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IN THE COMPETITION
APPEAL TRIBUNAL

Case No: 1589/5/7/23(T),
1424/5/7/21(T), 1596/5/7/23

Salisbury Square House
8 Salisbury Square
London EC4Y 8AP

22nd June-31st July 2026

Before:

The Honourable Mr Justice Roth
Dinah Rose KC
Alasdair Smith

(Sitting as a Tribunal in England and Wales)

BETWEEN:

**INFEDERATION LIMITED (“Foundem”)
KELKOO.COM (UK) LTD & OTHERS (“Kelkoo”)
WHITEWATER CAPITAL LIMITED (“Ciao”)**

Claimants

- and -

GOOGLE LLC & OTHERS

Defendants

A P P E A R A N C E S

Colin West KC (instructed by Hausfeld & Co LLP) on behalf of Foundem

Daniel Jowell KC, Sarah Love KC, Hugh Whelan & Gianna Seglias (Instructed by Linklaters LLP)
on behalf of Kelkoo and Ciao

Meredith Pickford KC, Brendan McGurk KC, Julianne Kerr-Morrison, David Gregory & Alistair Holder Ross (Instructed by Herbert Smith Freehills Kramer LLP and Bristows LLP) on behalf of
Google LLC & Others

1 Tuesday, 7 July 2026
2 (10.30 am)
3 (Proceedings delayed)
4 (10.35 am)
5 Housekeeping
6 THE CHAIRMAN: Just before resuming the evidence, I should
7 say that we received yesterday, as requested,
8 the amended note from Google which will be, as we
9 understand it, approved by or affirmed with a statement
10 of truth by Mr Cody Kwok in due course. So we record
11 that we have received that.
12 I take it the Claimants have also received it?
13 MR WEST: Yes, I think we have a signed version.
14 THE CHAIRMAN: You have got a signed version?
15 MR PICKFORD: The Tribunal should have one, a signed
16 version —
17 THE CHAIRMAN: Right.
18 MR PICKFORD: — but we will very happily provide it again,
19 if, for some reason, that has not got through.
20 THE CHAIRMAN: Yes, we will check if that has come through.
21 We also saw just now, sent through late last night,
22 an application about expert evidence. We have not had
23 a chance to look at that yet. We will come back to
24 that, probably tomorrow.
25 Can I also mention that we believe that the Swedish

1

1 Market Court has now given judgment in
2 the Google Shopping case in Sweden, so if we could, in
3 due course, please be given a copy of that judgment and
4 a translation.
5 MR JOWELL: We have liaised in order to seek an official
6 translation.
7 THE CHAIRMAN: You are probably on to it already.
8 MR JOWELL: I think Mr Pickford may be able to help you.
9 MR PICKFORD: I understand that we can provide a certified
10 translation by Thursday.
11 THE CHAIRMAN: That is absolutely fine, thank you.
12 Yes, Mr West.
13 MR CRISTOS GOODROW (continued)
14 Cross-examination by MR WEST (continued)
15 MR WEST: Good morning, Mr Goodrow.
16 Just finally could I ask you a few questions about
17 your third statement, paragraphs 56 and 57, that is
18 {H3A/13/18}.
19 Are you familiar with these paragraphs?
20 A. (No audible response).
21 THE CHAIRMAN: I think you know, Mr Goodrow, the words
22 highlighted in yellow we are calling "Algorithm A".
23 A. Very good.
24 (Pause)
25 MR WEST: Do you recall these paragraphs of your statement?

2

1 A. I'm just re-reading them.
2 (Pause)
3 Yes, I do.
4 Q. Mr Goodrow, the question has arisen in these proceedings
5 whether Algorithm A would have demoted results from
6 Google Product Search if they had appeared in the blue
7 links, and as we know, results from Google Product
8 Search did not appear in those links, did they, in
9 the real world?
10 Could you just answer, because otherwise
11 the transcript does not pick up the answer.
12 A. Yes. I guess — was there — I'm sorry, what was
13 the question?
14 Q. That in the real world, results from Google Product
15 Search did not appear in the blue links?
16 A. That's correct —
17 Q. (Overspeaking) In the organic results. Indeed, you
18 discussed briefly in your evidence yesterday the reasons
19 for that, you may recall. I do not think we need to go
20 to the transcript, but if I just remind you of what you
21 said, you said:
22 " ... we had a prohibition against any Google
23 property appearing in search except ... through the
24 universal system."
25 This is yesterday, {Day9MT1/136:17}.

3

1 Then you said:
2 " ... we have this file that says anything that has
3 a prefix match can't appear in the web results."
4 Do you remember that?
5 A. That's correct.
6 Q. The file that you are talking about, are you aware of
7 this, it is something called a "robot.txt" file? Does
8 that ring any bells?
9 A. I mean, I know what a robot.txt file is, but I don't
10 think that was the file that we used to keep — to keep
11 Google property results out of the web results.
12 Q. Could we just have a look at the robot.txt file to see
13 if we are talking about the same thing. It is at
14 {J2A/84/1}. If you go to {J2A/84/3} of this document —
15 THE CHAIRMAN: This is not a confidential document?
16 MR WEST: This is non-confidential, yes.
17 You can see, towards the bottom, about
18 three-quarters of the way down, the word "Disallow" and
19 then a list of "shopping" pages.
20 A. Yes, I see that.
21 Q. That, I think, is our understanding of why it is that
22 these pages were not crawled by Google's bots, but do
23 you agree with that?
24 A. I think this is a file that would prevent them from
25 being crawled, but as I recall, there was another file

4

1 that we used that prevented them from, even if they were
2 crawled, showing up in the web results and that's a file
3 that I — I don't remember editing this file, but
4 I remember editing the other one.

5 Q. But if we are considering a different version of
6 the world in which Google's product search results did
7 appear, then this would have had to be set to "allow"
8 rather than "disallow" and the other file you talk
9 about, again, would have to allow that to happen?

10 A. Yeah, first, this would have to allow them to be
11 crawled, and then the file that I recall should have
12 allowed them to then also appear.

13 Q. The question then arises of how Algorithm A would have
14 affected those results. Now, you say in your third
15 witness statement that you have been shown
16 paragraphs 350 to 351 of the Decision. Could we just
17 look at that, and I am afraid we are probably going to
18 have to briefly go into closed session to do this point.

19 The reference is {BA/2/86}.

20 PROFESSOR SMITH: While we are waiting, can I just check
21 that there is nothing significant in the fact that
22 the file we have just been shown is called "robots.txt"
23 and the other one referred to elsewhere does not have
24 the plural in it, it is still — there is no
25 significance in that, is there?

5

1 A. They're just two separate files. "Robots.txt" is just
2 a common file that any website can use to prevent
3 a crawler from crawling it, which is why it prevents
4 crawling in this case, whereas this other file is just
5 an internal file to Google which would prevent things
6 from showing up in the web results.

7 MR WEST: So we were going to {BA/2/86} and I think probably
8 we do very briefly need to go into closed session to
9 address this point.

10 THE CHAIRMAN: Right, so we are going to go into camera,
11 which means those who are not in the confidentiality
12 ring, I must ask you please to leave court and the live
13 stream will be turned off.

14 Just pause a moment, Mr West.

15 (In private)

16 (In public)

17 Questions from THE TRIBUNAL

18 THE CHAIRMAN: Mr Goodrow, when — you came into Google as
19 you explained and one of your immediate tasks, as you
20 explained, was designing Google Product Search, and
21 the impression I get is that Google Product Search, and
22 that is what you were working on, was much superior in
23 many ways to Froogle; is that fair?

24 A. Yes, that's fair.

25 THE CHAIRMAN: You talk in your — the first of — your

6

1 first witness statement, which is actually labelled your
2 second witness statement but the first one we have
3 looked at, at paragraph 29, which is on {H3A/6/8}, and
4 there in paragraph 29 you talk about Froogle.

5 Picking it up in about the fourth line:

6 "Froogle was an offer-based service which could be
7 searched but with limited comparison functionality,
8 making it hard for users to decide whether two offers
9 were for the same product. With Froogle, the user would
10 have to click through to the merchant websites for
11 the offers to try to determine if the offers were for
12 the same products, by comparing the product details,
13 photo, and perhaps serial numbers of the products as
14 they were displayed on the different merchant websites.
15 There was no way to know from the listings in Froogle
16 whether two listings were for the same product, and
17 since the listings were only for offers and not
18 products, it did not help users to decide which product
19 they wanted."

20 So it sounds as though in the way you describe it,
21 would that be a fair conclusion, that Froogle was really
22 not a very satisfactory site for comparative shopping?

23 A. I didn't think so. I mean, I think maybe when it was
24 first launched it was innovative at the moment, but by
25 the time I had joined, it wasn't as helpful as what we

7

1 were trying to create with Google Product Search.

2 THE CHAIRMAN: Yes, indeed.

3 Then if we go on in your statement to paragraph 94
4 — it is a quite different question — which is on
5 {H3A/6/24}, you say:

6 "During my time on the Google Product Search team,
7 we monitored Google Product Search's performance and
8 market share relative to other players in the online
9 shopping space."

10 You explain what you track.

11 Did you do that differently for different parts of
12 the world? I am thinking of Europe compared to the US
13 in particular, because we know that the other players
14 were rather different in Europe.

15 A. I guess, to some extent we did. I don't remember if we
16 had many comparison side by sides with some of
17 the European comparison shopping sites that we — that
18 I — that I saw yesterday. I think you've seen many of
19 the comparison shopping side by sides that we did, which
20 were, like, NexTag and Shopping.com and of course Amazon
21 and eBay. For Amazon and eBay, I think that we did
22 those in other — in Europe, so we would do those in
23 the UK and in France, but I don't remember specifically
24 any side by sides, quality side by sides with particular
25 comparison shopping engines in Europe.

8

1 I should just say, the other metrics, like, I mean,
 2 as I think you saw, there were monitoring of other
 3 metrics like overall clicks and traffic and things like
 4 that that didn't need a side by side to be created.
 5 THE CHAIRMAN: Yes.
 6 Then in your second statement that we looked at,
 7 which is actually, I think, your third, which is at
 8 {H3A/13/1}, at paragraph 24, which is on {H3A/13/9},
 9 just to be quite clear about that, you say:
 10 "It was not hard for us to sign up retailers to
 11 Google Product Search because: (i) Google Product Search
 12 was free; and (ii) we used the same feeds formats
 13 retailers were already sending to other places."
 14 So the "other places" that you refer to, that would
 15 include comparative shopping sites, presumably; is that
 16 right?
 17 A. Yes.
 18 THE CHAIRMAN: Yes, thank you. That is what I thought.
 19 That would be a dynamic feed, so if they changed
 20 the price, that would immediately feed through; is that
 21 right?
 22 A. As quickly as we could push it through, yes.
 23 THE CHAIRMAN: Yes.
 24 A. Very quickly. Within minutes usually.
 25 THE CHAIRMAN: Then going over the page {H3A/13/10}, on

9

1 paragraph 28, page 10, you say:
 2 "Users could access Google Product Search via three
 3 methods: (i) direct navigation to [the two named sites];
 4 (ii) the link at the top of Google.com results ..."
 5 That is the general search page:
 6 "... for the various properties (images, products,
 7 etc) ..."
 8 I think actually the link at the top is
 9 called "Shopping", I think, possibly, but it may have
 10 changed?
 11 A. Now it is called "Shopping". At one time it was called
 12 "Products".
 13 THE CHAIRMAN: I see. Yes, thank you.
 14 Then:
 15 "... a link in the Product Universal result."
 16 Can you help at all, which was the most popular,
 17 the least popular, in terms of volume of traffic to —
 18 A. I believe that the most popular would be through
 19 the Product Universal result, the second would have been
 20 through the link at the top, and then the least popular
 21 would have been through direct navigation to the URL,
 22 shopping.Google.com, or Google.com/products.
 23 THE CHAIRMAN: Right, so a sort of reverse order?
 24 A. Yes, I think that's right.
 25 THE CHAIRMAN: In terms of relative significance, would

10

1 the number (iii), the link, be much the most
 2 significant, or ...?
 3 A. I'm sorry, I can't remember.
 4 THE CHAIRMAN: You cannot help on that. Yes.
 5 If a user clicked onto Google Product Search through
 6 one of these three measures, it does not really matter,
 7 and did not stay long on Google Product Search, but
 8 having seen what it then went through from Google
 9 Product Search to click through to a merchant, would
 10 that count as a long click or a short click?
 11 A. Well, it just depends on how much time they spent.
 12 A long click, I can't remember the exact definition, but
 13 it would be rare. I think the definition was "short
 14 enough", a long click was short enough, so it would be
 15 rare that you would click to something and then click on
 16 from that to, like, a merchant and that would be too
 17 short to be a long click. Usually — usually if
 18 something is not a long click it's because someone
 19 clicks to it, doesn't like it and then comes back,
 20 doesn't move on.
 21 THE CHAIRMAN: I see. So that is why a short click, you do
 22 not want too many short clicks; is that right?
 23 A. That's right. Short click is an indication that
 24 wherever you clicked to was unsatisfying and you figured
 25 that out pretty quickly and immediately reverted.

11

1 THE CHAIRMAN: Therefore the click through to the merchant,
 2 which is what you want, but that is a long click because
 3 of the —
 4 A. Typically, I would expect that to have been a long
 5 click, yes, that's right. Especially as measured from
 6 the perspective of — of how we were measuring
 7 the click. So the click comes from, let's say,
 8 Google.com to Product Search and then if it goes on to
 9 a merchant, that all counts as being long, because as
 10 long as they don't go back to Google, then it's not
 11 short.
 12 THE CHAIRMAN: You count the two together?
 13 A. Yes, that's right.
 14 THE CHAIRMAN: I see.
 15 MS ROSE: You count it differently if they go back to
 16 Google?
 17 A. Well, yes, if they go back to Google, then if they go
 18 back right away, that would be a short click, if they
 19 take a while before they go back, then that could be
 20 a long click.
 21 MS ROSE: But is the fact that they go back to Google
 22 relevant to the categorisation?
 23 A. Not — I don't remember if — I don't think it's
 24 relevant to long or short click. It would be relevant
 25 to other things, like whether or not a clicked

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1 Product Search resulted in a click to a merchant, which
 2 was also something we were trying to increase.
 3 THE CHAIRMAN: I think you said in answer to one of
 4 the questions about Google Product Search and the way
 5 you designed it that you thought the product reviews you
 6 did not think are so important?
 7 A. Product reviews.
 8 THE CHAIRMAN: User reviews of a product, including user
 9 reviews.
 10 A. Well, I mean, we tried to — I think, at some point, it
 11 showed that we — we were — we were getting user
 12 reviews from the web crawl and trying to analyse them
 13 for sentiment, and then we had this — as I understand,
 14 this conflict with Amazon where they didn't want us to
 15 take that any more, and so we thought they were
 16 relatively important and we tried to include them, and
 17 more importantly, we — we were doing, at the time,
 18 which is something that I think you'll now see on
 19 Amazon, which is it will create sort of a summary of
 20 the reviews, you know, customers think this thing is
 21 well made, you know, but worth the price, or not worth
 22 the price, and that would be a way to summarise
 23 the reviews rather than have to go through each one of
 24 them.
 25 MS ROSE: So when did you start doing that?

13

1 A. Certainly by 2009 we were doing that.
 2 MS ROSE: Did you ever have a facility on the actual
 3 Google Shopping website for people to write reviews on
 4 that website?
 5 A. I don't think so. I think we may have discussed that,
 6 but I don't remember that.
 7 MS ROSE: Why — I mean, if you thought reviews were
 8 relatively important, why not have that on your own
 9 website?
 10 A. I think it was just a prioritisation question.
 11 THE CHAIRMAN: Why was it not a priority?
 12 A. Well, I think it was just about, you know, other things,
 13 like improving the search quality, maybe getting
 14 the reviews off of other places where we knew merchants
 15 — one of the — one of the points was that, for
 16 customers who visited Google Product Search and then
 17 went to a merchant site and, you know, buy that product,
 18 we felt like they were more likely to leave a review at
 19 that merchant site. So if they went to Amazon, they
 20 might leave it on Amazon, or if they went to Target or
 21 Walmart, and then so, you know, we thought that getting
 22 the reviews from those sites was probably more effective
 23 than asking them to sort of come back to Google Product
 24 Search and leave a review there.
 25 THE CHAIRMAN: Yes, thank you.

14

1 Are there any questions arising out of that?
 2 Re—examination by MR PICKFORD
 3 MR PICKFORD: Just one question, thank you.
 4 Mr Goodrow, you were asked a question by the Chair
 5 about the extent to which you differentiated between
 6 the US and Europe in terms of metrics. Could I take
 7 you, please, to the document that is at {M1/380}.
 8 So this is a "Commerce Review" and we can see that
 9 your name is on the "Contributors".
 10 Could we go, please, to {M1/380/48} in that, and
 11 please can I ask for us to zoom in on the bottom
 12 right—hand, the "Google Traffic Contribution to Amazon".
 13 Is that large enough for you — that certainly
 14 should be large enough for you to read now.
 15 So could I ask you to take a look at that figure and
 16 digest it and then I would like to ask you some
 17 questions.
 18 (Pause)
 19 A. Yeah, sure.
 20 Q. So what we see here is, it is entitled, "Google Traffic
 21 Contribution to Amazon", and then there is a table which
 22 sets out "Google.com", "ProductSearch" and then there is
 23 a division between "NA" and "ROW". What is "NA"?
 24 A. North America.
 25 Q. "ROW"?

15

1 A. Rest of world.
 2 MS ROSE: How American!
 3 A. Sorry! We should have labelled it "best part of world"!
 4 MR PICKFORD: Could you explain to me, please, what you
 5 understand by the various metrics that are showing here?
 6 What was this showing Google?
 7 A. Well, I think this is an estimate of the traffic that
 8 Google sends to Amazon broken up according to its
 9 source. So Google.com would be the Google.com website,
 10 Product Search would be probably the Product Search
 11 property, and then AdWords would be ads, wherever they
 12 appeared, that sent traffic to Amazon.
 13 Q. Do you know why, for rest of world, under
 14 Product Search, it has 0% and 0%?
 15 A. It might be because we didn't get offers from Amazon
 16 in — in those places.
 17 MR PICKFORD: Thank you.
 18 I have no further questions.
 19 MS ROSE: So, just to be clear, that is saying that in
 20 Europe in the relevant periods in 2009, no traffic was
 21 going from Google Product Search to Amazon?
 22 A. Yes, that's right. That's what this says.
 23 THE CHAIRMAN: Does that surprise you?
 24 A. It — I don't know. I know that we crawled Amazon, we
 25 sometimes got offers from Amazon and that relationship

16

1 was tricky, and so it's quite possible that they weren't
 2 sending offers for — for the locations in Europe, and
 3 it's also entirely possible that we weren't crawling
 4 their locations in Europe, because maintaining a crawler
 5 was troublesome and tricky and we may not have done it
 6 for Europe.
 7 THE CHAIRMAN: (Off microphone) Thank you very much. That
 8 concludes your evidence, Mr Goodrow. You are excused as
 9 a witness and you can leave the witness box and talk
 10 about the case.
 11 A. Thank you.
 12 (The witness withdrew)
 13 MR PICKFORD: If that is convenient, we call Greg Friedman.
 14 THE CHAIRMAN: Yes, if he is here, unless you want a break,
 15 otherwise we can go straight on.
 16 MR PICKFORD: I am in the Tribunal's hands.
 17 MR GREG FRIEDMAN (affirmed)
 18 Examination—in—chief by MR PICKFORD
 19 THE CHAIRMAN: Do sit down, Mr Friedman.
 20 MR PICKFORD: Good morning, Mr Friedman.
 21 A. Good morning.
 22 Q. You have a bundle there. I saw another bundle was just
 23 taken away from you by the court clerk. Could I just
 24 check, the bundle that you have got, that does not have
 25 any markings or anything on it, does it, because I saw

17

1 that you —
 2 A. (Off microphone — inaudible).
 3 Q. No, I mean, you brought it in, it is your witness
 4 statements.
 5 A. On the cover, you mean?
 6 Q. You were handed it just now.
 7 A. I was handed it.
 8 Q. Thank you. I just wanted to check. Thank you.
 9 Could you open that bundle up {H3A/7}, please, and
 10 at the first tab do you find a document there entitled
 11 your first witness statement?
 12 A. Can everyone hear me?
 13 Q. Yes.
 14 A. So let's see ... yes, my first witness statement.
 15 Q. Thank you.
 16 Could you go, please, to {H3A/7/56} of that
 17 document.
 18 A. Yes.
 19 Q. Is that your signature?
 20 A. It is.
 21 Q. Now, I understand that there are some corrections that
 22 you wish to make?
 23 A. Yes.
 24 Q. Can you please explain those to the Tribunal?
 25 A. Yes.

18

1 So I was given several documents to review over
 2 the last few weeks, and in going through them I realised
 3 that there were a couple of things that I wanted to
 4 correct in my witness statement.
 5 So the first one is — and I don't recall the exact,
 6 like, paragraph and everything, but basically I stated
 7 in a couple of places that there was a 60 millisecond
 8 deadline for basically shopping ads to do all of its
 9 work and return shopping ads as part of processing
 10 a user's query {H3A/7/39}, and I think there was one
 11 place where I said, if we did not complete that work
 12 within 60 milliseconds, no product ads could show. So
 13 I was looking through some of the contemporaneous
 14 documents and I was reminded that, actually,
 15 the 60 milliseconds was a service level agreement, so in
 16 other words 99% of the time we needed to meet that
 17 60 millisecond deadline or else we would be out of
 18 the service level agreement. The actual timeout where
 19 in fact no results would be shown whatsoever was
 20 80 milliseconds.
 21 So, you know, it's a very technical correction that,
 22 you know, I don't know its importance, but I wanted
 23 to — I wanted to raise it.
 24 Q. Could I take you, please, to paragraph 149 of this
 25 statement.

19

1 A. Yes.
 2 Q. Is that the paragraph that you are talking about?
 3 A. That is it. Should I read the relevant sentence,
 4 or ...?
 5 Q. No, I think — unless the Tribunal has any concerns that
 6 they are not clear what you are saying, I think that is
 7 satisfactory, thank you.
 8 PROFESSOR SMITH: The service level agreement was with
 9 the merchants?
 10 A. No, this was an internal service level agreement with
 11 basically the engineers that were in charge of
 12 the Admixer. So — so, you know — and should I go into
 13 more detail about — about the different servers and how
 14 they interacted? But it was really an internal
 15 engineering service level agreement. It's basically in
 16 order to keep latency under control in general,
 17 different, you know, teams within Google were
 18 responsible for different portions of the serving, and
 19 then there were agreements between them as to how long
 20 different processes could take.
 21 PROFESSOR SMITH: It is just, in my head, a service level
 22 agreement is usually something that relates to
 23 a contract, but this is more an internal target than
 24 an actual —
 25 A. Correct, that's right. That's exactly correct.

20

1 MR PICKFORD: Thank you, Mr Friedman.
 2 I understand there are two other corrections you
 3 wish to make?
 4 A. Yes.
 5 So, on a related note, I think there are — in
 6 paragraph 149, I see — and I think there are at least
 7 a couple of other places in my first witness statement
 8 where I refer to 300 milliseconds as the amount of time
 9 that the ad system had to complete all of its work. So,
 10 like, the first sentence of paragraph 149 says that. So
 11 in going through some of the contemporaneous documents,
 12 I was reminded that it was actually 200 milliseconds,
 13 not 300, and similarly to the 60 milliseconds, that
 14 200 milliseconds was a service level agreement, so 99%
 15 of the time we needed to meet that.
 16 Q. Could I ask you to move to the next paragraph,
 17 paragraph 150 {H3A/7/40}.
 18 A. Yes.
 19 Q. So there is also a reference there to latency limits.
 20 That is to 200 milliseconds, and then later on to
 21 300 milliseconds. Do either of those need correction in
 22 the same way?
 23 A. Yeah, let me — let me just read this to be sure.
 24 (Pause)
 25 So the final sentence in that paragraph:

21

1 "Doing all of this within 300 milliseconds or less
 2 was simply impossible."
 3 Should read:
 4 "Doing all of this within 200 milliseconds or less
 5 was simply impossible."
 6 Q. Could you go to paragraph 63, please, which is on
 7 {H3A/7/17}.
 8 Approximately eight lines down, there is a reference
 9 to 300 milliseconds.
 10 A. Yes. Let me just read it to make sure.
 11 (Pause)
 12 Yes, that's correct. This also needs to be
 13 corrected, where it says "had to occur in less than
 14 approximately 300 milliseconds", it should
 15 be "200 milliseconds".
 16 Q. Thank you.
 17 I understand there is one final correction that you
 18 wish to make to this first statement?
 19 A. Yes.
 20 So — and again, I don't recall the exact paragraph
 21 number, but there is a place where I'm describing CLAs,
 22 comparison listing ads, and I think — I believe it was
 23 the last sentence of one of the paragraphs said
 24 something along the lines of, "CLAs participated in
 25 the whole page auction similarly to how PLAs did", and

22

1 so that was my recollection at the time, you know, that
 2 I wrote the statement, but upon reviewing the documents
 3 I was reminded that in fact CLAs — so I should be
 4 specific. What I meant by "participate in the whole
 5 page auction" was that there would be a computation as
 6 to the value, the revenue that would be derived from
 7 CLAs and that would be added to the revenue that would
 8 be derived from PLAs, and that information would be
 9 entered into the whole page auction to determine whether
 10 or not to show the PLA unit or the CLA unit. So that
 11 was what my — what I meant by that statement. But I do
 12 need to correct that.
 13 Q. Perhaps if you could go to {H3A/7/52} at paragraph 201.
 14 A. Yes.
 15 Q. Is that what you are — is this the paragraph you are
 16 referring to?
 17 A. Yes, paragraph 201, that's correct.
 18 MS ROSE: But this is talking about the Remedy.
 19 A. Yes, that's correct.
 20 Should I give the Tribunal time to read
 21 the paragraph, or ...?
 22 (Pause)
 23 MR PICKFORD: Could I ask you just then to complete your
 24 explanation of the correction that you would like to
 25 make to that paragraph?

23

1 A. Yes. So, you know, as I was saying, what I meant by
 2 that final sentence in that paragraph, again, was that
 3 essentially the value that the CLA unit would provide in
 4 terms of revenue would be entered into the whole page
 5 auction to determine whether or not to show the PLA unit
 6 and/or the CLA unit or text ads or both. But upon
 7 reading the documents, that refreshed my memory that in
 8 fact the CLA unit did not — there was not a computation
 9 of the value of the entire CLA unit and that was not
 10 entered into the whole page auction, it was the PLA unit
 11 only that was entered into the whole page auction,
 12 the value for that, and whenever the PLA unit would be
 13 — would win the whole page auction and would be
 14 determined that it should show, then the CLA unit would
 15 show as long as there were three qualifying CLA ads.
 16 So another way to put that might be that the CLA
 17 unit comes along for the ride, that the PLA unit was
 18 the one that was entered into the whole page auction and
 19 if it won the auction and would show, then the CLA unit
 20 would show, if it could, and if it could meant there
 21 were three or more CLAs that qualified to show.
 22 MS ROSE: So if there is three CLAs that qualify to show —
 23 A. Yes.
 24 MS ROSE: — how do you determine which CLA shows?
 25 A. Yes, so — so there was an auction — so —

24

1 MS ROSE: That is an auction only between the CLAs?
 2 A. Correct.
 3 MS ROSE: Okay. So they are competing separately for their
 4 unit —
 5 A. That's right. That's exactly right.
 6 THE CHAIRMAN: So there were two auctions?
 7 A. Yes, that's exactly right. So — well, in fact, one
 8 could say there's three auctions, so there's an auction
 9 for the CLAs, there's an auction for the PLAs, okay, and
 10 then those are entered into the whole page auction.
 11 Now, in fact, the text ads auction also had its own
 12 auction before the whole page auction. I know it's
 13 complicated and I'm of course happy to go into whatever
 14 detail you would find useful.
 15 MR PICKFORD: Could I take you, Mr Friedman, please, to your
 16 second witness statement.
 17 A. Yes.
 18 Q. So that should be the next tab in your bundle
 19 {H3A/15/1}. Do you have that document?
 20 A. Yes.
 21 Q. Could you go, please, to {H3A/15/15}.
 22 A. Yes.
 23 Q. Is that your signature?
 24 A. It is.
 25 Q. I understand that there is one correction you wish to

25

1 make to this statement?
 2 A. Yes. I believe in this document —
 3 Q. Perhaps — it may assist, could we go to paragraph 12?
 4 A. That would be helpful, yes. That's great. {H3A/15/4}.
 5 Yes, very good. Okay. So in the statement I said:
 6 "To the best of my recollection, I was unaware of
 7 the Affiliate Program until I was made aware of it when
 8 Google was considering options for the Remedy."
 9 So, you know, that was my recollection at the time
 10 when I wrote the statement.
 11 There was some email that was provided to me in my
 12 document bundle in the last few weeks, where it said
 13 something like: I'm going to delegate some
 14 responsibility to Irwin to go over the — I think it was
 15 called the CSE aggregators something or other, and
 16 I think that was the affiliates program. That's not how
 17 I referred to it then and I don't know if at the time if
 18 someone had called it the affiliates program I would
 19 have known what that was. So, you know ... So I do want
 20 to just, you know, there was a document that indicated
 21 that I had some knowledge of the affiliates program back
 22 in 2012, I think it was, but I certainly didn't have
 23 detailed knowledge of it.
 24 Q. Thank you.
 25 Now, subject to the corrections that you have made,

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1 are these two statements the evidence that you wish to
 2 give for this trial?
 3 A. Yes, they are.
 4 Q. Do you believe that the facts stated in those statements
 5 are true?
 6 A. I do.
 7 MR PICKFORD: Thank you.
 8 If you could wait there, there will be some
 9 questions for you from Mr Jowell.
 10 Application by MR JOWELL
 11 MR JOWELL: Before I commence my cross-examination, may
 12 I make an observation to the Tribunal, which is this,
 13 that obviously this witness has quite fairly made
 14 a number of corrections and additions to his statement
 15 in examination—in-chief and it is clear from his
 16 evidence that he has been referred to additional
 17 documents in the course of preparing that additional
 18 evidence in examination—in-chief. Paragraph 3.2 of
 19 the Tribunal's practice direction requires that
 20 a witness statement should be accompanied with a list of
 21 the documents that the witness has been referred to in
 22 preparing their statement and it does seem to us that
 23 that would be rather undermined if it were possible to,
 24 through examination—in-chief, then elicit additional
 25 information from the witness in which it is clear that

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1 there have been further documents that the witness has
 2 been referred to.
 3 So we would request that we do obtain/we are
 4 provided with a list of the additional documents that
 5 the witness has been referred to for the purposes of
 6 this additional evidence provided in
 7 examination—in-chief.
 8 THE CHAIRMAN: Yes, I thought some of the statements — but
 9 I have not checked — do have a list of documents
 10 referred to. I think I saw that with one witness, but
 11 I now cannot remember which one. Mr —
 12 MS ROSE: Mr Goodrow.
 13 THE CHAIRMAN: Yes, thank you. Ms Rose reminds me it was
 14 Mr Goodrow's statement, where there is indeed —
 15 (Off microphone discussion)
 16 (Pause)
 17 MR JOWELL: Yes, we see — it is at {H3A/7/58}, we see just
 18 one document that he says he has been referred to.
 19 THE CHAIRMAN: But that is just his own statement, is it
 20 not?
 21 MS ROSE: Yes.
 22 MR JOWELL: Yes.
 23 THE CHAIRMAN: I do not understand that.
 24 MR JOWELL: No. It is a statement of —
 25 THE CHAIRMAN: The purpose of providing the statement of

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1 Mr Goodrow — is that an earlier statement? No, that is
 2 an earlier statement, perhaps, of 2016.
 3 MR JOWELL: Yes. Then I am told {H3A/15/17}, we see another
 4 single document.
 5 This was raised in correspondence.
 6 THE CHAIRMAN: Yes.
 7 MR JOWELL: But it has now, I think, got to a more serious
 8 stage.
 9 THE CHAIRMAN: Yes, whereas, by contrast, Mr Goodrow,
 10 page 34/35, has referred to quite a number of documents.
 11 Mr Pickford, is that really the case, that for
 12 the purpose of Mr Friedman preparing his statement,
 13 the only document he was referred to was his own
 14 previous statement?
 15 Submissions by MR PICKFORD
 16 MR PICKFORD: (Off microphone) Yes. My understanding is
 17 that that is true, and the reason for that is because
 18 those behind me took the view that applying the practice
 19 direction to the letter, and indeed in its spirit, they
 20 were to seek to minimise the amount that they refreshed
 21 Mr Friedman's memory, rather than to his pre-memory of
 22 events, and he was asked questions about what he
 23 remembered about the various issues and he was able to
 24 provide very comprehensive answers without referring
 25 back to any documents.

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1 In preparing for the trial, he has been given
 2 a pack — I do not know the exact mix of the pack — of
 3 documents that are relevant to the trial. It is in
 4 reading those that he has now sought to correct —
 5 THE CHAIRMAN: Yes.
 6 MR PICKFORD: — the issues that he (off microphone —
 7 inaudible) actually presented to the Tribunal.
 8 THE CHAIRMAN: Well, it is no criticism at all of
 9 Mr Friedman.
 10 Indeed, it is to your credit that you have checked
 11 carefully and corrected.
 12 But I think there should be a list of the documents
 13 he has been provided for the purpose of trial, because
 14 that is for the purpose of his evidence.
 15 Has the same practice been followed with the other
 16 witnesses we have heard, that they were given bundles
 17 before?
 18 MR PICKFORD: (Off microphone) Yes, I think we would be very
 19 happy — I mean, I think that should probably apply to
 20 all witnesses across the case, not just Google
 21 witnesses, because we do not have anything further,
 22 I think, than any of the other defendant witnesses.
 23 THE CHAIRMAN: If they have indeed been given bundles.
 24 MR PICKFORD: As an example, Mr Stables referred to
 25 referring to documents that he could not have seen at

30

1 the time of his witness statements because they include
 2 our written opening. So obviously he has also seen
 3 additional documents in preparing for the trial. So,
 4 I mean, what is sauce for the goose is sauce for
 5 the gander.
 6 THE CHAIRMAN: No, no, we understand, yes.
 7 PROFESSOR SMITH: The document referred to on page 58
 8 {H3A/7/58} of Mr Friedman's statement is an earlier
 9 statement by him. Would it have had a list of documents
 10 attached to it?
 11 MR PICKFORD: No, my understanding is that was a statement
 12 to the Commission; it is not a practice direction
 13 compliant witness statement and it is from 2016.
 14 THE CHAIRMAN: Yes, Mr West.
 15 MR WEST: (Off microphone — inaudible) list of such
 16 documents is not practicable because the individual
 17 witnesses from Foundem were also the clients in the case
 18 and they are the individuals who have had to review
 19 the disclosure as a result, so it is not a practical
 20 proposition in their case.
 21 THE CHAIRMAN: We know they have seen a large number of
 22 documents because they have been involved in helping
 23 with disclosure, so it is rather different, but for
 24 Dr Stables, that might be done.
 25

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1 Submissions by MR JOWELL
 2 MR JOWELL: Well, again, it is difficult, because he has
 3 been involved effectively in running Kelkoo for years
 4 and years and in complaining to the — you know, in
 5 the complaints to the Commission again, so he will have
 6 seen a large number of documents over the years, but
 7 which ones he has specifically seen for the purposes of
 8 this — you know, of his preparing for these proceedings
 9 is something that we could try to achieve.
 10 But the purpose of my intervention was because
 11 the actual witness statement is being amended
 12 effectively by reference to documents, and so I think
 13 that is a rather different situation to saying that
 14 every witness has to disclose all documents that they
 15 have seen in preparation for the proceedings. But
 16 Mr Stables did set out for the purposes of his witness
 17 statement a list of the documents that he had seen for
 18 the purposes of preparing that statement, and indeed
 19 that list is 10 pages long, so he complied with
 20 the practice direction.
 21 This is a rather different situation, where we have
 22 got effectively no documents apparently provided for
 23 the witness statement and then one has an addition to
 24 the evidence in examination—in-chief by reference to
 25 unknown documents and so we say those should be provided

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1 in this case.
 2 THE CHAIRMAN: Indeed.
 3 Have you seen the statement of 2016?
 4 MR JOWELL: Yes, we have, I understand.
 5 THE CHAIRMAN: Presumably that would have been based on lots
 6 of documents, no doubt.
 7 MR JOWELL: It is at {N/272}.
 8 This is effectively, I am told, an explanation of
 9 how the technology works to the Commission.
 10 MS ROSE: I mean, that statement in fact quotes from other
 11 documents. If you look, for example —
 12 THE CHAIRMAN: The pictures.
 13 MS ROSE: Yes, there are pictures. If you look at
 14 {N/272/3}, you can see there is text set out there which
 15 is taken from a feed.
 16 THE CHAIRMAN: Yes. We will just take a moment.
 17 MR PICKFORD: Sir, might I just reply to the application?
 18 THE CHAIRMAN: Yes.
 19 Further submissions by MR PICKFORD
 20 MR PICKFORD: In my submission, there is a certain element,
 21 to say the least, of pot/kettle/black here. There is no
 22 suggestion made, properly, by Mr Jowell, that our
 23 witness statement is not compliant. It was produced in
 24 the way described and it was produced without
 25 the assistance of further documents. It now turns out,

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1 contrary to the impression initially given by my learned
 2 friend, that all of the witnesses for this trial,
 3 certainly on the claimant side, have seen a very large
 4 number of further documents, they say so many they
 5 cannot possibly tell us how many further documents they
 6 have seen since preparing their witness evidence, but it
 7 is said that Google alone should have to prepare
 8 a special schedule.
 9 Now, we are prepared, obviously, to do whatever
 10 the Tribunal orders, but we say that what we are ordered
 11 to do also the Claimants should be ordered to do. That
 12 is just a matter of basic fairness.
 13 THE CHAIRMAN: I think what we will do is we take our break
 14 now and just consider what to do about that.
 15 Mr Friedman, you have just attested to your witness
 16 statements and made these corrections. We do take
 17 a mid-morning break for everyone's convenience,
 18 particularly the transcribers. We will do that now and
 19 come back at 10 to.
 20 (11.39 am)
 21 (A short break)
 22 (11.51 am)
 23 THE CHAIRMAN: Mr Friedman, could I just ask you to look at
 24 your first statement at paragraph 119, which is
 25 {H3A/7/32}, but you may prefer the hard copy. It is

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1 page 32.
 2 You see, at paragraph 119, you say:
 3 "Google explored a number of different solutions.
 4 To the best of my recollection ... "
 5 You set out (a) to (f).
 6 A. Yes.
 7 THE CHAIRMAN: Just so I understand it, this — you were
 8 doing that entirely from memory, you did not go and
 9 check against any of the documents in your file or
 10 anything? You just racked your brains and set them out,
 11 or how did you do it?
 12 A. Yes, I believe I did do it entirely from memory. It
 13 was, you know, something that I thought a lot about at
 14 the time. Now, of course, it's not a fully extensive
 15 list, this was — this was sort of the most important,
 16 you know, options that we considered as best as I could
 17 recollect.
 18 THE CHAIRMAN: Right. So that is fine, you did not ...
 19 I just wanted to understand that. Yes, thank you.
 20 I think, Mr Pickford, the position is this. As far
 21 as the evidence—in-chief, which is normally the witness
 22 statement, Mr Friedman has wanted to make, and has made,
 23 a couple of corrections, some of which, in terms of
 24 the milliseconds, may not be significant, the one about
 25 the auction is potentially more significant, and if he

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1 had had the documents he has now had, that is what his
 2 statement would have read, as he has now corrected it.
 3 So it would have been in that form as now corrected. So
 4 we do think it is right that the documents concerning
 5 the auction which are the basis of the amended
 6 statement, effectively, should be identified to
 7 the Claimants.
 8 We do not think anything beyond that is required.
 9 We do not think anything should be required of
 10 the Claimants, because the witnesses, they have not made
 11 such corrections, and indeed Dr Stables did annex a very
 12 extensive list of documents.
 13 That is how we shall resolve this.
 14 MR PICKFORD: That is understood. Thank you, sir.
 15 Cross-examination by MR JOWELL
 16 MR JOWELL: Thank you.
 17 Mr Friedman, you joined Google in January 2006, am
 18 I right?
 19 A. Yes.
 20 Q. You initially worked as part of the ads quality team?
 21 A. Correct.
 22 Q. In that capacity, you were involved in the launch and
 23 development of Product Listing Ads, right?
 24 A. Not initially. I joined the Product Listing Ads team
 25 in, I believe it was late 2008.

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1 Q. You say that, in 2012, you joined the Shopping Search
 2 Quality team?
 3 A. Yes.
 4 Q. At that time, in Europe at least, there was still
 5 the Product Universal that used Universal Search;
 6 correct?
 7 A. Yes, I believe so.
 8 Q. You created the — you or the team created the Shopping
 9 Unit which, in crude terms, brought together Product
 10 Listing Ads with the Product Universal?
 11 A. That is not how I would characterise it, no.
 12 Q. Well, it was — it replaced the Product Universal —
 13 A. Yes.
 14 Q. — with a box with Product Listing Ads in it?
 15 A. You mean —
 16 Q. Just in broad terms.
 17 A. Yeah, in broad terms, my experience and view is that we
 18 had a Product Listing Ads unit that we had been working
 19 on and we decided to basically make some changes to
 20 the Unit and remove the Product Universal Unit.
 21 Q. Okay.
 22 I just want to understand the main differences of
 23 before and after. So —
 24 A. Yes.
 25 Q. — one of the main differences was that under

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1 the Product Universal, as we discussed with Mr Goodrow,
 2 the merchants provided product feeds, but the merchants
 3 did not pay to receive clicks; correct?
 4 A. That's my understanding.
 5 Q. But in 2013, when you had the Shopping Unit, obviously
 6 the merchants then paid to receive clicks?
 7 A. Correct.
 8 Q. Under the Shopping Unit, there was — the amount that
 9 the merchants paid was determined by an auction?
 10 A. Correct.
 11 Q. Whether the merchants appeared in the box, in other
 12 words how prominent they were in the box, which position
 13 they appeared, depended in large part — not only, but
 14 in large part, on how much they bid in that auction?
 15 A. Yes, that was an important factor in — in the ranking
 16 score, the auction score. The bid was an important
 17 factor.
 18 Q. Okay, so that is one big difference, and I just want to
 19 turn to another one, which is that you will probably be
 20 aware that under the Product Universal, there were
 21 I think three formats, the two main ones being
 22 the catalogue format and the other being the offer
 23 format. Are you aware of that?
 24 A. So I do have a vague recollection of that. I never
 25 really had a lot of familiarity with the details of

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1 Product Universal, but — but what you — the statement
 2 you just said sounds right.
 3 Q. The catalogue version went through to the standalone
 4 Product Search website?
 5 A. I believe that's correct.
 6 Q. Right.
 7 But under the — and therefore there was, if you
 8 like, an interstitial page because — in that case?
 9 A. Well, interstitial with regard to eventually getting to
 10 a merchant, is that what ...?
 11 Q. Yes.
 12 A. Yes.
 13 Q. Under the Shopping Unit that you introduced, it all went
 14 straight direct to the merchants?
 15 A. Well, yes, all of the ads within that unit, the click
 16 targets went straight to the merchant. There were —
 17 Q. There was the header?
 18 A. Yeah, right, there was a header, which — which would
 19 link to the Shopping Property, and I also believe, at
 20 the end of the carousel, if a user were to scroll
 21 through the ads and get to the end, it — there was
 22 something that said, you know, "see more products", or
 23 something like that, and that would also take users to
 24 the Shopping Property.
 25 Q. But the vast majority of users clicked — they looked at

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1 the comparison products and then they clicked through to
 2 the merchant direct from the Unit; correct?
 3 A. I don't remember what the click-through rate was on —
 4 on these — on the different aspects of the — of
 5 the Unit specifically. I mean, I think it is correct to
 6 say that the majority of clicks, and possibly the vast
 7 majority, but I don't recall the exact numbers, were on
 8 the ads themselves and went through to merchants.
 9 Q. Thank you.
 10 I just want to confirm the process by which
 11 the results were obtained for that Shopping Unit.
 12 A. Okay.
 13 Q. So, first of all, as I think we have already
 14 established, those listings that populated the Shopping
 15 Unit were obtained ultimately from product feeds that
 16 were supplied by merchants; correct?
 17 A. Correct.
 18 Q. If we could go just to a footnote of your witness
 19 statement, it is footnote 16, at {H3A/7/25}, and you see
 20 that your footnote 16:
 21 "Whilst I was not closely involved with the process
 22 for generating product feeds, to the best of my
 23 recollection the feeds for PLAs were initially the same
 24 or closely related to feeds that were used for organic
 25 Shopping results prior to the introduction of PLAs."

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1 So just to be clear, by "organic Shopping results",
 2 you mean shopping results in the Product Universal?
 3 A. Yes, and any other place that those feeds were used.
 4 For example, I think they were used for the Shopping
 5 Property, I believe.
 6 Q. Right, okay.
 7 So you took — essentially you are saying you took
 8 the same or similar product feeds that had previously
 9 been used, effectively?
 10 A. I think so. You know, again, I don't have detailed
 11 familiarity of — of that. I think there were some
 12 modifications that were necessary to make it work with
 13 the ad system, but I really don't have much knowledge on
 14 that.
 15 Q. Okay.
 16 If we go to paragraph 44 of your statement, which is
 17 at {H3A/7/12} of this document, you can see that you
 18 explain that you had to — in the first sentence there
 19 would be:
 20 " ... an algorithmic error check ... by Google to
 21 determine whether there were errors in a merchant's
 22 uploaded feed, with manual review carried out in certain
 23 cases if errors were flagged."
 24 So you effectively — you say you then placed the
 25 checked or corrected information into a structured data

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1 called the Commerce Data Store of "CDS".
 2 THE CHAIRMAN: This —
 3 MR JOWELL: Oh, forgive me. Have I gone into — I am so
 4 sorry.
 5 MR PICKFORD: Yes.
 6 MR JOWELL: I am so sorry. Sorry, I was reading from my
 7 notes not from ...
 8 THE CHAIRMAN: I think those two sentences are confidential.
 9 MR JOWELL: Yes, forgive me.
 10 If you could just read to yourself those two
 11 sentences.
 12 THE CHAIRMAN: Yes, and we will just strike that last remark
 13 from the transcript.
 14 A. I'm sorry, you want me to ...
 15 MR JOWELL: If you just read those two —
 16 A. The first two sentences —
 17 Q. Yes, the —
 18 A. — of paragraph 44?
 19 Q. Yes, indeed.
 20 THE CHAIRMAN: The highlighting in yellow means that it is
 21 confidential, so we do not read it out.
 22 A. Very good, okay. Give me just a moment.
 23 MR JOWELL: So —
 24 A. Yes, I've read it.
 25 Q. You then used various — we see in paragraph 45, you

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1 used various processes to classify and catalogue
 2 products into different categories?
 3 A. Yes.
 4 Q. So, for example, you would say these go into books or
 5 electronics or clothing, yes?
 6 A. Correct.
 7 Q. Then it is lots and lots of subcategories?
 8 A. That's correct.
 9 Q. Then the next process — the next part of the process
 10 would be you would turn it into a read-only online index
 11 of all the offers and products?
 12 A. Yes.
 13 Q. If we go over the page we can see that in paragraph 46
 14 {H3A/7/13}.
 15 Then, following the auction, Google would then rank
 16 the various merchant offers and products and then serve
 17 those up in the display within the Shopping Unit;
 18 correct?
 19 A. Well, sorry, you said "following the auction", as in
 20 after the auction?
 21 Q. Yes, yes.
 22 A. This is actually prior to the auction in fact.
 23 Q. Yes, this — the indexing is prior. Then you have
 24 the auction; is that right?
 25 A. Well, so — so the indexing is a separate step that is

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1 disconnected from any user queries on Google, right?
 2 Q. Okay.
 3 A. When a user comes to Google and does a query and if it's
 4 a shopping query, then one of the — well, there's many
 5 steps, right? But before the auction, then there would
 6 be a query to this read-only database to get a set of
 7 candidate products and offers, and there are a variety
 8 of processes, you know, that happened, and then, having
 9 winnowed down a set of the candidate offers, then
 10 the auction would occur.
 11 Q. Then, following the auction, you would then display —
 12 you would then rank the various merchant offers?
 13 A. Well, the auction itself was the process by which these
 14 were ranked.
 15 Q. Right.
 16 Then, following that, you would then display those
 17 within the shopping unit?
 18 A. Yes, we would construct a candidate Shopping Unit where
 19 the — you know, the order of the — of the offers was
 20 determined, and then enter it into the whole page
 21 auction, and if the Product Ads Unit of the shopping
 22 unit was — would win the whole page auction, we would
 23 say, in other words it was determined that it should
 24 show, then those would be displayed.
 25 Q. Okay.

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1 Then that display enables users to browse that
 2 selection of products and then choose which one to click
 3 on —
 4 A. Yes.
 5 Q. — through to a merchant?
 6 A. Yes.
 7 Q. That ability — clearly, that ability to see a range of
 8 products and choose which one to buy based on a group of
 9 product results like that, that was very valuable to
 10 users, I take it?
 11 A. Yes.
 12 Q. Now, you say in paragraph 52, if we just — I think it
 13 is over the page {H3A/7/14}, you say that you supported
 14 the decision to limit participation in the Shopping Unit
 15 for merchants only?
 16 A. Yes.
 17 Q. Do you recall that evidence? Because you suggested
 18 interstitial or intermediary sites tend to lead to
 19 a delay?
 20 A. Yes. Should I read paragraph 52?
 21 Q. Yes, if you wish to.
 22 A. Okay, just one moment.
 23 (Pause)
 24 Yes, okay.
 25 Q. Now, could we go to {M1/175}.

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1 You see here an email from Ashutosh Shukla, who was
 2 one of the engineers from the Product Search team who
 3 led the integration of the Product OneBox into
 4 Universal Search. I do not know if you knew him?
 5 A. No.
 6 Q. You did not.
 7 A. Or at least I don't — I don't recall.
 8 Q. Okay.
 9 You see what he says in his email. He says:
 10 "Something to keep in mind — in product search we
 11 believe that it is a better user experience to show
 12 catalogues in the onebox as opposed to merchant offer."
 13 A. Mm—hm.
 14 Q. Now, we heard from Mr Goodrow, yesterday, that he also
 15 subscribed to that view. Were you aware of that
 16 perception within Product Search, that from the user
 17 perspective, it was typically better to route them to
 18 the interstitial page of Google Shopping Property rather
 19 than direct to the merchant?
 20 A. I think I remember, but this is — you know, I'm not
 21 saying this with high confidence, but I think I remember
 22 one particular engineer saying something along these
 23 lines to me, that — that he — that he thought that it
 24 was better to show the catalogue entries in ... yes.
 25 But that was just one engineer that I recall, yeah.

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1 Q. Do you know someone called Sameer Samat, who was —
 2 A. Yes.
 3 Q. Would it have been him?
 4 A. No.
 5 Q. No. Well, let me show you something from Sameer Samat.
 6 {M1/244}.
 7 Now, Sameer Samat was a — he was a Director of
 8 Product Management, was he?
 9 A. Yes.
 10 Q. He was quite a senior individual?
 11 A. He was reasonably senior, yes.
 12 Q. He is writing to Marissa Mayer here. She was a senior
 13 individual, was she not?
 14 A. She was indisputably senior.
 15 Q. Yes. She actually led the development of
 16 Universal Search, did she not?
 17 A. I actually don't know.
 18 Q. You do not know, okay.
 19 A. I have no reason to disbelieve that, but, yeah, I don't
 20 have personal knowledge.
 21 Q. You see what he says:
 22 "As a heads—up, the product search team is taking
 23 a successful experiment to change the product search
 24 onebox completed early last quarter, to search quality
 25 launch review with Amit and Udi this week. Johanna had

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1 approved the experiment late last year, but I was not
 2 sure if you were aware of it.
 3 "Delinking refers to the offers below no longer
 4 being links to merchant sites off Google.com. (see
 5 below).
 6 "The hypothesis was: Clicking on individual offers
 7 and making purchases based on just 3 results shown in
 8 the onebox was felt to be a poor experience. Instead,
 9 bringing users through to the product search site for
 10 a full comparison experience was likely to increase
 11 conversion."
 12 He says:
 13 "The experiment had universally positive whole page
 14 metrics. Specifically, long clicks increased
 15 significantly and short clicks declined significantly."
 16 Were you aware of these de—linking experiments?
 17 A. I don't believe so. I mean, not — not that I recall,
 18 no.
 19 Q. So you are not aware that there were actual experiments
 20 conducted that confirmed that — or seemed to confirm
 21 that people preferred links to a full price comparison
 22 website?
 23 A. To the best of my recollection, I was not aware of this.
 24 Q. Okay.
 25 A. But this was a long time ago.

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1 Q. Sure. I understand.
 2 So you were not particularly aware that there was an
 3 assessment of the Product Search team that interstitial
 4 pages improved user experience?
 5 A. Well, the — as I mentioned, the only thing that
 6 I recall in that regard is this — this one engineer
 7 saying something to me about that.
 8 Q. You recall at least one engineer saying that?
 9 A. One engineer is what I recall.
 10 Q. But you were not aware that that view was based on
 11 experimental evidence?
 12 A. I don't remember.
 13 Q. Okay.
 14 Now, you say in your witness statement at
 15 paragraph 63, that a very fast display was viewed as
 16 important within Google for the display of ads within
 17 the SERP {H3A/7/17}. I think you mention there a figure
 18 of 300 milliseconds?
 19 A. Yes.
 20 Q. I think you have now just corrected that to
 21 200 milliseconds?
 22 A. Correct.
 23 Q. But surely, for many customers, if you are buying
 24 a product, what matters is that you get the best
 25 information, it is not if it is 200 milliseconds or

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1 400 milliseconds. Does that really matter?
 2 A. Well, I — it was — it was Google's view and this was,
 3 you know, enforced with strong policies and things like
 4 that, that it really does matter a lot, and so there
 5 were, you know, pretty strict and pretty tight latency
 6 controls, which I remember my teams, my engineering team
 7 spending a lot of time having to fight that, having —
 8 sorry, "fight" is perhaps not the right word, having to
 9 work hard to make sure everything could be done within
 10 those constraints, within those latency constraints.
 11 Q. I understand that, but from your own personal
 12 experience, I mean, if you are going on a site like,
 13 say, Expedia, for example, to buy an airline ticket, it
 14 can take a couple of seconds sometimes, in my
 15 experience, for the results to come up.
 16 A. Right.
 17 Q. That is clearly not prohibitive, is it?
 18 A. Well, I think it depends on the — you know, the first
 19 thing I should say is, I'm not an expert in this area,
 20 but if you're just asking my personal opinion —
 21 Q. Yes.
 22 A. — you know, I think it does depend on the nature of
 23 the task, right, how much — how much time you're
 24 willing to wait.
 25 Q. Yes, and if it is a product where you are spending

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1 money, one would assume that actually a bit of extra
 2 time is not a problem really?
 3 A. Well, I think it depends, and I think the other thing
 4 that I want to bring up is the — well, it said
 5 300 milliseconds but corrected to 200 milliseconds,
 6 right? I will point out, that was for the ads system,
 7 right? So there were different latency constraints and
 8 things like that, which I actually don't have detailed
 9 knowledge of, for the search system, for the organic
 10 system, right?
 11 Q. I mean, these days, when you have AI, for example, it is
 12 very common, where you are doing a deep dive, to wait
 13 several second sometimes, right, for Google Gemini?
 14 A. Yes, I have noticed that personally, when I use AI,
 15 sometimes it takes a while.
 16 Q. Now, after 2012, you say that Google created a single
 17 shopping organisation that combined organic shopping and
 18 the PLA team, and we have discussed how that operated on
 19 the page. But I want to just understand the reasons for
 20 the unification.
 21 If we go to {H3A/7/24}, paragraph 86, you give
 22 a number of reasons for the unification?
 23 A. Mm—hm.
 24 Q. If we go to — over the page to (d) {H3A/7/25}, you say:
 25 "The above rationales behind the unification can be

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1 seen as being primarily related to (1) improving value
 2 to users, (2) improving the quality of Shopping results
 3 ... and (3) expected improvement to merchant value and
 4 Google's revenue as a result of unification."
 5 I just want to focus on that last one, "Google's
 6 revenue". I mean, Google makes most of its revenue from
 7 advertising; correct?
 8 A. Yes.
 9 Q. Over the years, the amount of revenue that Google has
 10 made from advertising has grown to extraordinary
 11 extents; correct?
 12 A. Yes, it's grown quite a bit.
 13 Q. I think, according to Gemini, I am told that, in 2025,
 14 Google Search generated over 225 billion in revenue.
 15 That is just Google Search advertising revenue. That is
 16 about right, is it not?
 17 A. I mean, I don't know, but it's not impossible.
 18 Q. So I just want to ask you something about the culture of
 19 Google, because I just want to understand how it has
 20 managed to develop into a company that makes advertising
 21 revenue on such an incredible scale.
 22 If we go to {M3/1}.
 23 This is a message from Jeff Huber, dated
 24 27 August 2004, so it is a bit before your time, but
 25 I just want to show it to you and then I want to ask you

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1 some general questions. We see who it is addressed to.
 2 It is addressed to Eric Schmidt, Jonathan Rosenberg,
 3 Marissa Mayer, Susan Wojcicki, Larry Page and
 4 Sergey Brin, so this is basically everyone and everyone
 5 at the top of Google, right?
 6 A. Well, certainly there are some important names there.
 7 I can't say this is everyone.
 8 Q. Okay.
 9 A. In fact — actually, I probably can say it's not
 10 everyone, but, yeah, this is obviously a group of
 11 important people.
 12 Q. Very senior executives?
 13 A. Yes.
 14 Q. You see it says — if we go to the first heading, it
 15 says:
 16 "Google's unfair advantages."
 17 It says:
 18 "The foundation for our strategy should be built on
 19 Google's 'unfair advantages', which are our unique
 20 assets and capabilities that are very hard for our
 21 competitors ... to replicate quickly or easily, due to
 22 technology, structure/culture, and/or network—effect
 23 barriers.
 24 "We believe our 'unfair advantages' include:
 25 "1. Scale and leverage from our technology

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1 architecture."
 2 Over the page {M3/1/2}, you can see:
 3 "Lots and lots of Traffic."
 4 You see the third bullet, it says:
 5 "We have the power to make our break any web—based
 6 business ..."
 7 That is quite a strong statement, is it not,
 8 Mr Friedman?
 9 A. Let me just make sure. I'm going to read that bullet
 10 point in full.
 11 (Pause)
 12 I mean, yes, that is a statement — that's quite
 13 a statement.
 14 Q. If we go to {M3/1/3}, can you see at point 5, you see
 15 there is already a priority there on really solving
 16 universal or personal search, and if you see, on
 17 the bottom — page 3, at the bottom right, we see
 18 "... strategic ... themes", "... strategic and tactical
 19 themes."
 20 Do you see, just above the bullet, it says:
 21 "Strategic THEMES ..."
 22 Then it says —
 23 A. I'm sorry.
 24 Q. Do you see just above the list?
 25 A. Well, can I ask the operator to increase

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1 the magnification?
 2 Q. Yes, let us do that.
 3 A. My apologies.
 4 Okay, great.
 5 Q. So you see at the bottom it says:
 6 "Strategic THEMES ..."
 7 Then it says in square brackets in this meeting
 8 note, it says:
 9 "... [though should be re—written to express
 10 customer benefits]."
 11 A. Yes.
 12 Q. Then it says:
 13 "We need to win on Search and Advertising."
 14 And so on.
 15 If you go over the page {M3/1/4}:
 16 "Tactical THEMES."
 17 Number 2, it says:
 18 "We want a capitalist organization model."
 19 But then, if you look a little bit down, we see:
 20 "Input on the themes."
 21 Then there are some comments, point number 2, "We
 22 want a capitalist organization model", it says:
 23 "... generated spirited discussion.
 24 "Capitalist model is interesting, but it means
 25 resources are pulled away from search (?)."

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1 Then it says:
 2 "Shouldn't use the term 'capitalism'; it's a loaded
 3 word."
 4 If we {M3/1/6}, please, you can see under, "Strategy
 5 for our core business: search & ads":
 6 "A consistently supported theme throughout
 7 the discussion to date is that Search & Ads are our core
 8 business, and they are the foundation for our future
 9 success."
 10 Do you see that?
 11 A. Okay.
 12 Q. So I just want to ask you off the back of that just
 13 a few questions.
 14 Do you agree that when you were at Google, a message
 15 that you consistently received from management was that
 16 increasing advertising revenue was key to Google's
 17 commercial success?
 18 A. Well, I was in the ads organisation, so that was — that
 19 message, or ones along those lines, were conveyed.
 20 Q. Yes.
 21 Could I ask you something a little bit less cut and
 22 dried, which is that one notices in this note
 23 a sensitivity about how the company will be perceived.
 24 So, for example, I showed you that the note says, well,
 25 we want to win on search and advertising, then it says,

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1 but we need to rewrite this to express customer
2 benefits, and then we saw that somebody says, we want to
3 be capitalists, but then somebody says, we should not
4 use that term, it is a loaded term.

5 Would it be fair to say that this is — Google is
6 a company that cares a good deal about its image?

7 A. Well —

8 Q. It wants to be perceived as helping users, but actually,
9 underlying it, it is really driven by revenue, is it
10 not?

11 A. So I really cannot speak to what any of these
12 conversations, this meeting or any of that — you know,
13 I wasn't — I wasn't even at the company at that point.

14 Q. I am just asking you about the culture.

15 A. Okay. So what I will say is that my — my general
16 experience working at Google for 18 years is that people
17 really did care about doing the right thing and about
18 doing right by users and customers and all
19 the stakeholders.

20 Now, of course revenue was important, of course
21 advertising was important; that was the business model,
22 right? So, you know, one of the things that we did in
23 the ads organisation was to do our best to balance,
24 okay, how do we make revenue and still provide high
25 quality results and still, you know, do the right thing,

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1 right? Do no evil, right? Or don't be evil was the —
2 Q. Was that really — was it not really just about image?
3 Really there is just a relentless focus on the bottom
4 line, is there not?

5 A. That was not my experience.

6 Q. Okay.

7 A. Not at all, in fact. There were many decisions that
8 were made that resulted in less revenue because we felt
9 it was the right thing to do for various reasons.

10 MS ROSE: Can you give an example?

11 A. So, there — let's see. Well, you know, in the ads
12 organisation we would look at many different launch
13 candidates, right? So different potential changes to
14 the product which could result in, you know, a variety
15 of changes to user behaviour, to revenue, etc. So, in
16 making those decisions, there were always, you know,
17 okay, well, this is making a certain amount of money, it
18 has these user characteristics in terms of various
19 metrics that indicate how much value users were
20 deriving, etc, and it was often the case that revenue —
21 revenue was always important, right, but it was often
22 the case that revenue would be trumped by — if we felt
23 it was a particularly bad user experience.

24 Now, I can — I can think for a bit about very
25 specific examples, if — if you like. I don't have one

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1 top of mind, but I'm more than happy to think about
2 that.

3 MS ROSE: But presumably a bad user experience might have
4 adverse implications on revenue in the longer term?

5 A. Yes, that's right, it would have adverse —

6 MS ROSE: So the two may not be in opposition?

7 A. That's correct, and in fact that is behind — the logic
8 behind this notion of long-term value which — I don't
9 know how much that has come up in this trial, is that —
10 is that the interests of users and Google should be
11 aligned with — with — if we're really, you know,
12 computing long-term value correctly.

13 MS ROSE: But does that logic still hold once Google has
14 crushed all the other search — general search sites,
15 like Bing and Yahoo!, so that people do not really have
16 a choice?

17 A. Well, I think the — you know, this isn't an area of
18 expertise of mine, of course, but I guess what I would
19 say is competition is good for — you know, for users,
20 right? It generally leads to better innovation, it
21 generally leads to users having choice. So I don't —
22 so all other things being equal, competition is good,
23 absolutely.

24 Now, I think, you know, in the way that we computed
25 long-term value, we tried to see, okay, were, for

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1 example, users coming back to Google more often as
2 a result of certain changes that we made, right? Or —
3 and things like click durations, etc, right, which I'm
4 sure you've gotten into in this trial, right? So
5 I think there were — my assessment would be that there
6 are several aspects of long-term value that are less
7 dependent on competition and more on what is the users'
8 experience on Google.

9 MS ROSE: Does the advent of different AIs, like ChatGPT and
10 Claude and so on, change the competitive landscape in
11 relation to that aspect for Google?

12 A. In relation to which aspect?

13 MS ROSE: To general search.

14 A. I would think so, yes, absolutely. You know, I no
15 longer work at Google. I'm not sure if this is —
16 you know, it's been two and a half years.

17 MS ROSE: I am just thinking about — I am sure you are
18 familiar with the term "enshittification"?

19 A. I'm all too familiar with the term and the phenomenon,
20 yes.

21 MS ROSE: I am wondering if that is something that you feel
22 like a company that acquires a near monopolistic status
23 is at risk of in pursuit of —

24 A. I think — I think they're at risk of that, yes.
25 I mean, it doesn't happen automatically and necessarily,

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1 but it would be a risk factor.
 2 MR JOWELL: Could I show you a document at {M1/513}.
 3 This is a "Product Search", "Initial Analysis on
 4 Cannibalisation", from January 11, 2008.
 5 If we go to {M1/513/2}, you can see it is exploring
 6 the "possible cannibalistic impacts on product search".
 7 Perhaps if we just look at page 2 and then we will
 8 go to page 3.
 9 A. Sorry, you want me to look at the slide, or ...?
 10 Q. Yes, have a quick read of this, yes.
 11 A. Okay, give me a moment then.
 12 (Pause)
 13 Okay.
 14 Q. So if we go — you can see over on {M1/513/3} you can
 15 see the diagrammatic illustration of —
 16 A. Okay —
 17 Q. You would have been aware, were you, of this phenomenon
 18 of cannibalisation, of people effectively, instead of
 19 them clicking on the Product Listing Ads on the page,
 20 they would click on the Product Universal and that would
 21 not lead to any — you would therefore lose revenue?
 22 A. Well, you're talking about that — that specific
 23 instance of cannibalisation —
 24 Q. Yes.
 25 A. — or cannibalisation in general?

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1 Q. No, that specific — that phenomenon. Before you move
 2 to the Shopping Unit —
 3 A. Yes.
 4 Q. — there was this problem of cannibalisation. Were you
 5 aware of that?
 6 A. I'm sure we discussed it. I don't remember a lot of
 7 the details.
 8 Q. Do you recall that one of the advantages of the new
 9 system, the new Shopping Unit, was that it got rid of
 10 this cannibalisation?
 11 A. I don't actually remember us having a lot of discussion
 12 about that. It's quite possible we did.
 13 Q. Okay.
 14 A. I just don't — I just don't remember. You know, that
 15 wasn't the focus of our discussions about, you know,
 16 what — what was the rationale behind — you're talking
 17 about in terms of the unification in 2012?
 18 Q. Yes.
 19 A. It's a very reasonable assumption, that we had those
 20 discussions. I don't recall.
 21 Q. Okay.
 22 Let me show you another document from around
 23 the time of the unification.
 24 A. Yeah.
 25 Q. {M1/414}. If we go to the last email in this

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1 {M1/414/4}, it is over the page, I think — page 3,
 2 forgive me {M1/414/3}. There we are.
 3 You can see an email from Sameer Samat —
 4 A. Yes.
 5 Q. — from October 29, 2012.
 6 A. Yes.
 7 Q. He writes:
 8 "When Shopping embarked upon the transition to
 9 a commercial model we had a conviction about
 10 the direction but we couldn't be exactly sure how it was
 11 going to turn out. But, here we are!"
 12 If we can go down a bit to the next page {M1/414/4},
 13 you see "#2":
 14 "The initial user quality hit is less than
 15 expected."
 16 So it seems that you were expecting users initially
 17 not to like the new format; is that right?
 18 A. Well, I think there's a general notion at — at Google
 19 that — you know, that the quality of organic results
 20 tends to be, you know, better than the quality of ads
 21 results. I mean, there's a tremendous amount of effort
 22 that goes into the quality of ads results, but because
 23 you're factoring in quality components solely in
 24 the organic sense, right, there's sort of more theoretic
 25 opportunity for — for a pure quality ranking.

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1 Q. So there was concern that quality was going to go down?
 2 A. Apparently so.
 3 Q. Yes.
 4 If we go to {M1/414/3} — forgive me, the next page
 5 to the one we were on. I meant {M1/414/5}. Forgive me.
 6 You see "#3", the other side of the coin:
 7 "Shopping is now a \$770M+ revenue run-rate business,
 8 with the \$1B mark in sight for Q4. Shopping is becoming
 9 a large new business at Google and there is a lot of
 10 room left to grow."
 11 If you go up to page — if we can go up to
 12 {M1/414/2}, you can see a message from Sundar Pichai
 13 himself, and he says:
 14 "The revenue growth chart is stunning especially
 15 the inflection point."
 16 So, for the people who were in charge, like
 17 Mr Pichai, in Google, it is very clear that what is
 18 motivating this change is overwhelmingly the increase in
 19 revenue, was it not?
 20 A. I don't see how you would draw that conclusion from
 21 this. I think he is impressed with the revenue gains,
 22 and I think that's important, right? I wouldn't say —
 23 you know, it doesn't seem like a reasonable conclusion
 24 to say "overwhelmingly" that is the only thing he cares
 25 about, or something like that.

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1 Q. Well, clearly, we saw, you acknowledged, that there was
 2 likely to have been a decline in user experience, but we
 3 see a massive increase in revenue. It does seem as
 4 though it was the bottom line that was driving this
 5 change; correct?
 6 A. I mean, I can't say to factors that went into
 7 the decision other than what, you know, people were
 8 discussing and revenue was one of the factors.
 9 Q. Is it possible that one of the reasons that you did not
 10 like — that people with interstitial pages were not
 11 allowed to bid at that stage was not because Google did
 12 not like interstitial pages but just because Google did
 13 not want its competitors featuring in the Shopping Unit?
 14 A. So I do not remember anyone saying anything like that.
 15 Q. Okay.
 16 Do you remember any discussion about whether other
 17 CSSs should be allowed to bid?
 18 A. Yes. Yes, and I remember that there was a lot of
 19 concern about the quality — if we were to —
 20 specifically if we were to relax the requirement that
 21 the landing page — okay, so this is in the context of
 22 ads, which is — you know, was the organisation I was
 23 in. If we were to relax the requirement that product
 24 ads — product ads had a requirement that you must be
 25 able to purchase the product on the same website as —

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1 as the landing page, right? So a shorthand for that
 2 would be, you know, product ads were — you had to be
 3 a merchant, you had to sell products to place product
 4 ads, right? So there was a lot of discussion about how
 5 much of a quality hit it would be to relax that
 6 requirement.
 7 Q. "A quality hit". Well, okay, but we have seen that
 8 there were experiments that were conducted that
 9 indicated that people actually — users actually
 10 preferred to have a full comparison shopping experience
 11 before buying products. That does not seem to coincide
 12 with what Mr Goodrow and the rest of the Quality Search
 13 Team had all decided only quite recently previously.
 14 A. I mean, I guess what I would say is, you know, certainly
 15 there were different parts of the organisation and
 16 different people that are going to have different views.
 17 There's also different time periods, right? So, like,
 18 you know, some of the things you're showing me are from,
 19 whatever, 2004, 2005, 2006, etc, right? So, of course,
 20 my own experience and knowledge is going to be
 21 restricted to the — you know, the organisation I was
 22 in, which was the ads organisation, and the time that
 23 I was in it, right? But —
 24 Q. Were you aware in the ads organisation of a real concern
 25 of a threat from what we will call aggregators, vertical

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1 search specialists?
 2 A. I don't think I remember too much of a concern in that
 3 regard. Our — what I remember as our biggest concern
 4 was Amazon.
 5 Q. Okay, but you joined in 2012, did you not?
 6 A. No.
 7 Q. Oh, you joined search quality in 2012, you were in ads
 8 before that?
 9 A. So I joined Google in 2006 —
 10 Q. Yes.
 11 A. — in January 2006. In late 2008, I began to work on
 12 what became Product Listing Ads.
 13 Q. Okay.
 14 A. Then, of course, there was the Shopping Organisation
 15 that was created in 2012, I believe. But I'd been
 16 working on product ads, you know, since late 2008.
 17 Q. Okay.
 18 So you say you did not see presentations in which
 19 they identified as the leading threat in Europe to
 20 Google's business aggregators, specialised vertical
 21 search companies?
 22 A. Not that I recall. I mean, I'm not saying that I —
 23 that there weren't such presentations or — and it's
 24 even possible that I saw one, but I certainly don't
 25 recall it.

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1 Q. Okay.
 2 Now, were you aware that not long before you
 3 launched the Shopping Unit, Google had launched
 4 the Panda algorithm over the course of 2011?
 5 A. Am I aware today?
 6 Q. Well, were you aware at the time?
 7 A. At which time?
 8 Q. Back in 2012.
 9 A. I don't think so.
 10 Q. Were you aware of the effect — the devastating effect
 11 that the Panda algorithm had in demoting comparison
 12 shopping sites from Google's SERP?
 13 A. I don't — to the best of my recollection, in 2012
 14 I just wasn't aware of — of the Panda algorithm or its
 15 effects or anything around it.
 16 Q. So who in Google would have been in a position to put
 17 the full strategic position together and see what was
 18 happening with Panda, what was happening in ads, what
 19 was happening with the Shopping Unit?
 20 A. Well, hopefully the very senior executives.
 21 Q. The very senior executives.
 22 I would like to turn, if I may, to a different
 23 topic, which is: the Remedy.
 24 Now, you say in your witness statement, at
 25 paragraph 99 {H3A/7/27}, that the Commission

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1 investigation into Google was first brought to your
 2 attention by your manager in around 2015 or 2016; do you
 3 recall that?
 4 A. Yes, to the best of my recollection, that's correct.
 5 Q. Okay.
 6 Now, before you became involved with the Remedy in
 7 response to the Commission Decision, there had already
 8 been significant prior engagement between Google and
 9 the Commission. You do not mention that, so I take it
 10 you were not involved?
 11 A. Correct, I was not involved in the prior, like, I think
 12 circa — actually, I'm not even sure, somewhere around
 13 2013 or something like that. I was not involved with
 14 any of that.
 15 Q. Were you aware that Google had previously, in early 2014
 16 and before that, offered commitments to the Commission
 17 to institute changes as a means of potentially avoiding
 18 any infringement decision?
 19 A. Was I aware of this at what point?
 20 Q. Well, let us take it in stages. I take it you were not
 21 aware at the time?
 22 A. Correct.
 23 Q. When did you become aware?
 24 A. Some time in my involvement in the Remedy, starting
 25 somewhere around 2016/2017, I guess.

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1 Q. Okay.
 2 A. I'm not sure.
 3 Q. Were you aware as to what those proposed commitments had
 4 been at that time? Were you made aware of what Google
 5 had offered?
 6 A. I believe that there was some — some discussion,
 7 possibly some mocks that I was shown at some point.
 8 Q. Okay.
 9 Were you aware that the Commission had appeared to
 10 have come fairly close to accepting those commitments?
 11 A. I had heard that.
 12 Q. So it must be that before you became involved, people
 13 within Google had already done a lot of thinking and
 14 work about how to meet the Commission's concerns;
 15 correct?
 16 A. Certainly some people.
 17 Q. You had not been involved in that, but am I right in
 18 thinking that that would include people like Google's
 19 in-house economist, Mr Millet, and in-house lawyer,
 20 Oliver Bethell?
 21 A. I'm sorry, I didn't understand the question.
 22 Q. Were they — were those — I am trying to find out who
 23 was involved —
 24 A. In the prior?
 25 Q. — in the prior engagement with the Commission, where

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1 clearly a lot of thinking had been done into how to meet
 2 the Commission's concerns, and I am asking you who did
 3 that thinking, and I was saying Mr Millet, the in-house
 4 economist, and Mr Oliver Bethell, the in-house lawyer?
 5 A. I actually don't know.
 6 Q. You do not know.
 7 Okay, well, you literally do not have any idea who
 8 was involved in the thinking at Google? I find that
 9 surprising.
 10 A. I remember a particular Product Manager who had some
 11 involvement in it, and I think he was probably the one
 12 that showed me the mocks, I'm guessing. Yeah. Other
 13 than that, I don't think I remember — at least right
 14 now I do not remember.
 15 Q. You do not remember Curto Millet? I think
 16 I pronounced —
 17 A. Well, I certainly remember him. I worked very closely
 18 with him —
 19 Q. Oh, you did? Right.
 20 A. — on the Remedy in 2017 and beyond, and I —
 21 Q. You were not aware that he had been working on it
 22 for years before, or ...?
 23 A. It doesn't ring a bell right now. It certainly — I may
 24 have been aware at the time, you know, but ... you know.
 25 Q. I would like to discuss next your evidence about

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1 the various remedy alternatives that were explored by
 2 Google.
 3 A. Yes.
 4 Q. I know that you discuss this in your witness statement
 5 and I would like to say at the outset that I appreciate
 6 that your witness statement was written in October 2025,
 7 so seven years after the Remedy was implemented, and
 8 I appreciate also that you have given evidence that it
 9 was given without the benefit of many other underlying
 10 documents.
 11 A. Yeah, it was just a small — a very small number, yeah.
 12 Q. So I would like to just remind you of some of those
 13 documents to show you how you viewed the options at the
 14 time.
 15 A. Okay.
 16 Q. Can we go to {M1/536}. You see here:
 17 "Google Shopping ... Remedy ... Proposal ..."
 18 I understand this is around the time of the Decision
 19 in June 2017. You can see:
 20 "An infringement decision will order us to bring
 21 the alleged abuse effectively to an end. We would have
 22 to stop what the Commission characterizes as
 23 the favoring of our own comparison shopping service.
 24 This would require Google to 'position and display
 25 competing comparison shopping services in the same way

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1 as it positions and displays its own comparison shopping
 2 service'.

3 "If we achieve this goal by providing better access
 4 to SCU space to aggregators, the EC may limit us to
 5 charging aggregators only 'operating/actual costs' or
 6 a 'nominal amount' of EUR 0.01 per click.

7 "We set out below a sequence of proposals for how we
 8 might comply, ordered from the most to least preferred."

9 Does this ring any bells?

10 A. Yes. I mean, I think I worked on this document,
 11 although, unfortunately, these documents don't have,
 12 like, author information to really refresh my memory
 13 about that. But, yes, this does look familiar, and
 14 I think a document, or one like it, was part of
 15 the bundle that I was looking at earlier — you know, in
 16 the last couple of weeks.

17 Q. We see "competing comparison shopping services", that
 18 expression is used, and also "aggregators".
 19 Was "aggregators" the expression you tended to use in
 20 Google for comparison shopping services?

21 A. I think it was a more general term.

22 Q. Right. But it included comparison shopping services?

23 A. Probably. I don't remember exactly.

24 Q. Okay.

25 There are a number of different structures then

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1 considered, and we can see in the last paragraph of
 2 the introduction, starting with what you call "account
 3 unbundling", yes? We will come back to that.

4 If we could just go to the end of this document
 5 {M1/536/14}, we see "Proposal 7", so it is the very last
 6 one, is: remove the Shopping Unit, yes?

7 A. Yes.

8 Q. So, as we saw, this is from the most to the least
 9 favoured option, so this was your least favoured option,
 10 was it not?

11 A. According to this document.

12 Q. If you go to another option, {M1/536/6}, please, and if
 13 we could just focus on — it is a bit — you see 5a:
 14 "Showcase Ads for Aggregators. We do something like
 15 having only Premium Showcase ..."

16 You see it says:
 17 "... Ads in the EC countries, where 'Google
 18 Shopping' and each Aggregator are treaty 'merchants' are
 19 today in Showcase ads. That is to say:
 20 "The SCU will consist of a set of 'cards', one card
 21 per aggregator.
 22 "An auction is run in which the aggregators compete
 23 to show their cards. Ranking of cards is done through
 24 as Showcase does today ..."

25 And so on. Perhaps if you just read the rest of

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1 that.

2 A. Okay.

3 (Pause).

4 Okay.

5 Q. If you go over the page {M1/536/7}, we can see — what
 6 I am interested in is really the comment on
 7 the right—hand side, comment 20.

8 A. Okay.

9 Q. It says:
 10 "+GJF ..."
 11 Is that you?

12 A. It is.

13 Q. So you have been — I take it you are not the author of
 14 this comment, you are an additional recipient of
 15 the comment?

16 A. Yes, I guess it was directed at me. Someone —

17 Q. Directed, okay.

18 A. — right — wanted —

19 Q. Yes. Someone says:
 20 "Have a look at ..."
 21 Then they give you a link:
 22 "... which shows you an Idealo syndicated Shopping
 23 Unit, but where instead of offers the individual slots
 24 show models (very similar to Google's catalogue version
 25 of the Product Universal) with information on lowest

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1 price and number of offers. This type of info would
 2 provide greater scope for individual aggregators to
 3 differentiate their cards (whereas the mock below only
 4 has picture and the brand as differentiating factors).
 5 "I am not advocating this, and merely raising it for
 6 general awareness."

7 A. Okay.

8 Q. So this seems to be someone showing you an example of
 9 something where you could adapt this version but you
 10 could have something very similar to Google's catalogue
 11 version of the Product Universal, the version where it
 12 went through to the Property, but instead going through
 13 to CSSs, rival CSSs, and showing on the page the number
 14 of offers that they have and the lowest prices; correct?

15 A. Let me just re—read it and try to reconstruct.
 16 (Pause).

17 Okay, I'm sorry, could you repeat the question?

18 Q. Sure. So what this is an example of is something that
 19 would be similar to the catalogue version of
 20 the Product Universal, but instead of clicking through
 21 just to the Google property, you would instead be able
 22 to click through to rival CSSs, and the rival CSSs would
 23 be able to show information of their lowest price offers
 24 and also the number of offers?

25 A. Well, that is possible, that this is what it's

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1 referring to, right? There's no — you know, this
 2 document doesn't contain the actual image that's linked
 3 here, and so — you know, and — let's see, would "show
 4 models ... with information on lowest price and number
 5 of offers". I mean, I think what you're saying is
 6 a reasonable interpretation of this. It's not —
 7 I can't say with 100% confidence that that's exactly
 8 what —
 9 Q. But it is a —
 10 A. — this refers to.
 11 Q. — reasonable interpretation.
 12 So it is effectively saying you could have something
 13 rather like what became CLAs but also including
 14 information on lowest price and number of offers;
 15 correct?
 16 A. Yeah, I mean, I think that, as far as I can tell, this
 17 person was pointing us, or pointing me to this
 18 HotUKDeals.com, right, which I don't remember what that
 19 site is exactly, but apparently it's — you know, it's
 20 not a Google site, obviously, right? It's some — it's
 21 a third party that had some unit that was an Idealo
 22 syndicated shopping unit, and so they were trying to
 23 show me and others: here's a unit that is on this other
 24 site, you know, is there something that we could do that
 25 might be something like this?

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1 Q. Okay.
 2 That is something that you could have done, is it
 3 not?
 4 A. What is something that we could have done?
 5 Q. What we have just discussed. That was perfectly
 6 technically feasible, was it not?
 7 A. Okay, so that is a — something that I think I would
 8 need to think carefully about and also, you know, we
 9 could get into. So is it technically possible to do
 10 something like this? I think we would need to specify
 11 the specifics of what was being done, right? So —
 12 Q. A version of this —
 13 A. Okay.
 14 Q. — is totally doable, CLAs with price and number of
 15 offers?
 16 A. CLAs with price —
 17 Q. Lowest price and number of offers.
 18 A. With lowest price and number of offers. I can imagine
 19 that that would be doable, you know, with sufficient —
 20 so, you know, what I'm imagining is that the — that
 21 the CSS would provide a feed to Google, right, which had
 22 the full set of offers and — you know, and prices and
 23 all these kinds of things, and based on that information
 24 Google could compute the — you know, some product
 25 information and the price, the lowest price, the lowest

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1 price out of the offers that were given to us in
 2 the feed, and could present that in a unit. I think
 3 that — there's nothing that I can think of at
 4 the moment that would be technically infeasible there
 5 but, perhaps with further reflection, I might have
 6 a different opinion. I mean, these things take time to
 7 think through, right?
 8 Q. Okay.
 9 If we can go to {M1/538}, please, we can see under
 10 the — in the fourth subparagraph of the introduction —
 11 this is another version of this remedy document. Again,
 12 I think it says dated 4 July 2017, but I think that that
 13 cannot be right, because we see in the first sentence
 14 that it mentions the Decision, so it is clearly,
 15 I think, after the Decision now.
 16 If you look at the fourth subparagraph, it says —
 17 under the introduction, it says — it seems it mentions
 18 a deadline of September 28, 2017, 60 days, but it also
 19 notes that there is the possibility of an extension?
 20 A. Just one minor correction. I think you said "60 days".
 21 I think that September 28th would be 90 days from
 22 the Decision.
 23 Q. Forgive me, 90 days.
 24 A. I think that August 29th is the 60 days, I think.
 25 Q. You are quite right.

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1 A. Yeah.
 2 Q. I think you are right.
 3 But it says that:
 4 "However, we may apply for a suspension ..."
 5 It notes that then you would have six to 12 months.
 6 A. Okay.
 7 Q. Do you recall that?
 8 A. Do I recall?
 9 Q. The possibility of getting an extension.
 10 A. I think — I think we were wondering whether that would
 11 be possible, yes, you know, and to the best of my
 12 recollection the Commission said "dream on". They
 13 said "absolutely not".
 14 Q. Well, on the basis of this, it seemed that the most —
 15 it says the most likely scenario is that you would have
 16 six to 12 months to come into compliance.
 17 A. I said?
 18 Q. If you look at the sentence here, it says:
 19 "Assuming we do apply for a suspension, the most
 20 likely scenario is that we would have 6–12 months to
 21 come into compliance."
 22 A. Okay. Sure, that is what that sentence says.
 23 Q. So is it possible that your recollection is wrong and
 24 that actually you believed at the time that you could
 25 have obtained an extension if you had wanted one?

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1 A. I have strong recollection that — that the — that
 2 the Commission was quite adamant that we needed to make
 3 product changes that would bring us into compliance
 4 within that 90-day window, and you know, if there's some
 5 other documents that strongly suggest otherwise, I could
 6 reconsider my opinion, but that is my strong
 7 recollection is that the Commission was quite adamant
 8 that 90 days was not going to change.

9 Q. Okay.

10 If we can go to {M1/538/5}, you can see at
 11 the bottom "Proposal 3", which is "No Shopping
 12 Property"?

13 A. Yes.

14 Q. So that is removing the standalone website?

15 A. Yes.

16 Q. If we see below that, we see — if we could go down, you
 17 can see that it was estimated — you were estimating
 18 the revenue impact of that, and it says, "Initially
 19 \$400 million USD/a year", yes?

20 A. That's what it says, yes.

21 Q. You also, I think, identify a compliance issue at
 22 the top {m1/538/6}:
 23 "As is the case with most other proposals, an
 24 important open question is to what extent 'rich'
 25 functionality on google.com would be allowed."

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1 A. Yes.

2 Q. "What would be the definition ..."
 3 By that you meant: could we keep the shopping unit;
 4 correct?

5 A. No, it was what — assuming we kept the shopping unit,
 6 what kind of functionality would be allowed in that —

7 Q. In it.

8 A. — unit? Like, would you be able to do filtering by
 9 price, or — or refinements by brand, or, you know,
 10 these kind — like, I think that's what's meant by "rich
 11 functionality".

12 Q. Yes, and:
 13 "What would be the definition of 'The Property' from
 14 a compliance perspective? Could we have refinements,
 15 sorting, pivots, related items ..."

16 A. Yes, exactly what I was saying, yes.

17 Q. "... on rich-[user interface] units on google.com?"

18 A. Yes.

19 Q. So I think we are saying the same thing, it is saying:
 20 to what extent could we keep the unit in the same format
 21 that we have it?

22 A. No, no: to what extent could we, in the future, add
 23 these capabilities to the unit? That's — I think that
 24 is my understanding of what this question is raising.
 25 You know, we were thinking about the future of the — of

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1 what we could do and still be compliant, but also allow
 2 us to innovate, right, and improve the product, right?
 3 So I know some of the things that we had been thinking
 4 about was adding, you know, what's called here "rich
 5 functionality" to the shopping unit that allowed more
 6 sophisticated, you know, shopping comparison, you know,
 7 functionality, right?

8 THE CHAIRMAN: What kind of functions?

9 A. Right. Well, I'm not sure that I recall the exact ones.
 10 I can give kind of a flavour of the kind of thing, if
 11 that would be helpful.

12 THE CHAIRMAN: Yes, that would be helpful.

13 A. Yeah, I mean, so you can imagine — let's see.
 14 Actually, if you give me just a moment, maybe I can
 15 recollect a little better. Just give me maybe
 16 30 seconds.

17 THE CHAIRMAN: Well, we can give you more than a moment,
 18 because it is 1 o'clock.

19 A. Ah, okay.

20 THE CHAIRMAN: If you would like to reflect before
 21 answering, we can take our lunch break now and return at
 22 2 o'clock. So give that some thought.

23 A. Sure.

24 THE CHAIRMAN: The only thing I have got to tell you, as
 25 I think you know already, that you cannot discuss your

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1 evidence or the answer that you are reflecting on with
 2 anybody else —

3 A. Yes.

4 THE CHAIRMAN: — and you cannot discuss the case with
 5 anyone over lunch.

6 A. Understood.

7 THE CHAIRMAN: Then we will resume at 2 o'clock.
 8 (1.01 pm)
 9 (The short adjournment)
 10 (2.00 pm)
 11 (Proceedings delayed)
 12 (2.05 pm)

13 THE CHAIRMAN: I think we left you, Mr Friedman, in
 14 mid-answer.

15 A. Yes, yes.

16 THE CHAIRMAN: A question that you had to think about.

17 A. Yes, so I believe you were asking about what — what
 18 kind of rich functionality might we have developed in
 19 the Shopping Unit in the future.

20 THE CHAIRMAN: Yes, exactly.

21 A. So it would be things along the lines of, let's say,
 22 either sorting or filtering by things like brand, price,
 23 or functionality, so, you know, you might have different
 24 functionality in a — in a modern television or
 25 computer, you know, sort by laptop, etc.

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1 MS ROSE: Or by size?
 2 A. Yes, size, exactly, for shoes, or for clothes, colour,
 3 right? All these kinds of things that are giving you
 4 a more kind of sophisticated ability to explore
 5 the product space and understand it.
 6 THE CHAIRMAN: Yes.
 7 A. So what was meant by the passage was: we need to
 8 understand what's allowed and what's not.
 9 THE CHAIRMAN: Yes.
 10 MR JOWELL: Mr Friedman, I think we were looking at this in
 11 relation to the document at {M1/538}. So if we could go
 12 to proposal 7, which is on {M1/538/15}, we see that one
 13 of the proposals, again, was to remove the shopping unit
 14 altogether?
 15 A. Yes.
 16 Q. Yes?
 17 We see that that would be — would have been even
 18 more expensive for Google than removing the Property,
 19 would it not?
 20 A. I think that's what this shows, if I remember what
 21 the number was for the Property, it was somewhere in
 22 the order of 400 — we could look, but ...
 23 Q. If we look at the "Appendix" there, just below that, we
 24 can see the "Principles of Compliance Proposals", and we
 25 see:

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1 "Greg's notes on what he thinks should be our
 2 principles ..."
 3 A. Mm—hm.
 4 Q. One of those is — the third one, is:
 5 "Minimize net revenue impact to Google."
 6 A. Yes.
 7 Q. That is set out because you recognised that would be
 8 a very important factor for those supervising you in
 9 Google, would it not?
 10 A. For — for what, again?
 11 Q. For those supervising you in Google, for the senior
 12 management.
 13 A. I'm sorry, I'm having trouble understanding the very
 14 last part of what you said.
 15 Q. It would be very important to senior management?
 16 A. Oh, yes. Yes, it would.
 17 Q. Yes.
 18 A. Yes, it would.
 19 Q. If we go over to page {M1/538/16}.
 20 A. 6—0?
 21 Q. 16, you can see it in front of you?
 22 A. Yes.
 23 Q. Then we see your notes on the "proposed ordering of
 24 preferability"?
 25 A. Yes.

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1 Q. You see at the very bottom, number 11 is:
 2 "Remove [the] Shopping subdomain."
 3 Number 12 is removing the Shopping Unit?
 4 A. Yes.
 5 Q. So those were not really options that you were seriously
 6 considering unless in extremis?
 7 A. Well, we were considering them.
 8 Q. But they were at the bottom of your list?
 9 A. It was the bottom of — I mean, you know, I think it
 10 says "Greg's list", or whatever, so I will take personal
 11 responsibility for my preference being at the bottom,
 12 yes.
 13 Q. That was the general view, was it not?
 14 A. I am sorry, was there a question?
 15 Q. That was the general view; it was not just your view, it
 16 was the general view?
 17 A. Well, there was disagreement. Different people had
 18 different views.
 19 Q. Okay.
 20 A. I think there were some people who were more willing, or
 21 more — more — you know, considered that to be not
 22 the last choice.
 23 Q. Okay.
 24 MS ROSE: Is the choice that was finally gone — the chosen
 25 remedy is number 1, is it not?

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1 A. Let's see. Well, I think number 1 was part of
 2 the Remedy. I think — I'll have to look a little more
 3 carefully. I think perhaps other ones listed here were
 4 part of the Remedy as well. Should I — should I go
 5 over that and specify exactly what I thought? Yeah,
 6 okay.
 7 (Pause)
 8 Yeah, so number 1 was part of the Remedy.
 9 Okay, so number 2 "accounting mechanism", you know,
 10 there's some vagueness there, but I think certainly
 11 there was an aspect of the Remedy, there was
 12 the accounting mechanism and to audit fairness.
 13 MS ROSE: What does that mean?
 14 A. I think the idea there is to make sure that GSE,
 15 Google Shopping Europe, is a profitable business —
 16 MS ROSE: I see, yes, yes, yes.
 17 A. — and is bidding fairly, right?
 18 MS ROSE: Yes, yes.
 19 A. Then — now, this is a little pedantic or whatever, but,
 20 you know, when I say that number 2 is part of
 21 the Remedy, then it says, "But, no changes to UIs ...",
 22 that wasn't part of the Remedy because we did have
 23 changes to the UIs. I mean —
 24 MS ROSE: Right, right.
 25 A. — forgive my ...

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1 MS ROSE: So 1 and 2, but not the bit in brackets?
 2 A. Correct.
 3 MS ROSE: Yes.
 4 A. "Give aggregators option to only show in SCU (and not in
 5 Shopping ...)."
 6 I think we did that. That was part of the Remedy.
 7 So basically, when — when CSSs submitted their
 8 inventory, their offers to Google, I think — I believe,
 9 by default, they would only show on Google.com
 10 the shopping unit, not on the Shopping Property, right?
 11 THE CHAIRMAN: "Aggregators", you use to mean the CSSs?
 12 A. I believe so. I think that's the — I think when it's
 13 on number 3 "give aggregators", I think that means CSSs
 14 in this context.
 15 MS ROSE: So 4 you did not do?
 16 A. No, we did do. So CSU [sic], which is the Shopping
 17 Unit —
 18 MS ROSE: But they did have links to properties?
 19 A. No.
 20 MS ROSE: Google Shopping is still in the SCU?
 21 A. Ah, yes. So — oh, okay. That's — that's right.
 22 Okay, so — so there were links on the unit prior to
 23 the implementation of the Remedy that went to
 24 the Shopping Unit and that weren't available to other
 25 CSSs, right?

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1 MS ROSE: Yes.
 2 A. So like the title and when you scroll to the end of
 3 the carousel, right? So those were removed, right? In
 4 fact, any link that was — except for the "by ...", that
 5 one is true.
 6 MS ROSE: That is for everybody.
 7 A. That's for everybody.
 8 MS ROSE: You also still have the Google Shopping tab in
 9 the toolbar.
 10 A. That is correct. We were informed by the Commission
 11 that wasn't in the scope of the Decision.
 12 MS ROSE: Okay.
 13 A. Yeah, that's right.
 14 MS ROSE: "... cost discounts to offers from Aggregators."
 15 A. Yeah. Yeah, I mean, essentially.
 16 MS ROSE: Essentially.
 17 A. Because we — I mean, because actually I guess there was
 18 two ways you could say that we implemented that.
 19 The main one really was the margin, right?
 20 MS ROSE: Yes.
 21 A. Right, right.
 22 MS ROSE: "Various proposals for [User Interface] and
 23 auction changes ... 'single aggregator SCUs' and
 24 variants."
 25 That did not happen?

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1 A. That didn't happen, except for, later, we did do CLAs —
 2 MS ROSE: Yes.
 3 A. — which was —
 4 MS ROSE: So that is when you get one tile for — as
 5 a CSS —
 6 A. Yes.
 7 MS ROSE: — in the box?
 8 A. In the CLA tab, right, so there's — I don't know if
 9 we've gotten into this in the trial —
 10 MS ROSE: So I have seen two different things.
 11 A. Yeah.
 12 MS ROSE: So is there a whole row of CLAs or just one CLA
 13 within —
 14 A. Yeah.
 15 MS ROSE: — the Shopping Unit?
 16 A. Well, so —
 17 MS ROSE: So the Shopping Unit is mainly individual products
 18 but can also be a CLA?
 19 A. Yes, so how it worked was — well, no, not in the —
 20 okay, so it was a separate unit.
 21 MS ROSE: Okay.
 22 A. — essentially, so —
 23 MS ROSE: But it was one box in the row of boxes, or are you
 24 saying it was a whole separate row?
 25 A. Well, I can — I'll try to explain the UI. There might

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1 be pictures that people can show?
 2 MS ROSE: We have seen various pictures, yes.
 3 A. Yeah, okay. But there's — essentially, the way we
 4 ended up implementing CLAs is —
 5 MS ROSE: This is the second iteration, right? This is not
 6 the first iteration of the Remedy?
 7 A. Correct, it was not the initial roll-out.
 8 MS ROSE: Okay. Right, right.
 9 A. We didn't have CLAs in the initial —
 10 MS ROSE: Okay, so, yes.
 11 A. — roll-out of the Remedy —
 12 MS ROSE: Yes.
 13 A. — right? The initial roll-out of the Remedy, no CLAs.
 14 MS ROSE: Yes.
 15 A. Then we subsequently developed CLAs. It was, you know,
 16 basically a request of the Commission. So when we
 17 rolled that out, so the PLA unit would still show by
 18 default and there would be a tab above it which said,
 19 like, I forget exactly what it said, but it said,
 20 like, "products" or something like that.
 21 MS ROSE: Okay.
 22 A. Then there was a separate tab, right, that said, like,
 23 "comparison sites", or something like that, right? So
 24 if you clicked on the comparison sites tab, then you
 25 would show the CLA unit —

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1 MS ROSE: I see.
 2 A. — which was exclusive —
 3 MS ROSE: So it would be a row —
 4 A. So the PLA unit would go away —
 5 MS ROSE: So that would be a row of tiles?
 6 A. That's correct.
 7 MS ROSE: Each one for a CSS?
 8 A. Correct.
 9 MS ROSE: I see.
 10 But one thing that is now on the SERP is something
 11 called "product sites", which seems to be a product of
 12 organic search, not sponsored links.
 13 A. Right.
 14 MS ROSE: But which gives you links to individual CSSs. Are
 15 you aware of that?
 16 A. So, you know, I left Google two and a half years ago.
 17 MS ROSE: Right.
 18 A. I do remember some discussion about that possibility —
 19 MS ROSE: Right.
 20 A. — before I left.
 21 MS ROSE: Right.
 22 A. It was not implemented, or at least as far as I can
 23 remember, it was not implemented until after I left.
 24 MS ROSE: I mean, if you had put a search in for Google now
 25 for something like "digital camera", that shows up on

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1 the first page, but we have not really heard any
 2 evidence about it, and I am slightly wondering why
 3 no one is relying on it.
 4 A. Why what again?
 5 MS ROSE: Why no one is relying on it —
 6 A. Oh.
 7 MS ROSE: — in either direction.
 8 A. Yeah.
 9 MS ROSE: But no doubt we will be told.
 10 A. I mean, I wouldn't be able to answer that.
 11 MS ROSE: Okay, so go on, go back to this.
 12 A. Yes, okay, so we're going through —
 13 MS ROSE: I think we got — we were down to number 6. Then
 14 number 7.
 15 THE CHAIRMAN: What is the difference, in practice, between
 16 7 and 4?
 17 A. 7 and 4. Okay:
 18 "SCU with no links to property (but maintaining
 19 Shopping mode tab).
 20 "
 21 "SCU with no links to property ... (reads to self)
 22 ... plus restrictions on what we can do in the UI of
 23 SCU."
 24 Yeah, I'm not sure exactly why it was laid out in
 25 that manner, but the restrictions on what we can do in

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1 the UI, my best reading of this, you know —
 2 MS ROSE: Might be about functionality?
 3 A. — would be that rich functionality that we would want
 4 to develop in the future if it was allowed, yes.
 5 MS ROSE: "Paid 'single-aggregator' SCU(s) which float in
 6 organic results."
 7 A. Yes:
 8 "Paid 'single-aggregator' SCU(s) which float ..."
 9 Yes, so this was one I didn't really remember when
 10 I was writing my statement, or at least not the detailed
 11 one, you know, like the "floating in organic results"
 12 part. But when I was looking at — I guess there was
 13 probably some version of this document, right, then,
 14 you know, that refreshed my memory that that was under
 15 consideration.
 16 MR JOWELL: Just to understand, can you explain what that
 17 would have involved?
 18 A. So I don't remember exactly. There — I think when
 19 I was — okay, when I was reviewing this — this
 20 document, or one version — you know, there's several
 21 versions of this document, I think — there was
 22 a description of it, which I kind of briefly read
 23 through to prep for trial, but I didn't really go into
 24 a lot of detail, so I don't know if I can remember
 25 exactly the details of this.

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1 Q. Well, we can certainly see — if we go to {M1/538/12},
 2 we can see here:
 3 " ... Floating Commercial Unit and Display Parity."
 4 Here we have "From Kelkoo", and then a series of
 5 offers at Kelkoo, and then "From Google Shopping".
 6 A. Yes.
 7 Q. So something like that would then have floated within
 8 the organic results?
 9 A. Yes, apparently so.
 10 Q. Then you have a paid version of that and an unpaid
 11 version of that?
 12 A. Yeah, apparently so.
 13 Q. Yes. So one where people would bid and another where
 14 they would not have to bid?
 15 A. That sounds right.
 16 Q. There is no suggestion that — in this document, that
 17 this would have been technically unfeasible, is there?
 18 A. I don't recall.
 19 Q. If we go to M1 —
 20 THE CHAIRMAN: Just on that, presumably when you are putting
 21 these proposals up for consideration —
 22 A. Yes.
 23 THE CHAIRMAN: — and there is some reference under some of
 24 them to "Engineering Notes", I see —
 25 A. To engineering notes?

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1 THE CHAIRMAN: Yes. I mean, if you go back up, if you look
 2 at various — what you do is, I think very clearly, you
 3 set out the different proposal, you explain what they
 4 are, then you have some comment on revenue and then you
 5 have some engineering notes.
 6 A. Yes.
 7 THE CHAIRMAN: For example, on page {M1/538/10}, if we go to
 8 page 10 just as an example. I cannot remember which
 9 proposal this is. It is 5—something. But do you see in
 10 the middle of the page, you have put in:
 11 "Engineering ...
 12 "We probably will need some amount of additional
 13 latency budget ..."
 14 A. Yes.
 15 THE CHAIRMAN: Etc.
 16 A. Yes.
 17 THE CHAIRMAN: So you comment on each one whether there is
 18 an engineering problem or not, and if so, what might be
 19 involved.
 20 A. Yes, and, you know, I wouldn't claim that this section
 21 is meant to be a comprehensive list, right?
 22 THE CHAIRMAN: Sure.
 23 A. It also, of course, depends on the version of
 24 the document that we're talking about. Hopefully and
 25 presumably these sections get filled out over time,

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1 right?
 2 MR JOWELL: Let me take you —
 3 THE CHAIRMAN: But on the question being asked. If this was
 4 really, technically, hugely complicated and difficult,
 5 then you would have said something, would it be fair to
 6 say, in these initial notes saying: hugely complex
 7 and —
 8 A. Probably the only caveat that comes to mind is that for
 9 items that didn't seem to be very likely to happen.
 10 You know, for one reason or another, we may not have put
 11 much effort into them; we may have tried to list it for
 12 completeness but not really filled out the details. I'm
 13 not saying that that was specifically true for any one
 14 of these, I'm just saying in general.
 15 THE CHAIRMAN: Yes, that makes sense.
 16 MR JOWELL: Mr Friedman, I am going to take you through
 17 a few more iterations of this document. Before we do,
 18 can I just show you something to try and understand or
 19 help you recall your role on it.
 20 If we go to {M1/442}, please, and if you go — if we
 21 could go to {M1/442/3}.
 22 You should see there an email — it is slightly
 23 highlighted, it says:
 24 "Assuming these options will mostly be about
 25 removing certain [User Interface] features, it makes

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1 sense for Khanh & Greg to be in the front line, but
 2 please loop in Raphael & Matthias ..."
 3 So that is you and — who is Khanh?
 4 A. He was my manager.
 5 Q. He was your manager, right.
 6 If we go to {M1/442/1} here, we see an email from
 7 you in the middle:
 8 "Hello all,
 9 "We have fleshed out the proposals ..."
 10 A. Sorry, operator, I wonder if you can ... my eyes are
 11 really bad, I apologise. Okay, great, thank you.
 12 Q. It says:
 13 "Hello all,
 14 "We have fleshed out the proposals more (such as
 15 describing an auction for single—CSS SCUs ..."
 16 A. Yes.
 17 Q. "... and briefly discussing the submission/ingestion of
 18 feeds by CSSes), and we also added another option —
 19 resurrecting the idea of a query—time callout to 3rd
 20 party CSSes."
 21 A. Mm—hm.
 22 Q. I just want to show you another document. I think this
 23 is the document that you circulate, and if we go to
 24 that, it is at {M1/540}.
 25 A. I'm sorry, you said this is the document ...?

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1 Q. I think that you circulated with that email.
 2 A. I see, I see.
 3 Q. I believe so. With the one "resurrecting the idea of
 4 a query—time callout to 3rd party CSSes".
 5 A. Okay.
 6 Q. If we go to {M1/540/8}, we see an explanation of this:
 7 "Shopping API (aka Query—Time Callout Approach)."
 8 A. Yes.
 9 Q. You see the "Proposal" here:
 10 "A common web—service API which CSS (including
 11 Google Shopping CSS) would implement. In its simplest
 12 form it could be as simple as Input: Raw Query and
 13 expected Output. List of Results (links to merchant
 14 landing pages ..."
 15 Yes?
 16 A. Yes.
 17 Q. Do you recall this option?
 18 A. Yes.
 19 Q. If you see the comment on the right—hand side,
 20 comment 13, it says:
 21 "With the addition of us getting a look at the data
 22 that is being potentially returned ahead of time (e.g.
 23 by submitting a feed), I think this proposal [becomes]
 24 much more realistic. Also because I now understand how
 25 we could deal with images. The nice thing about the

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1 proposal is that it allows all CSS to compete on quality
 2 which aligns our overall goals with this proposal. So,
 3 now I actually think this is a great idea, assuming we
 4 can solve the technical problems!"

5 A. Mm—hm.

6 Q. So someone was clearly enthusiastic about the option.
 7 Was it you, or do you recall who?

8 A. Well, as far as I can reconstruct from this comment
 9 thread in the document, so comment 12 says "Matthias
 10 [comma] [blah blah blah]", what do you think about this
 11 proposal? Then comment 13 seems to address that
 12 question.

13 Q. Right.

14 A. So to my best ability to reconstruct, that comment would
 15 have come from Matthias.

16 Q. Matthias, I see, okay. Who was Matthias?

17 A. So there were two Matthiases that I worked with, but I'm
 18 pretty sure there would be Matthias Zenger.

19 Q. What was his role?

20 A. So he was an Engineering Manager and then Director — he
 21 may have even become VP at some point, I actually don't
 22 know — in Zurich, who was responsible for a lot of
 23 the merchant and advertiser-facing functionality, like,
 24 for example, feeds, feed ingestion, he had some
 25 responsibilities with commerce data store.

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1 Q. So he was very well qualified to comment on this?

2 A. From his perspective, right? I mean, what I will say is
 3 he's not a User Interface engineer or anything like
 4 that, so if you're wondering about whether it's a good
 5 user experience or not, that would — he would not have
 6 that qualification, but, you know, it depends on what
 7 you mean by "qualified".

8 Q. Okay.

9 MS ROSE: What does "API" stand for?

10 A. Application programme interface. So it's basically
 11 the specification of how you would call into the system
 12 with code. So I don't know how familiar you are with —
 13 with, you know, software code and whatnot, but it
 14 basically is saying: okay, if you want to call into this
 15 system and you are a software system, this is how you do
 16 it.

17 MS ROSE: I see.

18 A. You send this system, you, you know, call these
 19 functions essentially, and this is what gets returned to
 20 you, this is the information that gets returned to you.

21 MS ROSE: So this is a technical approach for having the CSS
 22 display on the SERP next to Google's?

23 A. Yes.

24 MS ROSE: Yes.

25 A. Let's see, the CSS — let me just ...

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1 MS ROSE: Well, having a sample of the CSS, having results
 2 from the CSS display on the shopping unit — in
 3 the Shopping Unit?

4 A. Yes. I think the — I think that's largely correct, as
 5 — as you characterised it, but I just ... So the idea
 6 would be —

7 MS ROSE: You have a feed from the CSS.

8 A. Yeah.

9 MS ROSE: With, say, all of their different digital camera
 10 options.

11 A. Yes.

12 MS ROSE: Somebody searches "digital camera".

13 A. Yes.

14 MS ROSE: You get a box with three digital cameras
 15 saying "From Kelkoo", and another one with three digital
 16 cameras saying "From Google"?

17 A. Well, hold on, just one second —

18 MS ROSE: Yes.

19 A. Okay, so the very last sentence on this page that's not
 20 a footnote says — and the last part of it:
 21 " ... and shows one of the units with links to
 22 the rest of the valid results."
 23 So I think what was envisioned here, and I'm just
 24 kind of inferring —

25 MS ROSE: I see, so the CSS decides which digital camera

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1 displays —

2 A. Yes.

3 MS ROSE: — on the tile?

4 A. Well, okay, so I — I hope I'm not misinterpreting this,
 5 but my best guess — and maybe we could read more of
 6 the document to ensure that what I'm about to say is
 7 correct — is that the shopping API would have Google
 8 call out at query time to the CSS systems, the CSS
 9 systems would then say these are the results I want
 10 displayed in my unit, okay, and then —

11 MS ROSE: For this query.

12 A. For this query, for this exact query right now, right?

13 The user does the query first and then the call out is
 14 done in real-time while the user is waiting.

15 MS ROSE: So I type in "digital camera".

16 A. Yes.

17 MS ROSE: Kelkoo says: these are the results I want
 18 displayed for "digital camera".

19 A. Yes, and Kelkoo sends it back to Google, you know,
 20 Idealo, all the other CSSs that are the participating
 21 would send back their results.

22 MS ROSE: There is an auction.

23 A. Then, presumably, there's an auction for the entire
 24 unit. Each of the units compete, not the individual
 25 offers within the unit —

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1 MS ROSE: No, but the unit —
 2 A. — but the unit as a whole.
 3 MS ROSE: With the display showing the particular result
 4 they want per unit.
 5 A. Correct. I believe —
 6 MS ROSE: So the difference between that and the Remedy as
 7 implemented —
 8 A. Yes.
 9 MS ROSE: — is that the CSS determines which result appears
 10 in the unit?
 11 A. Yes, that is one of the differences .
 12 MS ROSE: It is not just a Google auction with the merchant
 13 with the CSS basically acting as agent for the merchant?
 14 A. Yeah, I think, it 's — that is one difference, correct .
 15 MS ROSE: Right. That is quite an important difference from
 16 the perspective of the CSS.
 17 A. Yes.
 18 MS ROSE: Because it means that this is a shop window into
 19 their service —
 20 A. Mm—hm.
 21 MS ROSE: — rather than simply them acting as agent for an
 22 individual merchant.
 23 A. Right, I think it 's a higher fidelity representation of
 24 what you would find on their site if you were to click
 25 through than if Google were to do the ranking, etc.

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1 MS ROSE: Yes. It gives the CSS some control over
 2 the parameters and the quality issues that they want
 3 reflected on Google's shop window.
 4 A. Correct.
 5 MS ROSE: That is really helpful. Thank you.
 6 PROFESSOR SMITH: Does this address the issue that when
 7 Google is searching for a product offer from Google,
 8 those product offers are already in a Google—controlled
 9 index — set of indices, whereas the CSS offers outside
 10 Google's system and ... does this solve the problem that
 11 it takes much longer to assemble offers from outside
 12 the system compared with —
 13 A. Right.
 14 PROFESSOR SMITH: — offers already indexed within Google?
 15 A. I think I understand the question. I believe it
 16 mitigates to some degree. I do not believe it solves it
 17 in its entirety . You know, it mitigates it because to
 18 some degree, we can — Google — because — okay, so
 19 let 's say that each CSS is submitting all their
 20 potential offers , right? We can do these offline,
 21 you know, before any query processing happens, quality
 22 determinations and checks on those offers that we
 23 wouldn't be able to do had the CSSs not provided them to
 24 Google, right? So that is one aspect that could be done
 25 and that would help, you know, would mitigate some of

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1 the concerns. I think there remain several concerns
 2 which we could — I'm happy to get into.
 3 MR JOWELL: Let me — thank you, that was very helpful.
 4 If we could go to {M1/540/9}, you can see some of
 5 the concerns and some of the answers to some of
 6 the concerns. So if you see, under the "Output", you
 7 see there is a bold text:
 8 "Good Quality ..."
 9 Do you see that?
 10 A. I see that, yeah.
 11 Q. It says:
 12 " ... Validity alone would be insufficient and we
 13 would need some mechanism to make sure the results are
 14 of acceptable quality (ie useful to the user). This is
 15 a much harder problem (for instance, ensuring there are
 16 no NFS results or even irrelevant results). We might
 17 need to have automated checks with periodically sampled
 18 human evals to ensure presentable quality. Hopefully,
 19 as long as the same constraints are imposed on
 20 Google Shopping CSS this would be acceptable as
 21 a solution."
 22 A. Mm—hm.
 23 THE CHAIRMAN: "NFS" is ...?
 24 A. Non—family safe, so, like, porn or porn adjacent, yeah.
 25 MR JOWELL: So you are looking there to — at practical ways

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1 to ensure that quality could be maintained under this
 2 approach?
 3 A. Yes, we were trying to figure out, you know, different
 4 ways where you could improve quality for this, yes.
 5 I mean, I will say that this — you know,
 6 the proposal still suffers significantly from an
 7 inability to do proper quality controls, which I'm happy
 8 to get into, if you would —
 9 Q. It seems as though you were looking at ways, as you say,
 10 to mitigate that?
 11 A. Yes, and presenting feeds would — would help mitigate
 12 to some degree.
 13 Q. Yes.
 14 Then we see, under "Time Constraints", can you see
 15 what is written there?:
 16 " ... In order to ensure users have a good
 17 experience, we wouldn't want to wait for a long duration
 18 to get the results back. Currently ads as a whole gets
 19 only about 200ms and shopping ([with regard to] admixer)
 20 only about 60ms. In practice, if we make the call as
 21 early as possible in GWS and are able to assemble
 22 the results back (also in GWS) we might be able to
 23 afford to provide more latency for 3rd party CSS to also
 24 respond back without hurting user experience. It 's
 25 possible that 3rd parties would require much longer

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1 latencies , e.g. 500–1000ms. The duration would
2 presumably be negotiated with the [European Commission]
3 (once we've determined a range of what's acceptable from
4 the Google stakeholders)."

5 So, again, it does not look like, from this, that
6 latency is an absolute deal breaker, does it?

7 A. So what I'll say is, you know, this was a document that
8 was prepared by, you know, a certain number of engineers
9 trying to explore as widely as possible all
10 the different options and trying to dive as deeply as we
11 could in the time allotted into all the different ways
12 that we could make it happen, what would the concerns
13 be, right? So this does not reflect — and I think it's
14 clear it does not reflect, because — sorry, let me
15 finish my sentence. It does not reflect, like, after,
16 you know, sufficient deliberation and discussion with
17 the decision-makers at Google and elsewhere, right, that
18 this is a reasonable option, right? It specifically
19 says "once we've determined a range of what's acceptable
20 from the Google stakeholders", for example, right, and
21 also things about negotiating with the EC? So it's
22 important to have that context.

23 MS ROSE: What is "GWS"?

24 A. That stands for "Google web server". So — should
25 I elaborate, or is that — is that sufficient?

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1 MS ROSE: That is your server, I am guessing?

2 A. So, essentially, that's the organic server. It is
3 a server —

4 MS ROSE: Okay, organic search server.

5 A. Organic search — it also calls into the Admixer. So
6 the call comes — so when a user query comes to
7 Google — I'll ignore irrelevant parts, which are
8 numerous. The query will come into GWS, which then
9 begins its organic processing and it calls into
10 the Admixer in parallel for the ads processing to
11 happen.

12 MS ROSE: Okay.

13 PROFESSOR SMITH: The largest of the numbers here of time
14 delays is 1,000 milliseconds. Is that the time it would
15 take to reach the customer?

16 A. Well, I think what this sentence is saying here — let's
17 see. Give me just one second:

18 "It's possible that ..."

19 Actually, let me read it so I can make sure I can
20 answer your question accurately.

21 (Pause)

22 So I believe that, as far as I can interpret what
23 I'm reading right now, that that is not the full user
24 latency, that is how much time we would be giving to
25 the CSSs to do their processing of results and return it

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1 to Google, right? So there would be additional latency,
2 you know, where there's some processing before we call
3 out to the CSSs, there's the latency of actually making
4 the call, right, the network latency, and returning,
5 right? I'm not sure whether the latency of making
6 the call and returning was to be included in this 500 to
7 1,000 or not. Maybe, maybe not; I can't quite
8 interpret. Then there's the processing the CSS does,
9 right, to search its index and assemble the results,
10 right? So, definitely, that 500 to 1,000 would
11 represent primarily that, right? The results come back,
12 Google needs to then assemble the results, run
13 the auction, you know, do any quality checks, etc, etc,
14 so — so it's a portion of the user-perceived latency,
15 but nowhere near the total.

16 PROFESSOR SMITH: A fair proportion of your colleagues would
17 be concerned, as I understand it, at adding one whole
18 second into the process?

19 A. I think that is — that's an accurate understatement.
20 Yes, absolutely, yes.

21 PROFESSOR SMITH: (Overspeaking) — That is an entirely
22 neutral question.

23 A. Sorry?

24 PROFESSOR SMITH: Sorry, that was intended as an entirely
25 neutral question.

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1 A. Yes, and I apologise. Absolutely, adding a second to
2 user-perceived latency would be considered pretty
3 disastrous to — to many people at Google at this time.

4 MR JOWELL: Can I show you the next document —

5 A. Yes.

6 Q. — at {M1/444}.

7 We see here a message dated 8 July 2017. It is an
8 exchange between you and Mr Tholomé.

9 A. Yes.

10 Q. Who was Mr Tholomé?

11 A. He was a Product Manager for — I think — I believe he
12 was based in Zurich —

13 Q. Okay.

14 A. — on —

15 Q. Okay.

16 A. — shopping.

17 Q. He talks — here, we see you replying to a comment on
18 the remedy.

19 A. Yes.

20 Q. Eric Tholomé says:

21 "A 'query-time callout' approach, where we call out
22 to third-party CSSes to have them dynamically construct
23 an SCU."

24 He says:

25 "Do we really want to propose this? Have we not

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1 said in the past this wasn't realistic for user
 2 experience reasons ... "
 3 Then, in brackets, he says:
 4 "... (though I think it is clear we do this for some
 5 experiences such as flights — but can argue flights are
 6 super high consideration purchases where users can wait
 7 seconds to get answers, not true for most shopping
 8 purchases)."
 9 You reply:
 10 "Yes, I do think it's worth careful consideration,
 11 as ... discussed at the last meeting."
 12 A. Yes.
 13 Q. So clearly — so this is an approach that you used —
 14 Google used for flights?
 15 A. Apparently so. I mean, I'm not familiar with — with
 16 that aspect of the Google technical —
 17 Q. Of course, some purchases on product purchases would be
 18 of an equivalent magnitude to flight purchases?
 19 A. You mean in terms of how much they cost?
 20 Q. Yes.
 21 A. Yeah, some products cost as much as flights, absolutely.
 22 Q. So, for those purchases, there is no reason to suppose,
 23 is there, that users would not tolerate a little bit of
 24 extra time?
 25 A. Well, I suppose if you could restrict — if you could

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1 figure out beforehand or something, you know, oh, this
 2 is going to be a high consideration purchase —
 3 Q. It could be for certain product categories, could it
 4 not?
 5 A. I'm sorry?
 6 Q. It could be for certain product categories?
 7 A. Yes.
 8 Q. If you are buying a fridge —
 9 A. Yes.
 10 Q. — for example, right?
 11 A. Yeah. That's a potential. Now, you know, again,
 12 I think the other aspect to consider here is that,
 13 you know, this is part of the ads system, which was held
 14 to particularly strict latency standards. You know,
 15 there was this — this idea from organic search which
 16 is: we're going to give — we never want to be waiting
 17 for ads, right? We want to return the organic results
 18 to users as quickly as possible and if ads can get in
 19 there in that time frame, great, and if they can't, we
 20 won't show ads, right? So there were these strict
 21 timeouts and all these things that we've discussed
 22 a little bit about before, right? So, because this was
 23 part of the ads system, right, it was — it was subject
 24 to much stricter controls than the organic side.
 25 Q. Okay.

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1 MS ROSE: The conversation you are having here is obviously
 2 2017.
 3 A. Yes.
 4 MS ROSE: Would the time periods and the technological
 5 solutions that we have been discussing have been
 6 significantly different in 2008 or 2010?
 7 A. Well, I think it depends on what you're speaking to
 8 specifically. I mean —
 9 MS ROSE: Well, this idea. This idea of having feeds and an
 10 API.
 11 A. Well, okay, so, you know, my experience, knowledge,
 12 expertise is in product ads primarily, which weren't
 13 released until late 2009, right? So — so to the extent
 14 that product ads didn't exist until 2009, right, unless
 15 Google had, you know, learned earlier, right, and
 16 I think I make this statement in one of
 17 the counterfactual sections of my maybe second witness
 18 statement or something like that, if they had learned
 19 early enough, yes, they could have developed this ad
 20 system as — as the solution, right? But if you looked
 21 at the exact timeline that actually happened, product
 22 ads weren't out until 2009.
 23 MS ROSE: So in 2009 —
 24 A. Yes.
 25 MS ROSE: — would it have been possible to have

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1 the solution that is being discussed here, the one that
 2 you are saying is worth careful consideration? Would
 3 that have been technically feasible in 2009 or would
 4 there have been any significant difference between 2009
 5 and 2017?
 6 A. I'd have to think about it. It's — I mean, it's
 7 actually — like, when I was asked about these kinds of
 8 questions before, it took me a lot of thinking before
 9 I could answer. So I don't see any immediate blocker,
 10 like, that comes — that pops into any mind, but I'm not
 11 sure how much weight to give that.
 12 MR JOWELL: Thank you.
 13 Could we go to a slightly different type of
 14 presentation. It is a slide presentation at {M1/522}.
 15 You can see, if we go to {M1/522/3}, that there were
 16 three options presented.
 17 THE CHAIRMAN: What is the date of this?
 18 MR JOWELL: Forgive me. It is dated — if we go back to
 19 {M1/522/1}, we see:
 20 "EC Shopping Remedy and Discussion.
 21 "... July 13, 2017."
 22 Do you recall this slide deck?
 23 A. I mean, upon seeing it, I believe that — I have no
 24 reason to disbelieve that this was a slide deck that
 25 I looked at and probably contributed to.

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1 Q. Who do you think it would have been presented to?
 2 A. Well, just looking at this one slide, which is what
 3 the current display has, I don't know.
 4 Q. Okay.
 5 A. I mean, if — if we —
 6 Q. To senior management?
 7 A. If we could look at the — I mean, however much
 8 information you can give me about this deck will allow
 9 me to answer that question better. So, like, if I could
 10 look at the title slide, if I could — if it's — if
 11 there's any title to the deck itself that says, like,
 12 "Presentation to Sundar" or something like that, right,
 13 any of that would help me answer the question.
 14 THE CHAIRMAN: You probably prepared a lot of slide decks —
 15 A. Yes.
 16 THE CHAIRMAN: — over this period, I expect?
 17 A. Absolutely, we prepared quite a bit and we had many
 18 discussions at — with many different levels.
 19 THE CHAIRMAN: Yes.
 20 A. Right?
 21 THE CHAIRMAN: I can imagine.
 22 MR JOWELL: If we go to {M1/522/2}, we see:
 23 "The purpose of today's meeting is to get your
 24 direction on how to proceed with our plans to comply
 25 with the EC Shopping decision."

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1 A. Okay.
 2 Q. Does that suggest that this is to Mr Pichai?
 3 A. It points in that direction, but I wouldn't say it
 4 definitively says that, yes.
 5 Q. But it is clearly — who would have been the person who
 6 would give you direction on how to proceed with your
 7 plans?
 8 A. Let's see. It could have been potentially, like,
 9 a VP of Engineering, like Oliver Heckmann, but I think
 10 it's a reasonable likelihood that this would be to
 11 Sundar or someone, you know, pretty — pretty senior.
 12 Q. Okay.
 13 If you go to {M1/522/3}, we can see that there
 14 are — it says:
 15 "We currently have three options ...
 16 "Option A: turn off the subdomain ..."
 17 A. Yeah.
 18 Q. " ... and leave a unit containing just PLAs on the SERP."
 19 A. Yeah.
 20 Q. It says:
 21 "This offer relies on ... some confused language in
 22 the EC decision which allows us to argue that having
 23 a separate property is the problem and that we can fix
 24 things by getting rid of it. This has a low chance of
 25 success because the EC wants us to change the units but

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1 the fact of making the offer and the EC rejecting it or
 2 saying nothing will be helpful on appeal.
 3 "If we have to accept that the unit is the problem,
 4 which is likely, we have two Options.
 5 "Option B involves removal of the Unit and
 6 the Subdomain. This removes makes the problem
 7 obsolete: no unit and no service to be favoured.
 8 "Option C is to offer some form of improved
 9 aggregator access to the unit."
 10 I understand from the "GREG" below that you would
 11 have been saying this?
 12 A. I think that that "GREG" there means I am the one who
 13 was tasked with presenting this slide.
 14 Q. Yes.
 15 THE CHAIRMAN: "The Subdomain", that is a reference to
 16 the Shopping Property, is it?
 17 A. I believe that's correct.
 18 MR JOWELL: Just to assist you, I am told that the metadata
 19 provided by Google gives the file name of this
 20 document: "Sundar briefing".
 21 A. Then I could say with some level of confidence this was
 22 a presentation to Sundar.
 23 Q. I am grateful.
 24 If we go to {M1/522/4}, we can see option A:
 25 "Option A allows us to retains more than 80% of

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1 revenue and traffic in the EU. However, it has a low
 2 chance of success and we lose subdomain revenue forecast
 3 to be around \$460M in 2017."
 4 So you are effectively saying, first of all, we do
 5 not think that turning off the Property alone is going
 6 to satisfy the Commission; correct?
 7 A. Yes.
 8 Q. Secondly, it is going to cost us almost half a billion
 9 dollars in 2017; correct?
 10 A. Yes.
 11 Q. Then —
 12 A. Yes.
 13 Q. — option — if we go from the bad to the disastrous,
 14 "Option B", it says:
 15 "... is our best chance of complying. As you can
 16 see, it has the highest cost. Total revenue impact of
 17 around \$1.6B in 2017. Lost queries. And lost sales and
 18 disruption for our merchants."
 19 So I imagine Mr Pichai was not attracted to that
 20 option at all, was he?
 21 A. I don't exactly remember what his reaction was in this
 22 particular meeting, but, you know, I can tell you that
 23 we decided not to go with this in the end.
 24 Q. It was a clear no, was it not?
 25 A. It was — it was, sorry?

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1 Q. A clear no? This was out of the question?
 2 A. It was a clear no, especially — well, also given
 3 consideration to the fact that we got some direction
 4 from the EC that they didn't like that, that even though
 5 our initial thought was: well, if we remove the unit,
 6 how could we possibly not be in compliance? But the
 7 EC was like, "We prefer that you keep the unit and give
 8 — give CSSs access to the unit".
 9 Q. But the critical thing that made this a complete
 10 non-starter is that you are going to lose \$1.6 billion
 11 annually, and that is not even counting the lost queries
 12 on Google, the lost product queries?
 13 A. Yeah, I mean, it's expensive. I think if we were to be
 14 held in non-compliance, I think that would be more
 15 expensive, right?
 16 Q. There was not — but you did not seem to assess that
 17 this would have — lead to. You say this is your "best
 18 chance of" —
 19 A. Right, but I'm saying compared to the alternatives,
 20 right? So, in other words, if we're weighing the risk
 21 of non-compliance and the associated fines, right, and
 22 damages, and all that kind of stuff, and then you look
 23 at, okay, well, what is our best chance of complying,
 24 right, and how much does that cost, right, so you have
 25 to kind of weigh those, and there was consideration

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1 given to turning off the unit, with the idea that, like,
 2 okay, that will give us the best chance at complying and
 3 maybe it's worth it not to risk all the — all
 4 the potential fines and damages and all that stuff.
 5 But — but that was — we ended up not making that
 6 decision, right, and again, part of the reason was EC —
 7 Q. That was a non-starter, come on.
 8 A. It was — yeah, it seemed like it was a non-starter for
 9 them, as far as I could tell.
 10 Q. For Mr Pichai it was a non-starter, surely?
 11 A. I mean, what I can say is I don't remember him, like,
 12 looking and saying, "Oh, well, we clearly can't do that,
 13 like, let's just forget that". I do not remember
 14 anything like that.
 15 Q. Okay, well, it was number 10 on your list, was it not?
 16 We saw, just a moment ago, it was the very bottom of
 17 your list?
 18 A. Yeah, it was the bottom of my list. I worked on that
 19 thing.
 20 Q. Okay.
 21 If you go to {M1/522/5}, you see you say:
 22 "Our recommendation is to apply pressure ..."
 23 Someone's recommendation is:
 24 "... to apply pressure on the [European Commission]
 25 now by offering to fix the subdomain only. Silence or

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1 no agreement would be helpful on appeal. We'll give
 2 them two weeks to respond."
 3 So that was your opening proposal to the EC was: we
 4 are going to turn off the website, yes?
 5 A. To the best of my recollection, that was our opening
 6 proposal.
 7 Q. Yes.
 8 That was really a bluff, was it not?
 9 A. I don't think it was a bluff. I think we didn't expect
 10 it of having a high likelihood of being accepted.
 11 I think if they had accepted it, I think we would have
 12 been happy, I think.
 13 Q. What, with half a billion dollars revenue lost a year —
 14 A. Well, actually let me retract that —
 15 THE CHAIRMAN: Hang on —
 16 A. — let me retract that —
 17 THE CHAIRMAN: — that is not the half billion.
 18 MR JOWELL: If we go back —
 19 THE CHAIRMAN: Yes.
 20 MR JOWELL: — the Property is —
 21 A. I would like to retract what I said about we would have
 22 been happy, because it was — I think that that was
 23 relatively low on our list.
 24 Q. Yes.
 25 A. So, you know —

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1 Q. So it was a bluff?
 2 MS ROSE: (Off microphone — inaudible).
 3 A. So I was not involved in the specific strategic
 4 discussions around this and so I can't — I cannot say
 5 definitively whether it was a bluff or not. It was not,
 6 to my knowledge, a bluff.
 7 MR JOWELL: Okay.
 8 If we go to page {M1/522/8}, we see the plan was to:
 9 "Send [a] letter exploring viability of subdomain
 10 shut-down."
 11 In the meantime you are going to scope out
 12 the alternatives?
 13 A. Mm—hm.
 14 Q. Then we see:
 15 "Generate letters of support from retailers for
 16 Google Shopping."
 17 A. Yes.
 18 Q. So effectively you are going to get some retailers to
 19 send letters telling the Commission not to change
 20 Google Shopping too much; is that right?
 21 A. Something along those lines. I mean, I think we — what
 22 I remember from that was we wanted to make sure that
 23 the Commission understood how much value to merchants
 24 the shopping unit was providing and, if we made major
 25 changes, such as removing the primary links so that they

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1 no longer went to merchants but rather went to CSSs,
 2 that that would be problematic for merchants.
 3 Q. So you were trying to get merchants to lobby
 4 the Commission?
 5 A. We were trying to:
 6 "Generate letters of support from retailers for
 7 Google Shopping".
 8 Yeah, I mean, we were trying to get — get
 9 the European — we were trying to get merchants to tell
 10 the European Commission: this is important to our
 11 business, please don't ruin our business.
 12 Q. If we go to M1/44 —
 13 PROFESSOR SMITH: Sorry, before we leave this document —
 14 MR JOWELL: Yes, of course.
 15 PROFESSOR SMITH: — can I go back and ask a question?
 16 Going back to your options, option A was going to
 17 cost half a billion pounds.
 18 MS ROSE: Dollars.
 19 PROFESSOR SMITH: Dollars, euros, whatever, half a billion
 20 something. Not seconds! But you thought the EC would
 21 not like it anyway?
 22 A. Yeah. And option A is shutting down the shopping
 23 product.
 24 PROFESSOR SMITH: In reality what you did is not very far
 25 away from option A, because you have kept the shopping

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1 unit and you still have Google Shopping, but
 2 Google Shopping is now populated, as you told us, with
 3 what happened when you shifted in 2012/2013,
 4 the shopping unit is populated mostly with ads.
 5 A. Mm—hm.
 6 PROFESSOR SMITH: Customers do not frequently click on
 7 the shopping unit, do not click on the Google Shopping
 8 links one way or another, the tab at the top.
 9 A. Mm.
 10 PROFESSOR SMITH: So actually, most of your business now
 11 comes through the shopping unit?
 12 A. Well, let's see, I guess there was a few parts to your
 13 question, so let me see if I can unpack it.
 14 So you were saying it's — what we actually did in
 15 the Remedy was sort of in practice not that different
 16 from shutting down the shopping domain, I guess was —
 17 is your contention, as I understand it —
 18 PROFESSOR SMITH: Outcome, yes.
 19 A. Yes, I think there are some differences in that, you
 20 know, users can navigate to the Shopping Property,
 21 shopping.google.com, and also because the shopping tab
 22 was outside the scope of the Decision, they can get to
 23 the Shopping Property that way, right? So I think,
 24 you know, having the ability for users to go to
 25 Google's, you know, in depth CSS is still there, so —

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1 so I think it's — now, it's true that, you know,
 2 the links that were within the unit were removed, with
 3 the exception, as — as you pointed out, to the "By
 4 Google", you know, CSS link, right?
 5 PROFESSOR SMITH: But not many consumers actually use these
 6 links now in the —
 7 A. Well, I don't know what the statistics are now, and
 8 I only have a vague recollection of what the statistics
 9 were then, so I can't really speak to how — how often
 10 people go to the Shopping Property at this point.
 11 MR JOWELL: Can I come back to the call out, the query—time
 12 callout approach, another document on that.
 13 A. Yes.
 14 Q. If we go to {M1/447}.
 15 This is — again, it is a document entitled:
 16 "CSS ranking of CSS inventory."
 17 A. Mm—hm.
 18 Q. It seems to be an internal discussion of this option.
 19 Do you recall this document?
 20 A. Okay, let me just look at it for a second.
 21 (Pause)
 22 Is this — is this document about 10 pages long or
 23 so? I want to make sure I'm —
 24 THE CHAIRMAN: I think 15 pages.
 25 A. It's 15 pages? I wonder — I wonder —

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1 THE CHAIRMAN: (Overspeaking — inaudible) —
 2 A. I'm sorry.
 3 THE CHAIRMAN: — Mr Friedman wants context. Apparently
 4 there is another document, the main document, to which
 5 this is some sort of attachment, looking at the top
 6 line.
 7 MR JOWELL: Yes, I see that. I am not sure we have that —
 8 THE CHAIRMAN: I do not know if you know the main document
 9 that it is linked to that might help Mr Friedman?
 10 MR JOWELL: We will try to find out, but I am not sure we
 11 have it. We will come back, if I may.
 12 But I just wanted to ask you a few things about what
 13 is written here. First, it talks about — it says —
 14 explains that:
 15 "... there are technical and non—technical reasons
 16 why CSS ranking of CSS inventory will be difficult."
 17 It says:
 18 "Privacy is the hardest constraint: making ..."
 19 Well, you can see there is the problem of call outs
 20 to third parties without query breaks and privacy
 21 problems. Then it says:
 22 "Latency is another concern ..."
 23 A. I'm looking for the, "Latency is another ..."
 24 Q. Do you see, it is the end of the second line:
 25 "Latency is another concern; Google Shopping

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1 operates within very strict latency constraints ... "
 2 A. Ah, okay, yes.
 3 Q. "... that 3rd parties are unlikely to be able to
 4 match ..."
 5 A. Yes.
 6 Q. "... in the case of a pure callout solution, we believe
 7 that a 400ms deadline for the call out is reasonable and
 8 fair."
 9 A. Mm.
 10 Q. Then it says this:
 11 "Both issues (privacy & latency) can be alleviated
 12 if we replace callout by sandboxing; we provide a number
 13 of hooks for 3rd parties (and potentially
 14 Google Shopping) to implement."
 15 Can you explain what "sandboxing" would involve?
 16 A. So I don't remember this document in any detail at all.
 17 In fact, I was a little surprised to see it when it
 18 showed up in my packet. Now, I think I maybe was tagged
 19 in the comment in here and possibly even had a comment
 20 or something, so I --- clearly I did see this document
 21 back then, I just hadn't --- hadn't recalled it at the
 22 time of me writing my witness statement and until I saw
 23 the document recently; and I'm --- I'm not --- okay,
 24 I don't know exactly what he meant by "sandboxing".
 25 I can guess, but I've been told I'm not supposed to

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1 guess.
 2 Q. Well, why do you not speculate for us what "sandboxing"
 3 would involve?
 4 A. Well, I wonder if there is more details on the proposal
 5 about sandboxing that I could read before I did that.
 6 Is there anything ---
 7 Q. Maybe the comment on the right-hand side would help.
 8 There are some privileged comments. But then, do you
 9 see comment 3 ---
 10 A. Okay.
 11 Q. "Yes, I think something along this line is sensible.
 12 The trick is to come up a fair scheme that:
 13 "1. [Is] not too hard for CSS to implement this may
 14 be viewed as clearly unfair if the technical bar is too
 15 high.
 16 "2. Enough room for Google Shopping to innovate,
 17 given that we need to stay in this box also."
 18 A. Mm---hm.
 19 Q. Does that help at all?
 20 A. Let me just --- if we could go back to the original
 21 paragraph that you were asking. Okay, let me just
 22 read it again.
 23 (Pause)
 24 Okay.
 25 THE CHAIRMAN: Before Mr Friedman attempts to answer, this

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1 is an executive summary, I think, of the document; is
 2 that right? Of what is quite a long document?
 3 Mr Jowell, is that right?
 4 MR JOWELL: Yes.
 5 THE CHAIRMAN: This page.
 6 MR JOWELL: That is right. I mean, we could ---
 7 THE CHAIRMAN: So there may be, rather than Mr Friedman
 8 having to try and speculate and excavate in his memory,
 9 if we go into the main document ---
 10 MS ROSE: Pages 8 and 9.
 11 THE CHAIRMAN: --- there may be something that will help you.
 12 A. Okay.
 13 THE CHAIRMAN: In the main document ---
 14 A. Thank you.
 15 THE CHAIRMAN: --- and Ms Rose is suggesting page 8.
 16 MR JOWELL: Ms Rose is absolutely correct, as always.
 17 Page 8 {M1/447/8} is, "Sandboxing environments".
 18 A. Ah, okay. So I will ... Great, thank you.
 19 (Pause)
 20 We can go a little further I guess to the next page
 21 or the next section of this {M1/447/9}.
 22 "Sketch sandbox solution", okay.
 23 (Pause)
 24 We can go on the next part {M1/447/10}.
 25 (Pause)

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1 I guess we can go on. Sorry, what I mean is could
 2 we scroll a little more, please? Thank you.
 3 (Pause)
 4 Okay, I have a --- I have a basic idea of what's
 5 being proposed here.
 6 Q. Okay.
 7 A. So, I'm sorry, is there a specific question, or should
 8 I try to explain it or what ---
 9 Q. A summary. In broad summary, yes.
 10 A. Okay, so I think it's basically that the CSSs would
 11 provide a feed of all their offers and they would also
 12 provide some code which would be run on Google's systems
 13 which would be able to do some kind of ranking of
 14 the offers. It also refers to a list of --- I think
 15 a list of queries with maps to offers or something like
 16 that. Actually, I think that's part B. Maybe we could
 17 go back to that section again. Sorry, it's a little
 18 complicated to get it all in. So we're looking for
 19 the part B in that, or ...
 20 (Pause)
 21 Sorry, could we go up a little more? Okay
 22 {M1/447/9}:
 23 "A feed mapping query--patterns to prioritized lists
 24 of offers, potentially including (query x offer)
 25 metadata."

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1 Okay, okay. Let's see if I can understand and
 2 explain this.
 3 So CSSs provide feeds of offers to Google, and
 4 Google does some — some kind of indexing on that,
 5 though I'm not sure of the details of that. They also
 6 have a feed which maps, essentially, like, you can think
 7 of it as, like, keywords or subsets of a query, or in
 8 the simplest case, just a query string, right, and it
 9 says, "For this query, I want you to consider these
 10 offers", like offer ID, for example, right? It seems
 11 like the Tribunal is following what I'm saying so far.
 12 Please ask questions if not.
 13 Okay, so — so now you've got — Google has a set of
 14 offers and they have this mapping from: when you see
 15 this query, I want you to score and rank the following
 16 offers. Then — and then they provide code, that's this
 17 per-document scoring function, right, that would
 18 basically look at the query and the offer and come up
 19 with a score.
 20 Then the "global reranking", I'm not 100% sure
 21 there. I think that might have to do with, like,
 22 basically looking at the full set of results that you've
 23 now ranked. Given that full context, do you want to do
 24 some reranking for — you know, and I think that that —
 25 I have this vague notion that there was — that

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1 capability was part of organic shopping at some point or
 2 something. I don't know if this was ever discussed, but
 3 ... I have a feeling that part D is not super important,
 4 you know, for our discussions, so we can probably ignore
 5 part D, I am guessing.
 6 MS ROSE: One thing that we do not find here is where
 7 the monetisation comes in.
 8 A. Yes.
 9 MS ROSE: Where the auction comes in. It does not seem to
 10 be described in this process.
 11 A. That's — that sounds right to me. I don't see
 12 a description of the auction here, right? So perhaps
 13 this was meant to be an organic proposal. But, yeah,
 14 so — so, right, maybe everyone sort of understands
 15 the basic idea now, but there's code that would run on
 16 Google's systems but is provided by the CSS, right? So
 17 the CSSs give offers, give mappings of query to offers
 18 for consideration and give a scoring function. All of
 19 this gets essentially processed on Google's systems.
 20 MS ROSE: So essentially the point about this is that it
 21 enables Google to select the offer that the CSS thinks
 22 is most relevant to the query without passing the actual
 23 query to the CSS, violating the privacy of the searcher?
 24 A. That is my understanding of the intention of this,
 25 correct.

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1 MS ROSE: Yes.
 2 A. That is — I agree.
 3 MR JOWELL: In that way, it would get over the privacy
 4 problem?
 5 A. Sorry, could you ...?
 6 Q. It would get over any privacy problem there might be?
 7 A. Yes, I think that that's correct. I mean, at least as
 8 my — certainly any privacy issue that would arise from,
 9 you know, sending all the queries to third party CSSs at
 10 run time would be avoided and that — and I think that
 11 is the point of this.
 12 Q. If we look at what it says about latency, it is also
 13 informative. If we go to {M1/447/5}. If we could make
 14 it a bit larger, please.
 15 You can see "Latency constraints" sub-heading.
 16 A. Oh, okay, yeah.
 17 Q. You see what it says:
 18 "To determine what is an acceptable latency
 19 constraint, we need to answer four questions:
 20 "What is the order of magnitude that is perceptible
 21 by users.
 22 "What is Google's latency in answering such queries.
 23 "What latency constraints does Google Shopping
 24 operate under.
 25 "What is a latency target that is achievable by 3rd

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1 party CSSs with reasonable, but not advanced, technical
 2 expertise."
 3 A. Mm—hm.
 4 Q. Then it refers to some "cited sources" on latency.
 5 A. Yeah.
 6 Q. It talks about:
 7 "The relevant numbers in the paper are: 0.1 to
 8 0.2 seconds for 'response to control activation'."
 9 Yes?
 10 A. "The relevant numbers in the paper are: 0.1 to
 11 0.2 seconds for 'response to control activation'."
 12 Q. Then if we go — and then you see there are some
 13 relevant quotes.
 14 If we go over the page {M1/447/6}, there are a few
 15 caveats, including that:
 16 "The paper is almost 50 years old ..."
 17 A. Mm—hm.
 18 Q. Then it says:
 19 "Nonetheless, the relevant range in our context is
 20 that we should expect Google's search page to render
 21 within 2 seconds."
 22 A. Mm—hm.
 23 Q. "Due to the structure of the technology stack involved,
 24 this means that the entirety of the Shopping responses
 25 need to be available within that time frame."

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1 Then it says:
 2 "As for Google's latency, the best place to look
 3 would be the GWS latency dashboard ..."
 4 There:
 5 "The average latency is hovering between 500ms and
 6 600ms ..."
 7 A. Okay.
 8 Q. Then it says:
 9 "With respect to C, Google's SLA is a 99%—ile
 10 latency of 60ms ..."
 11 I think you mentioned that earlier?
 12 A. Yeah, yeah, this is probably the line that led me to my
 13 correction, I'm guessing, yes.
 14 Q. Yes.
 15 Then if we can scroll down, it concludes:
 16 "Thus, 200ms is the minimum that would be fair to
 17 3rd party CSS's."
 18 Then:
 19 "The final question with respect to latency is, what
 20 is a constraint that is workable with adequate technical
 21 knowledge."
 22 A. Sorry, I'm not — I haven't found that part yet.
 23 Q. Well, maybe if you just read it to yourself.
 24 A. Okay.
 25 (Pause)

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1 Oh, so the last sentence of the first paragraph
 2 that's being displayed, so it's:
 3 "Thus, 200ms is the minimum that would be fair ..."
 4 Is that what you're referring to?
 5 Q. Maybe if you keep reading.
 6 A. Okay. Oh, a—ha.
 7 (Pause)
 8 Q. Tell me when you are done.
 9 A. Okay, I'm still — still ...
 10 (Pause)
 11 Okay, and —
 12 Q. If we go over the page {M1/447/7}, let us finish
 13 reading. We see it says — it refers to:
 14 "A much more generous deadline would be GWS's
 15 average latency of 600ms."
 16 Then you see it suggests:
 17 "... 'splitting the two' and setting a deadline
 18 midpoint between Google's own internal deadline ... and
 19 GWS's average response times ... at 400ms ..."
 20 It notes:
 21 "... this should not put unnecessary technical
 22 burden on 3rd parties, as the evaluation above shows
 23 that a simple solution can achieve sub—100ms latencies."
 24 A. Okay.
 25 Q. So what I would suggest to you is that there is no

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1 latency impediments to the callout API solution, is
 2 there? There is no — it is perfectly doable within
 3 a total of 2 seconds? Indeed, sandboxing would also
 4 assist with latency, would it not?
 5 A. Certainly what I will say is sandboxing would assist in
 6 latency.
 7 Q. Okay.
 8 A. That is true.
 9 Q. That is because the information would be pre—processed?
 10 A. There would be pre—processing and the — you know, all
 11 the processing would actually — at query time, all
 12 the processing would be on Google's systems, right? You
 13 wouldn't have to do an external callout and all that
 14 that entails.
 15 Q. So I would suggest to you that the overall thrust of
 16 this document is that neither privacy nor latency were
 17 actually insuperable problems for this particular
 18 solution.
 19 A. Yes, so what I would say is if we were to go with
 20 a non—sandbox approach where we're actually doing a run
 21 time callout, privacy and latency are clearly issues.
 22 In fact, I would say deal killers.
 23 For the sandboxing case, it appears that
 24 the analysis done in this document, which, you know,
 25 I don't believe I was involved in but, you know,

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1 suggests that — well, the privacy should be not an
 2 issue, I believe. The latency, it still does require
 3 some reasonably substantial latency increase, so —
 4 you know, so for example, if you look at the amount of
 5 time that the entire product ads portion of the serving
 6 was given, 60 milliseconds 99% of the time, right? So
 7 I think he's suggesting we have to change that to 400 or
 8 something like that, right? So — so you have to keep
 9 that in mind. That's a huge difference, right?
 10 Also, you know, if I am correct in who wrote this —
 11 which I'm not 100% sure but I have a guess — I mean,
 12 you know, this is one engineer, right, who's making
 13 these assessments. He's not saying, like, you know, all
 14 the Google decision makers controlling latency will find
 15 this acceptable. You know, that's not —
 16 Q. But, to him, he is saying there is an acceptable
 17 solution to latency, is he not? That is the thrust of
 18 this document?
 19 A. He is saying that it is — it should be — I think what
 20 he's saying is — and this is my best interpretation
 21 from reading this, is, if we were to propose to
 22 the Commission and CSSs that CSSs get, you know, some
 23 number of milliseconds, right, that is consistent with
 24 a total processing time of 400 milliseconds, our
 25 position should be that is reasonable, that should be

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1 enough time for the CSSs.
 2 Q. And enough time for Google, or not too much time for
 3 Google?
 4 A. That might be also implied.
 5 Q. Thank you.
 6 Okay, could I now —
 7 MS ROSE: It could have been done in 2009 just as much as it
 8 could have been done in 2017?
 9 A. I'll have to — you know, these — these questions about
 10 what could be done, you know, require some thought. Let
 11 me just — can I take a minute or two to think about
 12 that?
 13 THE CHAIRMAN: Well, in fact, let us take our break.
 14 A. Okay.
 15 THE CHAIRMAN: I see that on our timetable in fact you are
 16 not envisaging — or were not envisaging completing
 17 the cross-examination of Mr Friedman this afternoon.
 18 MR JOWELL: I am running slightly, slightly behind time,
 19 because I have to — I think Mr West has an hour,
 20 I think.
 21 THE CHAIRMAN: All I was really working to saying is if
 22 Mr Friedman is coming back in any event tomorrow
 23 morning, which seems likely —
 24 MR JOWELL: Yes.
 25 THE CHAIRMAN: — and some of these more difficult questions

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1 where we are asking you to really think on your feet, as
 2 it were —
 3 A. Right.
 4 THE CHAIRMAN: — metaphorically, we might, as it were, ask
 5 you to reflect overnight and give you a chance to think
 6 it through.
 7 A. Sure.
 8 THE CHAIRMAN: Which might help you, I think, in fairness,
 9 particularly trying to work out what could have been
 10 done in 2009.
 11 A. Yeah, that would be great.
 12 THE CHAIRMAN: That might assist you.
 13 A. So should I be taking notes as to these questions or
 14 will the court provide a list of questions for my
 15 contemplation, or ...?
 16 MR JOWELL: I think he can be provided with a transcript.
 17 THE CHAIRMAN: I think you can have the transcript. I do
 18 not see any objection to that. You will probably recall
 19 the particular points, but ... and if not (off
 20 microphone — inaudible).
 21 We will come back — I mean, we can think about that
 22 and we will come back just after 3.30.
 23 (3.22 pm)
 24 (A short break)
 25 (3.36 pm)

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1 MR JOWELL: Could I ask, please, for you to be shown
 2 document {M1/457}.
 3 What I would like to turn now to, Mr Friedman, if
 4 I may, is the actual Remedy that you did adopt. This is
 5 an email exchange between Mr Fabien Millet, who we
 6 mentioned earlier, the internal economist — one of
 7 the internal economists at Google, and Mr John Vickers,
 8 a distinguished English economist, who was advising
 9 Google at the time.
 10 A. Yes. May I stop you just for a moment? I have
 11 a question for the court.
 12 So when we were talking about the sandbox approach,
 13 you know, we were having discussions around latency and
 14 privacy, I do have some thoughts on other problems with
 15 that approach that have to do with quality and other
 16 things. So it's up to you whether I should go into that
 17 or not, but I just wanted to offer that as — if you
 18 find it useful.
 19 THE CHAIRMAN: I think, yes, we would like to hear, while it
 20 is fresh now in your mind —
 21 A. Yes.
 22 THE CHAIRMAN: So shall we do that first and come back to
 23 this exchange in a minute?
 24 A. Okay. Okay, great.
 25 So — you know, so the privacy of the queries would

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1 be addressed with the sandboxing approach, the latency
 2 would be reduced but still very substantial. Now, in
 3 terms of quality, I think there would have been a very
 4 significant quality — negative quality impact, and
 5 the reason is that the proposed mechanism for selecting
 6 the set of offers that would be scored on a given query
 7 was this static list that is being provided by the CSSs
 8 to Google, right, as opposed to a very large index which
 9 is dynamically queried at run time. So, you know,
 10 there's an index that Google has, which I suspect we've
 11 gotten into at some point in the trial, with, you know,
 12 depending on what time period we're looking at, billions
 13 of offers, all of which are potentially retrieved for
 14 scoring on every query, right? Then there's all this
 15 technology to find the right set of queries given —
 16 sorry, the right set of offers and products given
 17 the query, given information about the user, time of
 18 day, various other things that are all dynamically
 19 determined, right? So that set of offers being pulled
 20 from — from the index —
 21 PROFESSOR SMITH: The index is refreshed how frequently?
 22 A. Yeah, I — to the best of my recollection, a full index
 23 refresh happened every six hours, and then there was
 24 a fast-track every 90 minutes or something like that
 25 for ... yeah.

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1 MS ROSE: So how often could the list from CSSs be
 2 refreshed?
 3 A. I mean, I — I don't know, but I don't see — I mean, it
 4 could be refreshed on a frequent basis. I think it's —
 5 you know, so part of that would be — well, and let me
 6 also point out that, you know, there's pretty
 7 complicated and sophisticated retrieval mechanisms to
 8 look at different aspects of the query, right, and to do
 9 all these synonyms and all these kind of things, right,
 10 which really rely a lot more on this dynamic processing
 11 the query as the query comes in, right, rather than
 12 a static list? I mean, there were times, way back in
 13 the early days, when I think we actually may have
 14 considered — okay, I can't remember this for sure.
 15 I think there were times, for the very first
 16 implementation of PLAs, we actually considered this
 17 static mapping of query to offers and we rejected it
 18 because we thought it just was not going to give us
 19 a good set of offers, because we wouldn't have all that
 20 information that's only available at query time.
 21 MS ROSE: This option would still enable Google to do that
 22 for its own shopping service, right?
 23 A. Well, if that was considered to be okay under the equal
 24 treatment principle, which probably it wouldn't, right?
 25 MS ROSE: But it might be that the CSSs — I mean, there

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1 might not be any alternative, right, because that may be
 2 the only way technologically that the CSSs can get their
 3 shop window onto the box?
 4 A. Mm.
 5 MS ROSE: Do you see what I mean?
 6 A. You're saying, so let's assume for a moment that it's
 7 mandated or — or that Google has made the decision: we
 8 will do this sandboxing approach?
 9 MS ROSE: Yes.
 10 A. Yes.
 11 Then the question is?
 12 MS ROSE: Well, then you would want to get the best possible
 13 quality.
 14 A. Yes.
 15 MS ROSE: That might mean that you had a different
 16 technology for Google's property from that which you had
 17 for the other CSSs, you might have to do that.
 18 A. I mean, we would probably advocate for that in that
 19 case, and I would guess — I mean, it's just a guess —
 20 that the EC would say no.
 21 MS ROSE: But there may not be any alternative. I mean, if
 22 there — you know, do you see what I mean?
 23 A. Yes. Yeah.
 24 MS ROSE: I mean, what is the alternative?
 25 A. Well, I guess the alternative is the Remedy as

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1 implemented, or —
 2 MS ROSE: But the Remedy as implemented does not give
 3 the CSSs any visibility really, does it, so this would
 4 be better than that?
 5 A. Mm—hm. Well, okay, so — and that goes for my second
 6 point, if — if I may, which is — so I think you
 7 pointed out — do I address you as madam or ...
 8 MS ROSE: You can call me madam or ma'am or, yes, Ms Rose.
 9 A. Okay, so, madam, you pointed out that the sandboxing
 10 approach outline didn't refer to an auction, right?
 11 MS ROSE: Yes.
 12 A. So, you know — now, you know, if we were to implement
 13 an auction—based solution, I think almost any solution
 14 that had this full unit taking over by a single CSS was
 15 very likely to result in much lower value that would
 16 then be entered into the whole page auction than
 17 the mixed CSS approach, which is the one we took for
 18 the Remedy, right?
 19 MS ROSE: You mean financially, when you say "Remedy"?
 20 A. Well, the computation of long-term value, yes.
 21 MS ROSE: Ah, so you are not talking about the price paid by
 22 merchants?
 23 A. The full value of the unit, so taking into, you know,
 24 consideration what are the likely click-through rates,
 25 you know.

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1 MS ROSE: Right. But, you know, I mean, looking at the way
 2 the unit is —
 3 A. Yes.
 4 MS ROSE: — frankly, it is not that great.
 5 A. Mm—hm.
 6 MS ROSE: You know, it is not really very useful. So I am
 7 just slightly sceptical about the sort of — the idea
 8 that there is this great kind of technological
 9 masterpiece that lies behind it, because basically —
 10 I mean, I did a search this morning for digital cameras
 11 and I got a random list of a few randomly priced and
 12 selected digital camera. It was very uninformative.
 13 You know, this may be a reason why so much more traffic
 14 is just going to Amazon.
 15 A. Mm. Yes.
 16 MS ROSE: I mean, is that not the reality?
 17 A. Well, I don't know if I have expertise in that —
 18 MS ROSE: So I am just slightly sceptical —
 19 A. Yes.
 20 MS ROSE: — about the idea that what you have is very high
 21 quality.
 22 A. What you're speaking to is the quality to users. We are
 23 not —
 24 MS ROSE: Sure, I am talking quality to users, yes.
 25 A. Yes. Well, what I can say is that, you know, we put

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1 tremendous effort into making it as high quality as
 2 possible and our ability to innovate in regards to
 3 providing user functionality on that box was restrained
 4 by the EC, right?
 5 MS ROSE: But, I mean, is not part of the problem that, you
 6 know, you have got Amazon, which is this enormous,
 7 dedicated product website —
 8 A. Mm, yes.
 9 MS ROSE: — with, again, billions of offers —
 10 A. Yes, yes.
 11 MS ROSE: — and enormous functionality —
 12 A. Yes.
 13 MS ROSE: — and completely tailored to taking your money
 14 with the minimum friction —
 15 A. Indeed.
 16 MS ROSE: — on one click and with next day free delivery —
 17 A. Yes.
 18 MS ROSE: — and there is no way you are going to compete
 19 with that, right, when your search engine does so many
 20 other things. You know, you are a Jack of all trades —
 21 A. Yes.
 22 MS ROSE: — and they are a master of one.
 23 A. Yes, yes.
 24 MS ROSE: So is that not the reality?
 25 A. Well, I think what I can speak to is, you know, when

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1 I was at Google and what the discussions were, and there
 2 was absolutely discussions: boy, Amazon is going to be
 3 hard to compete with, and here are a whole bunch of
 4 strategies that we can try to do to do so. Right?
 5 But — but that is a hard nut to crack, for sure.
 6 MS ROSE: Yes, and you are basically on the receiving end of
 7 the same kind of concentration network effect that
 8 affects smaller CSSs trying to compete with Google.
 9 A. You mean with respect to Amazon?
 10 MS ROSE: With respect to Amazon. There tends to be only
 11 one winner.
 12 A. Yeah, well, I think —
 13 MS ROSE: The internet tends to want —
 14 A. Yeah, I mean, I think the —
 15 MS ROSE: — this space because of network effects.
 16 A. I mean, so one of the things Amazon has done really well
 17 is to make it really easy to do your entire shopping
 18 journey all the way through purchase and then to have
 19 useful functionality for when you come back. Like: here
 20 is your previous purchases, right? Oh, I already know
 21 your shipping information, I already ... blah blah blah.
 22 So, yes, that's a huge competitive advantage.
 23 MS ROSE: Okay.
 24 PROFESSOR SMITH: Can I go back, because I am not sure I got
 25 a full picture of the downside of this sandbox.

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1 A. Yes.
 2 PROFESSOR SMITH: Because you said the Google index of
 3 product offers —
 4 A. Yes.
 5 PROFESSOR SMITH: — has got billions —
 6 A. Yes.
 7 PROFESSOR SMITH: — of offers and it is refreshed on an
 8 almost hourly basis.
 9 A. Mm—hm, yeah.
 10 PROFESSOR SMITH: What I did not get was how that contrasts
 11 with whatever is coming through into the sandbox from
 12 the CSSs.
 13 A. Yeah, so the — what the CSSs would do, and as
 14 I understand this proposal, you know, so subject to that
 15 limitation, right, is they would provide essentially
 16 this list of: okay, for this query, like if someone
 17 searches for "red summer dress", here is a list of 100,
 18 500, I don't know how many, offers that I want you to
 19 consider and do scoring on to determine which are
 20 the best offers to show. Right? So, you know, I don't
 21 know what you — what one might imagine would be
 22 the absolute limit on the number that you could put on
 23 there, right, but 1,000, 5,000, I don't know, right? So
 24 that's — that's kind of a static list, right, and it's
 25 also doing a mapping from — you know, at least in

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1 the simplest form — a query string, a literal query
 2 string to a set of offers, right, as opposed to this
 3 index system that looks at different aspects of
 4 the query and can generalise lots of things,
 5 like: here's a query that's never been issued by anyone
 6 before, but it has these terms in it, you know, it has
 7 these similarities to other queries, it has a similar
 8 Merlot category, I don't know if we've got into Merlot
 9 categories, but, you know, I mean the product category,
 10 right, etc, etc. So all of that stuff can be used to
 11 dynamically query this large set of offers and pull up
 12 the best set of I think it's 40,000 or 50,000, or at
 13 least was at one point, to be scored for the query.
 14 Does that help clarify, or ...?
 15 PROFESSOR SMITH: That does, and in a way I do not think it
 16 would be productive to go into further digging of
 17 detail, but that (inaudible), thank you, is clear.
 18 Thank you.
 19 A. Okay.
 20 MR JOWELL: May I ask a question?
 21 A. Yes.
 22 Q. Let us assume a world in which these rival CSSs are
 23 given that access through this system.
 24 A. The sandbox system we were talking about?
 25 Q. Yes.

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1 A. Okay.
 2 Q. Those CSSs develop, as they were developing before 2008,
 3 so that they are successful burgeoning businesses that
 4 expand and invest and improve their own way of
 5 ranking —
 6 A. Yeah.
 7 Q. — and delivering offers.
 8 A. Yeah.
 9 Q. Let us suppose that then you have competition between
 10 them and they compete for this position and they are
 11 investing and competing and getting better and larger
 12 than Google.
 13 A. Okay. Yes.
 14 Q. Then your quality concerns would not exist, would they,
 15 or not to the same extent?
 16 A. Well, the issue I'm raising is not that Google was —
 17 was technically superior, but by virtue of the query
 18 being run on Google's systems, right, in the sandboxing
 19 approach that's what it is, there are things that you
 20 can do, like query this huge database of offers at query
 21 time and not worry about the latency constraints.
 22 Q. My point is —
 23 A. Yeah.
 24 Q. — if the rivals got better —
 25 A. Yes.

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1 Q. — than Google —
 2 A. Yes.
 3 Q. — then you might end up having a better user experience
 4 over time?
 5 A. Better than — than —
 6 Q. Than giving the monopoly to Google for the ranking.
 7 A. Well, that is certainly possible, but it's not speaking
 8 to the point that I'm trying to speak to, which is
 9 the sandboxing approach specifically, right, which
 10 doesn't —
 11 Q. But it would be a countervailing fact, if you like,
 12 would it not?
 13 A. Okay, if we're talking about specifically for the unit
 14 that is displayed on Google.com, you know, that's
 15 a single CSS unit in the sandboxing approach, I will
 16 certainly say that, like, you know, to the extent that
 17 CSSs can provide good scoring functions and a good set
 18 of initial offers for consideration, that matters,
 19 right? There's limitations to what that can do, which
 20 was the point I was trying to bring up.
 21 Q. Yes.
 22 A. But, yes, of course it matters, and the more they invest
 23 in that, that will of course improve the quality.
 24 Q. Thank you.
 25 THE CHAIRMAN: If the query were passed on to the CSS —

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1 A. Mm — sorry, the question is?
 2 THE CHAIRMAN: If a query that was made on Google was
 3 transferred on to the CSS —
 4 A. So, in the sandboxing approach, no.
 5 THE CHAIRMAN: That is not sandboxing, I understand.
 6 A. Right, and that's the main sort of point of the
 7 sandboxing approach — also to reduce latency, I guess.
 8 THE CHAIRMAN: Yes.
 9 A. Right? But in the full callout approach that was
 10 considered, right, then the query is passed on to
 11 the CSS.
 12 THE CHAIRMAN: Then if the indexing, if they had
 13 the capacity, could be done by them, then —
 14 A. They would have their own index of — right, which they
 15 would be investing in, etc.
 16 THE CHAIRMAN: So the quality might be addressed, if they
 17 did it well?
 18 A. That aspect of the quality, right? There's a few
 19 different other aspects that I think are much harder to
 20 address, which I can get into if it's useful.
 21 THE CHAIRMAN: Which you have not mentioned yet?
 22 A. Right.
 23 THE CHAIRMAN: I have not (inaudible) yet.
 24 A. Yes.
 25 THE CHAIRMAN: But your problem then is then you have

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1 the privacy problem —
 2 A. Right.
 3 THE CHAIRMAN: — and potentially latency.
 4 A. And the latency problem, yeah, that's correct. That's
 5 correct.
 6 In any case, like, that was all the points I wanted
 7 to bring up and I'm happy to move on if the court
 8 wishes.
 9 MR JOWELL: I do not want to get too far behind.
 10 A. Yes, yes, yes.
 11 THE CHAIRMAN: Sorry, we have been disrupting you —
 12 MR JOWELL: No, no, not at all, I think it has been very
 13 valuable to everyone.
 14 If we go to {M1/457}, you see this exchange between
 15 the two economists, and if we go to {M1/457/2}, we can
 16 see an email from Mr Millet, dated 27 July.
 17 If we go to {M1/547/3} we see that he says:
 18 "I do not recall sending you the summary from
 19 the recent meeting on remedies with the EC ..."
 20 He says:
 21 "... please see attached just in case."
 22 Now, unfortunately, we do not — we have not been
 23 disclosed the meeting notes. I think they are alleged
 24 to be privileged.
 25 But if we go to {M1/457/1}, we can see Mr Vickers'

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1 thoughts on this. You see he says at the bottom:
 2 "A few quick thoughts:
 3 "1. My doubt about the acceptability of such
 4 a scheme was in part due to it not going appreciably
 5 beyond (or even as far as) the Almunia offer ... Maybe
 6 it does?"
 7 So that is a reference to the commitments offer.
 8 I think you said you were not familiar with that?
 9 A. No, I'm not. I am not sure what "Almunia" refers to,
 10 yeah.
 11 Q. But then he says:
 12 "You were not alone in doubting
 13 the acceptability ... " —
 14 PROFESSOR SMITH: This is Millet's, in response to —
 15 MR JOWELL: Yes. Yes, that is absolutely right. Yes,
 16 absolutely right, now Millet is commenting. Yes —
 17 PROFESSOR SMITH: But the line on the left —
 18 MR JOWELL: Yes, you're absolutely right —
 19 PROFESSOR SMITH: — indicates Vickers, and then no line
 20 indicates Millet; is that right?
 21 MR JOWELL: That is correct.
 22 Millet says:
 23 "You are not alone in doubting the acceptability of
 24 such a scheme. Maybe the fact that the entire unit is
 25 in some sense at play here (whereas Almunia only had

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1 half of it) played a role. Or maybe they feel that they
 2 had their moment in the sun already with the large fine,
 3 and that people will tune out now. Yet another
 4 explanation could be that they really disliked our
 5 alternative of shutting down the subdomain and made them
 6 revisit their calculus. All speculation of course ... "
 7 So, in short, the economists seem to be quite
 8 surprised that the scheme that you proposed was
 9 acceptable to the Commission, are they not?
 10 A. Yeah, I mean, it says that he had had some doubts about
 11 the acceptability of such a scheme.
 12 Q. If we see point 2, Mr Vickers says:
 13 "I'm not even on the language of Google Shopping
 14 bidding against aggregators. The bids are from
 15 merchants; Google Shopping (so to say) is just a conduit
 16 for their bids."
 17 A. Mm—hm.
 18 Q. The response over the page {M1/457/2}, Mr Millet says:
 19 "I have a lot of sympathy with that view. At
 20 the same time, I suspect the language in question is
 21 music to the Commission's ears."
 22 So the economists recognise that under the account
 23 unbundling scheme, from an economic point of view,
 24 the CSSs are just conduits for the merchants' bids, are
 25 they not?

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1 A. Well — so, you know, I have nothing to do — I've never
 2 seen this email, I had no involvement in it whatsoever,
 3 etc, etc, and it did — I think what it said is
 4 something about that Google is just a conduit, so he
 5 didn't say that all CSSs were.
 6 Q. Yes, well, let us see how you — let us — we can see
 7 how you look at it. If we go to {M1/459}. We see at
 8 the bottom your name.
 9 A. Okay.
 10 Q. Let us expand this a little, if we may.
 11 If we go over the page {M1/459/2}, could we make
 12 this a bit larger.
 13 You see you are commenting on a statement that would
 14 be made, which was:
 15 "No merchant will be able to participate directly in
 16 the auction."
 17 A. Yeah.
 18 Q. You say:
 19 "Why would we say this explicitly, and what exactly
 20 does this mean?
 21 "For example, if it turns out we don't have to
 22 adjust bids, there really isn't a substantial difference
 23 between the merchants participating directly in
 24 the auction versus participating via the Google Shopping
 25 CSS."

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1 Mr Millet responds to you:
 2 "Even in the case where we don't adjust bids, GSE
 3 would still be a 'layer' in between the merchant and
 4 the auction — charging a commission etc. So a merchant
 5 cannot come in without in some way going via an
 6 intermediary, even if the intermediary is incredibly
 7 thin."
 8 A. Mm—hm.
 9 Q. So I think both you and Mr Millet — I mean, you do not
 10 use the word "conduit", but you do agree, I think, that
 11 the intermediary layer is incredibly thin?
 12 A. Yeah, I mean, I think, to the best of my recollection,
 13 I was kind of speaking from — from a technical point of
 14 view, like: how do we implement this in the auction?
 15 Right? You know, most of what's needed directly in
 16 the auction would be this adjustment to the bid via the
 17 margin and the placing of that, right, and a few other
 18 things related to that, right? So I just wanted,
 19 I think, to make sure that we were being clear about,
 20 you know, what we were doing.
 21 Q. Yes, but then what you were clear about was that there
 22 was not a substantial difference between the merchants
 23 participating directly versus participating via a CSS,
 24 was there?
 25 A. Yeah, well, I think that, as I understand it — and this

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1 is not my area of expertise, but that's kind of
 2 the nature of the self—service model.
 3 Q. Yes.
 4 You then comment below that. You see you comment on
 5 the statement:
 6 "Designed and operated by Google General Search."
 7 You comment on that, you say:
 8 "What does this mean, and why are we saying it this
 9 way.
 10 "Maybe I'm being paranoid, but here's
 11 the concern: If the commission decided to dig deep would
 12 what was doing the work (which cost center, reporting
 13 chains, or anything like that), then they would see
 14 the work is clearly done by Google's Shopping division.
 15 "So I'm wondering if we should have that hedging
 16 here, though I'm not sure exactly what that hedging
 17 would look like."
 18 Are you essentially saying there that, under
 19 the proposed Remedy, the reality is that the substantive
 20 work is actually still being done by the Shopping
 21 division within Google?
 22 A. So I probably need to see more context on exactly what
 23 I was commenting on.
 24 Q. Well, I think it is the statement:
 25 "Designed and operated by Google General Search."

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1 A. But what is "designed and operated by Google General
 2 Search"? But I can also — if there is more context
 3 available, that would be great.
 4 Q. Let me see if we can find it.
 5 Maybe we can come back to that. Let me show you
 6 something — another document.
 7 A. Yeah.
 8 Q. If we go to {K1/25}.
 9 This is an email — this is an email here from
 10 someone called Thomas — if we can go down a bit. If we
 11 can go to {K1/25/2}, I think — well, actually, just to
 12 see the author, could we go back to the previous page
 13 {K1/25/1}.
 14 You see there is — it is an email from someone
 15 called Thomas Wlazik at Google —
 16 A. Okay.
 17 Q. — from August 2017.
 18 Do you know him? It says he is "LCS [Germany] —
 19 Industry Head Comparison".
 20 A. I don't remember having met him or knowing him, but,
 21 you know —
 22 Q. Would he be involved in comparison shopping or
 23 comparison products, "industry head comparison", or ...?
 24 A. Well, "LCS" means he's in sales.
 25 Q. Sales.

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1 A. In the sales organisation.
 2 Q. Right.
 3 A. I think "LCS" maybe stands for large customer sales, so
 4 supporting large customers, I think.
 5 Q. Okay.
 6 If we read over the — you see the heading:
 7 "Comments on: Google's response to the EC Shopping
 8 decision."
 9 A. Uh—huh.
 10 Q. If we go over the page to see what he says {K1/25/2}, he
 11 says:
 12 "While we understand the intention behind sending
 13 traffic in both cases (Google Shopping & aggregator)
 14 directly to the merchant's website (consistent
 15 experience for the user) and not to the aggregator's
 16 site we see several potential issues.
 17 "Sending traffic to merchant directly is actually
 18 more of an agency business model than a price/product
 19 comparison or product inspiration. 'Quality players'
 20 like idealo.de want traffic on their website and create
 21 added value to the user and come back later. They not
 22 only offer price comparison but product comparison with
 23 reviews, tests, facesheets that are original content
 24 created by hundreds of content creators working at
 25 idealo. This differentiates them and similar players

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1 ... from more arbitrage—like businesses which operate on
 2 ready—made feeds by large E—Commerce players only and
 3 invest very little in product and content."
 4 That is right, is it not? I mean, under
 5 the Remedy —
 6 THE CHAIRMAN: The next paragraph.
 7 MR JOWELL: Yes, and the next paragraph is also important:
 8 "In this context another question key is: How do we
 9 make sure that only aggregators participate in the new
 10 discounted auction?"
 11 THE CHAIRMAN: The paragraph you skipped over:
 12 "If it is easy to create ..." —
 13 MR JOWELL: "If it is easy to create a website that is
 14 compliant to buy discounted shopping traffic this will
 15 lead to a revival of the arbitrage industry and favour
 16 low—quality players which are basically buying traffic
 17 discounted from shopping ads traffic and selling to
 18 merchants at a higher price with no business risk or any
 19 value added. These would be at an advantage because
 20 they don't need to invest in their product at all."
 21 Then:
 22 "In this context another key question is: How do we
 23 make sure that only aggregators participate in the new
 24 discounted auction?"
 25 So — and he is right, is he not, in the sense that

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1 true comparison shopping sites are not actually able to
 2 perform their key functionalities under the auction, are
 3 they, under the existing Remedy?
 4 A. Well, I think that they're — it's certainly the case
 5 that there's some important functionality that
 6 comparison shopping services can offer which is not
 7 available to them in — in the auction, right?
 8 Q. Well, it is their key functionality, is it not, of
 9 ranking and presenting? They merely act as agency
 10 intermediaries under the existing —
 11 A. Yeah, I mean, I think I wouldn't consider this my area
 12 of expertise.
 13 Q. Okay.
 14 A. I think I can help more with technical questions.
 15 Q. Okay.
 16 A. But I guess I would say that, you know, one of the —
 17 you know, one of the things that is made available to
 18 them is to showcase their inventory, right? What offers
 19 do they have on their site and then — and then there's
 20 also, you know, the link associated with each offer, if
 21 people want to do the comparison shopping.
 22 Q. But all of the links, in practice, 99% of the clicks
 23 goes straight through to the merchant, do they not?
 24 A. Yeah, I think I was reviewing some of the documents that
 25 had these numbers. So it's on that order.

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1 Q. Yes, okay.
 2 Can we go to another document, {M1/476}.
 3 This is an email from you, at the bottom of page 1,
 4 and you are commenting on a "Comms doc"; do you see
 5 that?
 6 A. Yeah.
 7 Q. If we — if you see, you say you have got several
 8 concerns, and if we go over the page {M1/476/2}, we see
 9 your comments, and you commenting on "[page] 1", in
 10 bold:
 11 " ... 'where Google Shopping will operate as
 12 a separate profitable business'."
 13 Then you comment:
 14 "Let's be careful about setting expectations here.
 15 If we claim too much, people may try to hold us to it.
 16 We are in [fact] producing pro forma accounts (for
 17 the EC only to audit) to show that [Google Shopping]
 18 would be a profitable business if it were in fact
 19 separate. We are also instituting policies to protect
 20 confidential CSS data. But we are not legally
 21 separating the business."
 22 Then if we go further down, you see:
 23 " ... 'Google ... will operate at arms' length, as
 24 a separate profitable business'."
 25 You say:

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1 "Please tone this down. We are not going to be
 2 a fully separate business, certainly not in the legal
 3 sense. We are not even intending (as far as I know) to
 4 have the accounting be separate from a reporting
 5 perspective, EXCEPT for pro forma accounting for
 6 auditing by the EC only.
 7 "The more we say 'separate business', the more we
 8 risk making it a self-fulfilling prophecy, setting
 9 people's expectations which will then invite scrutiny
 10 and probably put a lot of pressure on for a more
 11 [formal] separation. That is NOT what we signed up
 12 for."
 13 So it is clear that you are very uncomfortable with
 14 this characterisation because you were not, in reality,
 15 separating the Shopping business, were you?
 16 A. So I believe what I was particularly concerned about is
 17 this idea of: is there a spun-out business, right, with
 18 a reportable — publicly reportable profit and loss,
 19 right, etc, etc?
 20 Q. Yes.
 21 A. I wanted to make sure that nobody was getting the idea
 22 that that was the case, because my understanding was
 23 that was not the case.
 24 Q. It is kind of a fictional entity really, is it not?
 25 A. Well, I think it's — it has certain characteristics

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1 within Google that — certain policies and procedures
 2 and things like that, that are important, right, which
 3 we can go — go into, but it is not a legally separate
 4 business, as my — that's my understanding, it's not —
 5 you know, it doesn't have legal status as a separate
 6 business, it doesn't report, you know — it doesn't
 7 publicly report profit and loss, etc, right?
 8 Q. If we can go to another document, please. If we go to
 9 {M1/525}, "EC Shopping Remedy", August 14, 2017. We
 10 understand this was another presentation to
 11 Sundar Pichai. Do you recall this?
 12 A. I mean, not — not specifically.
 13 Q. Right.
 14 If we go to {M1/525/3}, we see the "Remedy
 15 Proposal"?
 16 A. Yeah.
 17 Q. We see:
 18 "CSSs submit feeds, and bids, on behalf of their
 19 merchants."
 20 A. Mm.
 21 Q. If we go to {M1/525/5}, we see the "Implications and
 22 Risks", and you see:
 23 "USER EXPERIENCE: Expect reduced traffic to
 24 the Shopping Subdomain ..."
 25 Then:

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1 "REVENUE IMPACT: Not expected to have a substantial
 2 impact on revenue."
 3 I imagine that was music to Mr Pichai's ears, am
 4 I right?
 5 A. I don't recall how he reacted to that. I mean, if
 6 I were the CEO, I would be happy to hear that over,
 7 you know, alternate proposals that lose billions of
 8 dollars.
 9 Q. So had no revenue effect on Google? No net revenue
 10 effect?
 11 A. Yeah, I mean, not expected to have a substantial impact.
 12 Q. Okay.
 13 Can I just understand some things about how things
 14 operated under the revenue — under the Remedy in — and
 15 we are talking now the Remedy from September 2017.
 16 I just want to — so, first of all, merchants sign up
 17 with a CSS, either a GPS or a rival CSS?
 18 A. GSE you mean?
 19 Q. GSE, forgive me, yes.
 20 A. Yes.
 21 Q. Then the merchants provide the product feeds actually to
 22 Google, do they not?
 23 A. So, again, the product feed aspect of it is not my area
 24 of detailed expertise.
 25 Q. Okay.

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1 A. I thought it was CSSs that provided the feeds, but —
 2 Q. But, in practice, it is the merchants that actually
 3 provide the feeds, is it not, to Google?
 4 A. Well, that may be. I don't know that for sure.
 5 Q. Then Google would check those product feeds for errors;
 6 is that right?
 7 A. Yeah, and ingest the feeds and put the offers into
 8 the index and —
 9 Q. Yes, and it would check — well, let us go through it.
 10 Then Google would check and correct the information in
 11 its database?
 12 A. Sorry, correct the information in the database?
 13 Q. Yes, well, check. Check the information.
 14 A. Yeah, check — check to make sure that there weren't
 15 errors in the feeds.
 16 Q. Yes. They put it —
 17 THE CHAIRMAN: (Overspeaking) Verify it, in other words.
 18 A. Sorry?
 19 THE CHAIRMAN: It would verify it?
 20 A. It would verify that it was — yeah, that information
 21 was correct. There are also the — you know, these
 22 crawlers that would crawl the landing page and make sure
 23 that it matched up, right, to these kinds of things.
 24 That's right.
 25 MR JOWELL: Then Google would use various processes to

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1 classify and catalogue products into the different
 2 product categories?
 3 A. Yes.
 4 Q. So books and electronics and so on?
 5 A. Yes.
 6 Q. Into lots of subcategories?
 7 A. Yes.
 8 Q. Then Google turns it into a read—only one—line index —
 9 A. Yes.
 10 Q. — of all the offers?
 11 A. Yes.
 12 Q. Then the user enters a query which goes to that
 13 read—only database; correct?
 14 A. Yes.
 15 Q. Google winnows out the index to a smaller set of
 16 potential merchant offers?
 17 A. Yes.
 18 Q. Then, in light of the bids from the auction, Google then
 19 ranks the various merchant offers and products?
 20 A. Correct.
 21 Q. Then Google serves up and displays those offers within
 22 the Compliance Mechanism Shopping Unit?
 23 A. Correct.
 24 Q. Then that Shopping Unit allows users to browse that
 25 selection of products on offer and choose which to click

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1 through to to a merchant to buy?
 2 A. Correct.
 3 Q. Could we go just to one further document, {M1/528},
 4 please.
 5 This is an "Analysis of Shopping User Learning"
 6 A. Mm.
 7 Q. I do not know if you have seen it before?
 8 A. It was not in my document bundle, so I don't have
 9 a recent refresh, but I may — I may very well —
 10 I probably have seen it in the past.
 11 Q. Okay.
 12 THE CHAIRMAN: This is long pre—Remedy?
 13 MR JOWELL: It is. I want to just understand certain
 14 concepts.
 15 If we go to {M1/528/2}, you can see there is
 16 a reference there to, "Holdback Experiments":
 17 "New data: ramp—up and post—period.
 18 "Confirming query growth theory.
 19 "Total effect of play?
 20 "Short term + Learned—Effect."
 21 A. Yes.
 22 Q. "Per device."
 23 Are you familiar with that term "learned—effect"?
 24 A. Yes.
 25 Q. Could you explain that to the Tribunal?

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1 A. So, let's see. I have to just remember ...
 2 Okay, so basically I think if you're looking — so
 3 let's say you're showing the Shopping Unit, because —
 4 you know, or the PLAs on the page, and then you want to
 5 see, well, what effect does this have on users, are any
 6 coming back to Google more, are they clicking on
 7 the Unit more as a result of showing the Unit, right?
 8 So you can look at the short-term effects, which means,
 9 well, let's compare it to just turning off the Unit
 10 right away, you know, so we'll have an experiment where
 11 users don't get to see the Unit and we'll have another
 12 control experiment where the users do see the Unit,
 13 right? Then you say, well, just by seeing that Unit,
 14 like, that query or that day or whatever, how does that
 15 affect users' behaviour in terms of entering more
 16 shopping queries, clicking more, clicking less, all
 17 these kinds of things, right? So that's the short-term
 18 effect.
 19 The learned effect is basically, over time, if you
 20 have users exposed to that Shopping Unit for months,
 21 right, what happens to their behaviour, right, and so
 22 that's considered a learned effect. It's not a result
 23 of just that one query: oh, I see the Shopping Unit and
 24 so I'm going to do that. It's more like: okay, I have
 25 learned something about this Shopping Unit that is going

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1 to now affect my behaviour. Right?
 2 The way you test that is by having an experiment,
 3 which we call the "holdback", I believe, where you don't
 4 show the PLAs to users for months or years even, right?
 5 So there's a very small percentage of traffic which are
 6 — where we, you know, fix the — it's technically
 7 the cookies, but — as a proxy for the user, right, and
 8 so those users will not see the Unit. Then we compare
 9 it to people who've been seeing the Unit all along and
 10 say: who's doing more shopping queries, who's clicking
 11 more? Etc. So that's the learned effect.
 12 Is that clear for the Tribunal?
 13 MR JOWELL: So, in other words, it is — is this a fair
 14 summary, that it is a way that user behaviour gets
 15 conditioned or habituated to seeing PLAs in a certain
 16 format over time?
 17 A. Yes.
 18 Q. That affects their responses to things?
 19 A. Yes.
 20 Q. Okay.
 21 So can we —
 22 A. You know, you said in a particular format or whatever.
 23 I mean, the — we tended not to run experiments like
 24 comparing different formats like of this nature, maybe
 25 there were some. But this one, this holdback, is: show

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1 the Unit or don't show the Unit. So it's an on/off
 2 thing, yeah.
 3 Q. Okay.
 4 So if we go to {M1/528/4} of this document, we see
 5 the second arrow:
 6 "Users learn to pay more attention to CU—areas on
 7 page."
 8 A. Mm—hm.
 9 Q. So that is an example of this, that, over time, people
 10 focus on particular features or parts of the page?
 11 A. Yes.
 12 Q. Okay.
 13 A. That seems to be what that is saying, yes.
 14 THE CHAIRMAN: "CU—areas" is?
 15 MR JOWELL: The Commercial Unit.
 16 A. Yeah, it's another name for the Shopping Unit, or
 17 the PLA Unit.
 18 THE CHAIRMAN: The OneBox in the Shopping Unit —
 19 (Simultaneous speakers — inaudible)
 20 A. Well, not the OneBox. This is specifically the product
 21 ads unit. I mean, when I hear OneBox, I think of
 22 the organic Product OneBox.
 23 THE CHAIRMAN: Right.
 24 A. Yeah.
 25 MR JOWELL: Now, I think you have already mentioned that and

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1 you mention in your witness statement that, at
 2 the request of the Commission, CLAs were introduced —
 3 A. Yes.
 4 Q. — at a certain point.
 5 I think you were actually in charge of the team that
 6 was responsible for introducing CLAs; is that right?
 7 A. Yes.
 8 Q. You mention — you make mention in your witness
 9 statement, at paragraphs 161 {H3A/7/42} and 200
 10 {H3A/7/52}, of what you call metrics on CLAs, which you
 11 say validated your concerns that the format was
 12 unsuitable as a replacement for PLAs?
 13 A. Okay, yes.
 14 Q. You say that click-through rates on CLAs were low.
 15 A. I'm sorry, what paragraph number is this?
 16 Q. 161 and 200. It is on {H3A/7/52}.
 17 A. 161. Mm—hm, yes, okay. You said and paragraph 200 as
 18 well, or ...
 19 Q. Yes, and paragraph 200. You mention certain metrics as
 20 being poor on CLAs.
 21 A. Okay, I'm just reading 200.
 22 Okay, yes.
 23 Q. But just to be clear, when CLAs were introduced, and
 24 I think you mentioned this a moment ago, they were
 25 always the background tab, effectively, a hidden tab?

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1 A. Yes, except for the — that CLA—only experiment.
 2 Q. Okay, which we will come on to.
 3 A. Yeah.
 4 Q. So you would not expect a background tab to get nearly
 5 as many click-throughs as the tab that is the default,
 6 would you?
 7 A. That's correct, and that's why we looked at metrics both
 8 conditioned on clicking on the tab and not. So, in
 9 other words, we were looking at metrics just where
 10 the user does a query and then, if they don't click on
 11 the tab, right, then they're not going to click on any
 12 CLAs because they don't see the CLAs and so you look at
 13 metrics on that basis.
 14 Q. Okay.
 15 A. The separate way to look at it is you only look at
 16 metrics once the user has clicked on the tab and sees
 17 the CLA unit. So we looked at both.
 18 Q. Okay.
 19 In terms of, though, the format of CLAs —
 20 A. Yes.
 21 Q. — first of all, as we said, they are behind — they are
 22 in the hidden tab effectively?
 23 A. Yeah.
 24 Q. Secondly, when you look at the CLA, it has got no
 25 information on prices, does it?

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1 A. I don't think so. I believe that that is correct.
 2 Q. No lowest price information?
 3 A. I mean, I — I can't remember if there was a variant
 4 where we had the prices, but —
 5 Q. No information on the number of products or stores?
 6 A. I don't think so.
 7 Q. The images are smaller on CLAs, are they not, than on
 8 PLAs?
 9 A. Yes, because for PLAs, each ad, each card was for
 10 a single offer, right? So you could take up that space.
 11 Whereas on CLAs we were trying to show a variety of
 12 offers that were available on the CSS site within
 13 a single card, so you had to fit the images within
 14 a single card.
 15 Q. Okay.
 16 Now, can I show you some of your evidence in
 17 the PriceRunner proceedings —
 18 A. Sure.
 19 Q. — that you gave I think about six months ago, was it,
 20 now?
 21 A. Yeah, was it December maybe?
 22 Q. It is {O/9/79}.
 23 A. Yeah.
 24 Q. You see —
 25 THE CHAIRMAN: This is the Swedish case?

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1 MR JOWELL: This is the Swedish case, and Mr Scherp —
 2 I assume he was the lawyer — asks you:
 3 "Do you know if Google carried out tests to
 4 ascertain whether Google should have the CLA as
 5 the default tab instead of the PLAs as default?"
 6 A. Yes.
 7 Q. You answer:
 8 "I'm not aware of tests where that was implemented,
 9 you know. I think there was some analysis done, but I'm
 10 not aware of tests."
 11 A. Mm—hm.
 12 Q. It says:
 13 "You referred ... at least to results concerning
 14 that and they were poor, is that correct?"
 15 A. Mm—hm.
 16 Q. Over the page {O/9/80}, you say:
 17 "Yes."
 18 He says:
 19 "But that does not concern tests in real life, so to
 20 speak?"
 21 You say:
 22 "Correct."
 23 A. Mm—hm.
 24 Q. So, six months ago, it seems you had no recollection of
 25 the specific experimental tests that you conducted?

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1 A. I had forgotten about them, that's correct.
 2 Q. Okay.
 3 Do you recall it today?
 4 A. Well, yes, there's a variety of documents that — that
 5 I've seen now to remind me, yes.
 6 Q. Okay.
 7 Can I show you one of those? It is at {M3/244}.
 8 It seems that — "CLA Only", it says, at the top,
 9 and you see, "Project Leader: Greg Friedman"?
 10 A. Yes.
 11 Q. I think it's fair to say that you delegated
 12 the implementation of the experiment quite a lot to
 13 Mr Braendle and others?
 14 A. Not to Mr Braendle, because he wasn't an engineer, but
 15 to others, certainly, yes.
 16 Q. One can see the "Goal" there is to:
 17 "Run the experiment to show CLA (comparison listing
 18 ads) only, when it co—triggers with the PLA in
 19 EC countries."
 20 A. Mm—hm.
 21 Q. One can see the "Before" and "After"?
 22 A. Yes.
 23 Q. One can see very — I think you can see how much tinier
 24 the images are on the CLA?
 25 A. Yes.

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1 Q. One can also see that there is no price information?
 2 A. Mm. Yes.
 3 Q. We can see that there is no information on the number of
 4 stores?
 5 A. Yes.
 6 Q. The branding even of the shopping comparison site seems
 7 to be very small?
 8 A. I — I pretty much agree with what you said, except for
 9 the — I'm not sure about the branding part, because
 10 that looks to be — to me, just to my eye, looking right
 11 now, roughly on par with the size of the merchant
 12 branding on PLAs. But everything else you said I have
 13 no —
 14 Q. Okay.
 15 A. — I don't take exception to.
 16 Q. CSSs were not warned in advance of the experiment? They
 17 were not told about it, were they?
 18 A. I don't think so.
 19 Q. They were not given an opportunity, therefore, to try
 20 and improve the quality of the CLAs, were they? They
 21 had no control, in fact? The CSSs had no control over
 22 what the CLAs looked like, did they?
 23 A. Well, so there were certain aspects of the CLAs that
 24 they did control, like the — for example, the text
 25 underneath, right, which, you know, is part of

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1 the creative, right? Like, so — now this is German and
 2 I don't speak German, but under the — what is that —
 3 "billiger .de", there's that text that is sort of trying
 4 to — it's called the creative text, it describes
 5 something about the — you know, what they can offer for
 6 this query. So that — that was under their control.
 7 Q. But they were not allowed to put in prices or
 8 information on shops or anything else like that?
 9 A. That is my understanding.
 10 Q. Okay.
 11 Of course, if one talks about learned effects —
 12 A. I mean, sorry, just ... Potentially they could put some
 13 information about that in that creative, but that was —
 14 there was a limited ability to do so.
 15 Q. Okay.
 16 A. Yeah, sorry to interrupt.
 17 Q. So they were limited in what they could put in, even on
 18 the text?
 19 A. Well, no, no, sorry. Yeah, perhaps I didn't speak
 20 clearly. There was no limit on what you could put on
 21 the text, right? But the information that was
 22 associated with each of those individual products was
 23 not displayed along with the product. That's what
 24 I meant.
 25 Q. If we talk about learned effects, I mean, users have had

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1 a decade of getting used to seeing PLAs in the shopping
 2 unit, have they not?
 3 A. Mm.
 4 Q. So, not going to be terribly surprising, given the way
 5 this looks and those learned effects, that people are
 6 not going to click on the CLA nearly as much as they
 7 would on the PLA, is it?
 8 A. Well, so I think it's important to talk about
 9 magnitudes. So, you know, the slide show that — or
 10 the slides that you were showing me that talked about
 11 learned effects, I don't know — you know, I haven't
 12 seen the document, perhaps in there it talks about how
 13 much of an increase there is in queries and clicks and
 14 things like that. Those, if I recall, were on the order
 15 of, you know, there's a 2%/3% increase in clicks, or
 16 there's a 1% increase in queries to Google, or things of
 17 that nature, and we can — you know, I'm happy to look
 18 at those details if you have them available, but
 19 certainly it's single digit percentage effects in terms
 20 of the learned effects.
 21 But if you look at the click-through rates on CLAs,
 22 even conditioned on the user having clicked on that
 23 tab — if I — okay, having looked at either this
 24 document or a similar one, I think it said that they
 25 were 12x less. So that's like 80—something per cent.

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1 Q. But if you produce one thing with prices, and attractive
 2 images and things that have been adapted over years to
 3 optimise them and you present them next to these bland
 4 tiny images, of course you are going to get that sort of
 5 massive order of magnitude difference, are you not?
 6 A. Well, what I was taking exception to was your — your
 7 characterisation of the learned effect —
 8 Q. The learned effect, okay.
 9 A. — accounting for it.
 10 Q. But let us just look at the — but you agree with me
 11 that the presentation is not — is not equivalent,
 12 is it?
 13 A. The presentation is not equivalent, that is correct.
 14 Q. If we go to {M3/244/2} —
 15 MS ROSE: Can I just ask the reason why you cannot show
 16 price, you know, where you could not say, say, 10
 17 offers, lowest price X?
 18 A. I think — okay, so one concern here with doing
 19 something like that would be — so the CSSs are
 20 submitting their offer feeds, right, with prices and
 21 that is then made available to Google? Google then uses
 22 its ranking technology, right, and its retrieval and
 23 ranking technology to determine what are the best offers
 24 to match that, right, which is not the same as the CSSs'
 25 ranking technology? So if we were to say, okay, looking

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1 at the offers that Google ranked, this is the best
 2 price, that may not be what you see on the CSS site as
 3 the best price. Does that make sense?
 4 MS ROSE: So you are saying that when we have in these CLA
 5 boxes —
 6 A. Yeah.
 7 MS ROSE: — the cameras that we see pictures of here, so
 8 there is eight cameras in the first box —
 9 A. Yes.
 10 MS ROSE: — that those are selected and ranked by Google —
 11 A. Correct.
 12 MS ROSE: — not by the CSS?
 13 A. That's correct.
 14 MS ROSE: I see.
 15 So this is not equivalent to the kind of
 16 sandboxing—type thing we were talking about earlier?
 17 A. No.
 18 MS ROSE: Okay.
 19 MR JOWELL: But you do now have — on Google, you have
 20 the product sites where they do give that information of
 21 the lowest — of prices and number of products, do you
 22 not?
 23 A. You mean on the —
 24 Q. Yes.
 25 A. — shopping —

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1 Q. Yes.
 2 A. — subdomain or whatever —
 3 Q. Yes.
 4 A. — on the shopping property?
 5 Q. Yes?
 6 A. Yes, that's correct.
 7 Q. So, clearly, it would have been technically possible to
 8 include lowest prices and number of offers on CLAs?
 9 A. Well —
 10 Q. Because you do — I mean, that is what Google does now.
 11 A. Yeah, but the difference is is that, on the shopping
 12 property we're saying, okay, we have this set of offers,
 13 we know this is the full set of offers that we have —
 14 Google has, right?
 15 Q. Yes.
 16 A. And we know our ranking and how we're going to show,
 17 you know, all the offers, and we can then look at all
 18 those offers that we've retrieved from the index and get
 19 the lowest price, right?
 20 Q. But do you —
 21 A. You understand what I'm saying?
 22 Q. I do, but I think we are talking at cross—purposes.
 23 A. Okay.
 24 Q. Do you know about the PLACSS?
 25 A. I don't. I mean, I've heard of it, and —

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1 Q. So subsequently to this Google, in 2023, I believe, have
 2 introduced something called PLACSS, also another variant
 3 product where they include within the shopping unit —
 4 A. Yeah.
 5 Q. — a — what's called a PLACSS, and —
 6 A. Okay.
 7 Q. — because they have the feed from the CSS —
 8 A. Yes.
 9 Q. — they put in the CSS's lowest price and —
 10 A. A—ha — (overspeaking) —
 11 Q. — (inaudible)
 12 A. — I see. So —
 13 Q. So what I'm saying to you is —
 14 A. I'm — I'm — (overspeaking) —
 15 Q. — it's — (overspeaking — inaudible)
 16 A. — I'm tempted to ask more questions about how that's
 17 implemented, but I won't, because —
 18 Q. Okay, but it is —
 19 A. — it's my technical curiosity, not —
 20 Q. Okay. It has been —
 21 A. — not relevant to —
 22 Q. My point is —
 23 A. — the court, yeah.
 24 Q. — it has been done, so it can —
 25 A. Yes.

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1 Q. — be.
 2 If we go to {M3/244/2}, you see under the heading —
 3 we can see the desktop version at the top again, and
 4 again, it is simply not an equivalent presentation, for
 5 the reasons we have discussed?
 6 A. Sorry, say it again?
 7 Q. You can see, again, it is not an equivalent presentation
 8 as between PLA and —
 9 A. Yeah —
 10 Q. — CLA?
 11 A. — it's not equivalent.
 12 Q. It is not equivalent.
 13 You see under "Experiment scope", it says — we see
 14 the experiment is to be carried out — and I should not
 15 say the figures — I will not say the figures, but you
 16 see the percentages there?
 17 A. Yes.
 18 Q. There is a comment on that, and if we can just go to
 19 {M3/244/19} and if we can have a look at comment number
 20 6, please. Do you see it is — I think it is one of
 21 your — if we can go — if we can go up a little,
 22 I think. Can we go up a bit more? A little bit more.
 23 Sorry, a little — touch more. Thank you.
 24 You see comment 6, there is a comment from you. You
 25 said:

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1 "This said ... "
 2 Then you give the percentage:
 3 " ... before, but the actual traffic
 4 the control & custom control were set up with is ... "
 5 Then you give another figure:
 6 "So corrected this here."
 7 A. Yeah.
 8 Q. Then underneath that we see comment 7:
 9 "We estimate that a [certain percentage] experiment
 10 will increase total CLA clicks in the affected countries
 11 by [then it gives an order of magnitude]."
 12 Then it says:
 13 "This will cause problem with advertisers very
 14 rapidly running out of budget and will also make these
 15 experiments extremely high profile to CSSs. Therefore
 16 the strong preference is to keep the traffic much lower.
 17 "We should start with 1 cookie mod[ule] ... "
 18 Then you give the figure.
 19 A. Mm—hm.
 20 Q. "We may or may not want to ramp up from there."
 21 It does seem as though you were keen for CSSs not to
 22 know about the fact that this experiment had been run?
 23 A. I think the concern that I had, well—founded or
 24 ill —founded, was that if the CSSs were aware of this
 25 format, because this is before we had decided whether we

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1 were going to launch it or not, you know, that they
 2 would push the EC very hard for us to launch it
 3 regardless of any metrics or anything like that, and so
 4 I was hoping that we could gather the data and make —
 5 make a determination based on that without, like, some
 6 huge amount of pressure from the CSSs to — that was my
 7 own personal —
 8 Q. Okay.
 9 A. — concern.
 10 Q. But you also, by doing that, you were not giving them an
 11 opportunity to improve their CLA coverage, were you?
 12 A. Well — well, so I don't — I guess I don't understand
 13 — okay, yeah, let me ask. So how would making them
 14 aware of the experiment allow them to improve over what
 15 they could have already done with CLAs?
 16 Q. Well, they could — you mentioned, for example, the one
 17 thing you say they had control over was the text.
 18 A. Yes.
 19 Q. They could have tried to improve that in preparation for
 20 the experiment.
 21 A. Okay, and so —
 22 Q. I mean, this was a hidden tab, right? This was
 23 something that was — nobody clicked on, so they were
 24 not going to invest much effort in it, were they?
 25 A. Okay, so we're — okay, I think I understand what you're

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1 — what you're saying. I think you're saying — let me
 2 make sure I understand — is these CLAs don't get a lot
 3 of clicks, therefore CSSs aren't going to invest much in
 4 them. If they were aware that there might be an
 5 opportunity for the CLAs to show a lot more —
 6 Q. (Overspeaking — inaudible).
 7 A. — then — then it's worth the investment.
 8 Q. That is right.
 9 A. Yeah, that makes sense. I mean, that was not my
 10 thinking at the time, but when you say it now, I can see
 11 that.
 12 MR JOWELL: Okay.
 13 I have got about another five minutes. I could keep
 14 going for that or we could adjourn, because we have got
 15 Mr West in any event.
 16 THE CHAIRMAN: Yes. If that is all it is, yes.
 17 MR JOWELL: Well, thank you.
 18 If we go to {M3/535}, please, and we see here
 19 a document from 29 August 2022 on the CLA experiment.
 20 Again, it seems you did comment on this document.
 21 A. Uh—huh.
 22 Q. So if we go to, for example, {M3/535/15}, just to show
 23 you, you can see the penultimate comment there is from
 24 you?
 25 A. Okay.

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1 Q. So do you recall this document? Let us go back to
 2 page 1 {M3/535/1}.
 3 A. Yes, with my memory having been refreshed.
 4 Q. Okay. You see on the right—hand side there is a series
 5 of comments —
 6 THE CHAIRMAN: Sorry, what is the document?
 7 MR JOWELL: It is another document regarding the CLA
 8 experiment.
 9 A. Or, actually, you know what, I should look at this
 10 a little more carefully to make sure I'm not conflating
 11 it with another document.
 12 Q. Okay. It is the CLA only experiment.
 13 A. Okay, I — I'm not sure whether or not this is the same
 14 document that — that I reviewed in the last couple of
 15 weeks.
 16 Q. Okay.
 17 A. But, you know, if there's comments in here from me,
 18 I have no reason to dispute that I saw it at the time.
 19 THE CHAIRMAN: That is the — the context is there on
 20 page 1, yes? You show CLA as the second tab and PLA as
 21 the first tab:
 22 "In the experiment, we will show CLA only, and
 23 coverage ... will be controlled ... "
 24 A. Yes. This all makes sense.
 25 MR JOWELL: If you look at the first comment, comment 1, it

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1 mentioned:
 2 "Yes, let's ideally limit this to few carefully
 3 selected countries."
 4 A. Yes.
 5 Q. Yes:
 6 "We need to have sufficient CLA campaign coverage
 7 ... though."
 8 A. Yes.
 9 Q. Then you say:
 10 "UK, Germany, Netherlands, France, Italy are
 11 countries with major CSS impressions."
 12 A. Yes.
 13 Q. "Should we run in a country where Twenga has reasonable
 14 inventory/coverage?
 15 " ... Switzerland ... would be a great country for
 16 the experiment but the coverage is too low."
 17 A. Yeah.
 18 Q. Then:
 19 "[Switzerland] is too low, but Sweden, Spain, Poland
 20 have decent data ...
 21 "Are France, Germany, and the UK too big, otherwise
 22 these would be preferred due to higher volume and
 23 coverage."
 24 {M3/535/13}:
 25 "Taking France, Germany, and [the] UK we get

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1 [around] 50M a week so 5% will [get] us ... to ...
 2 10 million."
 3 Then we see {M3/535/14}:
 4 "Germany is a clear candidate for volume and
 5 campaign coverage.
 6 "UK has volume but not as much campaign coverage,
 7 France looks good as well as Italy."
 8 Then we see {M3/535/1}:
 9 "Then I'd vote for Germany to give this the best
 10 chance of success. If it fails there, we can be
 11 confident it wouldn't work anywhere else either."
 12 A. Yeah.
 13 Q. Do you recall being involved in any of these comments?
 14 A. I do recall having some discussions around where to run
 15 these experiments.
 16 Q. Okay. Do you recall that the view was expressed as
 17 there the best chances of success would have been in
 18 Germany?
 19 A. I mean, I — were it not for this document in front of
 20 me, I wouldn't have recalled that, but seeing
 21 the document in front of me, I've no reason to dispute
 22 its —
 23 Q. Okay.
 24 A. — authenticity or accuracy.
 25 Q. If we go to another document, again on the same

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1 experiment, {M3/244}. Again, on the CLA only
 2 experiment. Then if we go to {M3/244/18}, I think this
 3 is the document we were looking at before, and at
 4 the bottom of the page you see you make a comment:
 5 "New plan (as of Mon Sept 12) is to run in
 6 The Netherlands ... instead of Germany."
 7 So it seems that Germany was eventually excluded
 8 from the countries where the experiment was carried out?
 9 A. Uh—huh. Yes.
 10 Q. Why were you not giving the experiment a chance to run
 11 in the country where it had the best chances of success?
 12 I mean, is it the reality was that you were — this
 13 experiment was set up to fail, was it not? I mean —
 14 A. No, we were doing our best to run a fair experiment, to
 15 basically — we wanted — I mean, a lot of those
 16 comments that you were just reading is, like, "Let's
 17 make sure we get sufficient, you know, campaign coverage
 18 and query coverage so that we can get good data on
 19 this", right, and that there's enough CSS
 20 participation —
 21 Q. So why not in Germany where it had the best chance of
 22 success?
 23 A. Okay, so I have a vague recollection, which is —
 24 I would not say is high confidence, about a discussion
 25 I had with Thomas Graf.

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1 Q. Is that because this is going to be legally privileged,
 2 perhaps?
 3 A. Well, I think it's probably subject to privilege, I'm
 4 guessing.
 5 Q. Well, then do not tell us, but, okay, there was
 6 a legally privileged reason why?
 7 A. That is my vague recollection.
 8 Q. Okay. The lawyers were quite heavily involved,
 9 were they, in this experiment, external lawyers?
 10 A. They were involved.
 11 Q. Okay. All right. Thank you. I have got no further
 12 questions.
 13 A. I mean, what I will say is it was not for trying to make
 14 the experiment fail. It was not for trying to, like,
 15 select a country where we were, like, oh, we know
 16 the CLAs are going to do bad in this country, or ... It
 17 was not that.
 18 Q. Okay, but the — I mean, I have already put to you,
 19 I think, that this was not a fairly designed experiment
 20 for the reason that the presentation — the simple
 21 reason that the presentation of the CLA was not
 22 equivalent to the PLA; correct?
 23 A. Well, I think a lot of our argument, right, for — and
 24 the data that showed it, was that PLAs are far
 25 higher-performing format, you know, partially because of

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1 all the investment we put in, certainly, and partially
 2 because of the nature of the format, right, taking users
 3 to merchants.
 4 Q. But when you say the investment you put in, I mean,
 5 the PLAs had been perfected over years and years?
 6 A. That's true.
 7 Q. Google has had enormous amounts of data which has been
 8 very valuable in making them as effective as possible;
 9 correct?
 10 A. Yes.
 11 Q. CLAs have had no data. CSSs do not get any data —
 12 meaningful data?
 13 A. Certainly less. Substantially less.
 14 Q. Far less, yes.
 15 So they have not had a chance to improve or invest,
 16 and the presentation of the CLAs is also not in their
 17 control, is it? They are not allowed to control
 18 the images, the size of the images?
 19 A. Well, they do submit the images as part of the feed, but
 20 they don't — you're right that they don't control
 21 the selection of which images will get shown —
 22 Q. Or the size?
 23 A. — on a given query.
 24 Q. Or their size?
 25 A. Correct. That's correct.

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1 Q. They do not — as we have discussed, they are not able
 2 to put in any information on price, are they?
 3 A. We — well, it looks like, from the formats that you
 4 showed me —
 5 Q. No.
 6 A. — there is no price that is displayed for each offer,
 7 that's right.
 8 Q. So I suggest that this experiment was not a fair
 9 experiment.
 10 A. Mm.
 11 Q. Do you agree, in retrospect?
 12 A. Well, I think we were trying to determine is it
 13 a reasonable option to — you know, to show CLAs by
 14 default instead of PLAs, which I think was the question
 15 on the table.
 16 Q. Well, you were trying to show that it was not, were you
 17 not?
 18 A. No, we were trying to determine the answer. We had
 19 a very strong —
 20 Q. Prior.
 21 A. — prior that it was going to not look good, and our
 22 prior was confirmed, but we weren't trying to make that
 23 happen.
 24 THE CHAIRMAN: I think what is being put to you — or
 25 perhaps two things are being put. One was: was this set

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1 up to fail? You say: no, it was not, that was not our
 2 intention.
 3 Then a second but distinct point is that it was done
 4 in such a way that the way the CLA was presented was so
 5 clearly inferior to the way the PLA was presented —
 6 A. Yeah.
 7 THE CHAIRMAN: — that the result was almost inevitable.
 8 A. I see.
 9 THE CHAIRMAN: I think that is the second point being put.
 10 A. Yeah, I mean, I think, typically what would happen with
 11 a new ad format is you put out a first iteration, right,
 12 a first try, and you look at the experiment results and
 13 you — you get an idea: is this a promising path? It's
 14 not going to outperform your existing, highly-tuned ad
 15 formats, you know? And so the question is, like, how
 16 much room — like, how much quality and user experience
 17 needs to improve over what you've got now, you know, in
 18 order to make this a good format that's going to be
 19 useful for users and have good monetisation
 20 capabilities, right? And I think this experiment —
 21 I will say this, any ad format, any new ad format that
 22 was — that was attempted that showed these results
 23 would be immediately killed. Like, there's no way, like
 24 — like, the ad executives would take a look and say,
 25 "Why are we wasting our time on this, this is completely

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1 useless", and someone will say, "Oh, well, just imagine,
 2 we can do this and that", and, like, "You know what, if
 3 the experiment results on your first try did better,
 4 I would — I might be amenable to that, but these
 5 experiment results are horrible".
 6 So, anyway, that's —
 7 MR JOWELL: Let me ask you one question.
 8 A. Yeah.
 9 Q. Suppose that you did two forms of PLA.
 10 A. Yeah.
 11 Q. The one form is as they currently exist.
 12 A. Yeah.
 13 Q. Then the other form, you take out the prices.
 14 A. Yeah.
 15 Q. You take out all the information about reviews.
 16 A. Yeah.
 17 Q. You reduce the size of the images to about a quarter of
 18 what they are.
 19 A. Yeah.
 20 Q. Would you expect that new ad format to be successful?
 21 A. It would certainly be less successful, that is certainly
 22 true. Less successful than the existing PLA format.
 23 Absolutely it is true that those changes that you
 24 propose would reduce the performance, for sure.
 25 Q. Substantially?

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1 A. Yeah, I think that's right. I mean, I don't think it
 2 would reduce it to the degree — I'm — I'm almost
 3 positive it would not reduce it.
 4 Q. Well, you have not done an experiment, so we do not
 5 know.
 6 A. That's true. That's true. I have in my — I've done
 7 lots of experiments over my 18 years or whatever, but
 8 I haven't done that exact one, you're right.
 9 MR JOWELL: Thank you.
 10 THE CHAIRMAN: Thank you. Well, we will adjourn until — it
 11 is actually quite late. A bit more than five minutes,
 12 Mr Jowell.
 13 MR JOWELL: Sorry.
 14 THE CHAIRMAN: We will resume at 10.30 tomorrow. So that
 15 means that you are in the course of giving your evidence
 16 as we adjourn, so you are not allowed, as you
 17 understand, to discuss this case with anyone at all
 18 until your evidence is completed.
 19 A. Yes, understood.
 20 MR PICKFORD: We are obviously, because the Tribunal has
 21 asked us to, going to email the transcript —
 22 THE CHAIRMAN: Yes.
 23 MR PICKFORD: — to the witness. I take it that nobody has
 24 any objection to that, because otherwise we cannot do as
 25 has been asked.

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1 THE CHAIRMAN: Yes, that is fine. I think in fact
 2 Mr Friedman did in fact come back on the sandbox thing
 3 after reflecting on it. If there is —
 4 MR PICKFORD: Well, I am in the Tribunal's hands. We can do
 5 whatever you would like us to do.
 6 THE CHAIRMAN: Is there anything outstanding? I do not
 7 think so. I think, in that case, it is better not.
 8 So 10.30 tomorrow.
 9 (4.50 pm)
 10 (The Court adjourned until 10.30 am on Wednesday,
 11 8 July 2026)
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