellshaw, if you're
10 going to move to a different topic, why don't we break for
11 lunch.

12 It's a little bit before 12:30. So we will resume
13 at 1:30. We'll see everybody after lunch. Thank you very
14 much.

15 MS. BELLSHAW: Thank you, Your Honor.

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

18 (Recess from 12:29 p.m. to 1:30 p.m.)

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C E R T I F I C A T E

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

Date: November 8, 2023



William P. Zaremba, RMR, CRR

<p>BY MR. POPOFSKY: [29] 9409/4 9418/4 9418/14 9420/21 9421/5 9423/4 9424/24 9425/9 9429/13 9431/3 9432/5 9434/4 9439/12 9440/23 9441/12 9456/25 9458/24 9460/19 9462/22 9464/21 9469/12 9472/4 9472/14 9474/1 9478/20 9479/3 9483/9 9486/9 9491/23</p> <p>BY MS. BELLSHAW: [8] 9493/5 9494/2 9501/13 9501/23 9507/5 9507/17 9508/13 9512/17</p> <p>COURTROOM DEPUTY: [7] 9407/2 9407/6 9408/12 9408/14 9464/13 9464/16 9516/16</p> <p>MR. POPOFSKY: [38] 9408/18 9418/1 9418/11 9420/16 9420/19 9421/3 9423/2 9424/10 9424/23 9425/7 9429/10 9430/21 9432/4 9433/25 9439/10 9441/10 9456/21 9456/23 9458/6 9460/16 9463/11 9464/20 9469/6 9469/11 9471/11 9472/10 9472/13 9473/16 9473/24 9478/19 9479/1 9482/17 9483/7 9486/2 9486/6 9491/22 9492/17 9512/11</p> <p>MR. SCHMIDTLEIN: [3] 9407/16 9408/1 9408/9</p> <p>MS. 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