## IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

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ARENDI S.A.R.L., Plaintiff,
v.
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GOOGLE LLC, Defendant.

C.A. No. 13-919-JLH

REDACTED VERSION
(Filed August 21, 2023)

## NON-PARTIES SAMSUNG ELECTRONICS CO., LTD. AND SAMSUNG ELECTRONICS AMERICA, INC.'S UNOPPOSED MOTION TO SEAL PORTIONS OF THE TRIAL TRANSCRIPTS AND EXHIBITS

Non-parties Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Samsung"), by and through its attorneys, hereby move to seal limited portions of the trial transcript and certain exhibits containing Samsung's highly confidential business information relating to its settlement and licensing agreements. Pursuant to D. Del. L.R. 7.1.1, Samsung has conferred with Arendi S.A.R.L. ("Arendi") and Google LLC ("Google") to determine whether they opposed this request to seal, and both parties have indicated that they did not oppose. Samsung's proposed redactions are set forth in the attached sealed Exhibits. ${ }^{1}$

## I. FACTUAL BACKGROUND

At a jury trial from April 24, 2023, to May 2, 2023, this Court elicited testimony and admitted an exhibit related to Samsung's settlement and licensing agreement with Arendi. During the trial, the Court heard testimony related to a Settlement and Patent License Agreement

[^0]between Samsung and Arendi (the "Samsung-Arendi Agreement"), admitted into evidence as PX-77 (also referenced at trial as DTX-283). For example, the damages experts for both Arendi and Google discussed the Samsung-Arendi Agreement, including confidential terms such as the amount paid by Samsung in the agreement. See Apr. 26 Tr., infra Section III(2); May 1 Tr., infra Section III(3). Attorneys for the parties also engaged in discussions of the Samsung-Arendi Agreement and its terms in arguments to the Court. See e.g., Apr. 24 Tr., infra Section III(1).

On June 8, 2023, Samsung filed a notice of intent to redact and/or seal limited portions of the trial transcripts. D.I. 564. On June 20, 2023, Samsung filed a stipulation and proposed order by which Arendi and Google agreed to allow Samsung's outside counsel access to portions of the trial transcript with third-party confidential information unrelated to Samsung or its agreements with Arendi redacted. D.I. 572. The Court ordered that stipulation on June 22, 2023. D.I. 573. Samsung received the redacted transcripts from Arendi's counsel on July 28, 2023, and the Samsung-Arendi Agreement (Exhibit PX-77 (also referenced at trial as DTX-283)) on July 31, 2023.

Samsung notes that non-parties Apple, Inc. ("Apple") and Microsoft Corp. ("Microsoft") filed motions to seal similar portions of the trial transcripts and exhibits on May 3, 2023, and July 21, 2023, respectively. D.I. 537, 587. Apple's motion was granted on June 6, 2023, while Microsoft's motion was granted on July 24, 2023. D.I. 562, 591.

## II. LEGAL STANDARD

There is "a 'strong presumption' that the public and the media [are] entitled to access" judicial records. Bank of Am. Nat. Tr. \& Sav. Ass'n v. Hotel Rittenhouse Assocs., 800 F.2d 339, 343 (3d Cir. 1986). That presumption, however, is "not absolute," and may be rebutted if a party can show "that the interest in secrecy outweighs the presumption." In re Avandia Mktg., Sales Pracs. \& Prod. Liab. Litig., 924 F.3d 662, 672 (3d Cir. 2019) (quoting Bank of Am., 800 F.2d at
344). A party seeking to seal portions of a judicial record "must articulate 'the compelling, countervailing interests to be protected,' make 'specific findings on the record concerning the effects of disclosure,' and 'provide[ ] an opportunity for interested third parties to be heard.'" Id. at 672-73 (quoting In re Cendant Corp., 260 F.3d 183, 194 (3d Cir. 2001)). The Third Circuit has found that "if a case involves private litigants, and concerns matters of little legitimate public interest, that should be a factor weighing in favor of granting or maintaining an order of confidentiality." Pansy v. Borough of Stroudsburg, 23 F.3d 772, 788 (3d Cir. 1994).

Discussions of settlement and licensing agreements in judicial records are commonly found to rebut the presumption of access and are thus protected from disclosure by the courts. See Amgen Inc. v. Amneal Pharms. LLC, No. 16-853-MSG, 2021 WL 4133516, at *6 (D. Del. Sept. 10, 2021) (quoting Littlejohn v. Bic Corp., 851 F.2d 673, 678 (3d Cir. 1988)) (stating that the "disclosure of...settlement agreements is not necessary to provide the public with a 'complete understanding of the judicial system and a better perception of its fairness.'"); Kaleo, Inc. v. Adamis Pharms. Corp., No. 19-917-RGA, 2019 WL 11680196, at *2 (D. Del. July 16, 2019) (finding good cause to seal "details of, discussion of, and/or reference surrounding licensing negotiations."); Delaware Display Grp. LLC v. LG Elecs. Inc., 221 F. Supp. 3d 495, 497 (D. Del. 2016) (finding it appropriate to seal details such as "the pricing terms in license agreements, some other non-public financial information, trade secrets, and other proprietary technology.")

## III. INFORMATION TO BE SEALED

Samsung respectfully requests that limited portions of the trial transcripts and Exhibit PX-77 (also referenced at trial as DTX-283) be sealed, consistent with the Rules and the law of this Court and the Third Circuit. With regard to the non-redacted parts of the transcripts to
which it received access, ${ }^{2}$ Samsung requests sealing of the confidential information located on the following pages and lines:

1) April 24 Transcript (Ex. A):
a. Pg. 105, 11. 19-21
b. Pg. 106, 11. 2-4, 7-8, 12-19, 21-22
c. Pg. 159, 1l. 10-21, 24
d. Pg. 160, 11. 4-25
e. Pg. 161, ll. 1-2, 7-25
f. Pg. 162, 11. 1-8, 15-19
g. Pg. 232, 1l. 15-25
h. Pg. 233, 1. 1 - pg. 240, 1. 6
i. Pg. 246, 1. $5-$ pg. 250, 1.7
j. Pg. 266, 11. 4-9, 24-25
k. Pg. 267, 11. 1-5
1. Corresponding portions of the index related to these redactions
2) April 26 Transcript (Ex. B):
a. Pg. 578, 11. 20-24
b. Pg. 581, ll. 16-23
c. Pg. 592, 1. $11-$ pg. 593, 1. 4
d. Pg. 627, 1. 11 - pg. 628, 1.18
e. Pg. 664, 11. 12-24
f. Corresponding portions of the index related to these redactions
3) April 27 Transcript (Ex. C):
a. Pg. 819, 11. 21-25
b. Pg. 820, 11. 1-24
c. Pg. 934, 1l. 1-2
d. Corresponding portions of the index related to these redactions
4) April 28 Transcript (Ex. D):
a. Pg. 1122, 1. 20
b. Corresponding portions of the index related to these redactions
5) May 1 Transcript (Ex. E):
a. Pg. 1250, 1l. 14, 20
b. Pg. 1291, 1.6
c. Pg. 1295, 1.9
d. Pg. 1297, 1l. 18-19

[^1]e. Pg. 1299, 11. 17-18
f. Pg. 1300, 1l. 12, 21
g. Pg. 1301, 11. 11-12
h. Pg. 1303, 1.2
i. Pg. $1435,1.19$
j. Pg. 1438, 11. 11, 18, 25
k. Pg. 1439, l. 1

1. Pg. 1451, 1. 6,
m. Pg. 1452, 11. 22-25
n. Pg. 1453, 1. $1-$ pg. 1459, 1. 25
o. Pg. 1460, ll. 15 - pg. 1463, 1. 4
p. Pg. 1463, 11. 13-25
q. Pg. 1464, 1. $11-$ pg. 1465, 1. 1
r. Pg. 1467, 11. 3-15, 19-23
s. Pg. 1468, 11. 1-9, 25
t. Pg. 1469, l. 1
u. Corresponding portions of the index related to these redactions
6) May 2 Transcript (Ex. F):
a. Pg. 1474, 11. 23-24
b. Pg. 1484, 1l. 13, 15
c. Pg. 1531, 11. 14-25
d. Pg. 1532, 1.1
e. Pg. 1562, 11. 13-15, 16-18, 23
f. Pg. 1563, 11. 5-8, 10-15
g. Pg. 1612, 11. 19-21
h. Pg. 1613, 11. 13-22
i. Pg. 1614, 11. 15-16, 18-19
j. Pg. 1618, 1. 24
k. Pg. 1619, 11. 1-2, 5-17
1. Pg. 1620, 11. 13-14
m. Pg. 1621, 11. 11-16
n. Corresponding portions of the index related to these redactions
7) Exhibits PX-77 (also referenced at trial as DTX-283) (Samsung-Arendi Settlement and Patent License Agreement) (Ex. G) in their entirety

## IV. ARGUMENT

The confidential information that Samsung seeks to seal relates to the Samsung-Arendi Agreement, which was introduced at trial as Exhibit PX-77 (also referenced at trial as DTX-283).

The redactions that Samsung requests all relate to discussions of the terms and/or details of the

Samsung-Arendi Agreement and are narrowly tailored to redact confidential information related to that agreement.

As explained in the Declaration of Cheolwoo Ahn (the "Ahn Decl."), filed concurrently herewith, the Samsung-Arendi Agreement contains highly confidential information related to Samsung's settlement and licensing activities, including financial terms and other competitive materials. Ahn Decl. ๆ| 6. Samsung expends significant resources to maintain the security and confidentiality of documents such as the Samsung-Arendi Agreement. Id. © 7. The disclosure of information from such documents would cause Samsung serious harm, in that litigants and/or licensors would become aware of the terms on which it has licensed patents and settled litigation, thereby undermining Samsung's ability to negotiate commercially favorable agreements in the future. $I d$. $\mathbb{\|} 8$.

The Third Circuit and courts in this District have consistently recognized the need to seal confidential information such as the "details of, discussion of, and/or reference surrounding licensing negotiations." Kaleo, Inc. v. Adamis Pharms. Corp., No. 19-917-RGA, 2019 WL 11680196, at *2 (D. Del. July 16, 2019). Indeed, where non-parties are involved, this District has given greater weight to their risk of injury in the absence of a protective order, because they did not choose to litigate and risk disclosure. United States v. Dentsply Int'l, Inc., 187 F.R.D. 152, 160 n. 7 (D. Del. 1999). As explained above, Samsung faces serious, irreversible harm if the details of its licensing and settlement agreement with Arendi are made public. And as a nonparty, Samsung had no choice in disclosing its confidential information. As a result, the Samsung-Arendi Agreement and related discussions in the trial transcripts fall squarely within the scope of information that should be sealed because "the interest in secrecy outweighs the presumption." In re Avandia Mktg., 924 F.3d at 672 (quoting Bank of Am., 800 F.2d at 344).

## V. CONCLUSION

For the foregoing reasons, Samsung respectfully requests that the Court seal its confidential information related to Samsung's settlement and license agreement with Arendi, as identified in Section III(1)-(7) above.

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## EXHIBIT A

APPEARANCES CONTINUED:
FOR THE DISTRICT OF DELAWARE
ARENDI S.A.R.L.,
C.A. No. 13-919-JLH
v.
-00

9:00 a.m.
Jury Trial
Volume I
Sealed

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844 King Street Wilmington, Delaware

BEFORE: THE HONORABLE JENNIFER L. HALL United States Magistrate Judge

APPEARANCES:

SMITH, KATZENSTEIN \& JENKINS LLP BY: NEAL C. BELGAM, ESQ.
-and-
( BY: DAVID ELLIS MOORE, ESQ.
-and-
PAUL HASTINGS
BY: ROBERT W. UNIKEL, ESQ.
BY: CHAD J. PETERMAN, ESQ.
BY: MATTHIAS A. KAMBER, ESQ.
BY: ANDREA ROBERTS, ESQ.
Counsel for the Defendant

Google.
MR. Peterman: Chad Peterman on behalf of Google.

THE COURT: Okay.
MR. BELGAM: Your Honor, we have Max Straus, also for Arendi.
the court: All right. Very good. So for the record, I've got a big stack of papers, much of which has come in over the weekend, in the last 48 hours. So let's start working through this.

It's 9:02. We'll get started. I had intended to take the bench at 8:30, but we didn't have everyone here. I won't dock the time today, but I'm frustrated by the situation, that we didn't have everybody here so we could get started.

So we have the jurors waiting in the jury room. We're going to have them sit here while we go through some of this stuff. So let's get started.

So first up on my list -- all right -- has to do with IPR estoppel. So I have letters from the parties that $456,457,463$, and 464 on this issue. So the record is clear, here's my understanding of how we got to where we are today. This case has been pending since 2013, well before I took the bench.

Back in 2013, Apple, Google, and Motorola
petitioned for IPR of the ' 843 patent on a number of grounds. The PTAB only instituted review on one ground, obviousness over a reference called Pandit. After the IPR concluded and litigation resumed, Arendi moved for partial summary judgment that Google was prevented from asserting certain invalidity grounds as a result of IPR estoppel.

Judge Stark assessed Arendi's motion in his memorandum opinion at docket Number 391. As Judge Stark's opinion explained, Arendi's motion argued that Google was estopped from raising a number of different pieces of prior art, including a piece of prior art that the parties refer to as the CyberDesk system.

There appears to have been no dispute that Google could have presented in the IPR certain patents and printed publications that describe aspects of the CyberDesk system. However, Google contends that the CyberDesk system itself qualifies as prior art because it was publicly used prior to the relevant date.

In his opinion, Judge Stark held that Google was not estopped from asserting a ground of unpatentability that included combinations of references that consisted of estopped art with non-estopped art.

In other words, he included that even if Google were estopped from raising the public use of the CyberDesk system as a reference alone or in combination with other

Judge Stark observed that Google's invalidity expert, Dr. Fox, expressly relied on the deposition transcript of the developer of the CyberDesk system, Dr. Dey; and that Google contended that Dr. Dey explained certain CyberDesk features that are not disclosed in publications that describe the CyberDesk system.

Judge Stark concluded that there was at least a genuine issue of material fact as to whether the CyberDesk system is cumulative of the prior art publications that could have been raised during the IPR of the ' 843 patent. And he said that the dispute creates a fact issue that was not amenable to resolution on a motion for summary judgment.

That was back in March of 2022. Arendi did not request reargument, nor did Arendi at that time request a bench trial on the issue of IPR estoppel, or a determination from the court based on the record.

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\text { Fast forward to } 2023 \text {, prior to the pretrial }
$$ conference, the parties filed a proposed pretrial order. Arendi did not ask for a bench trial prior to the jury trial and the proposed pretrial order, nor did it otherwise flag for the Court prior to the trial conference that the issue of IPR estoppel needed to be decided before the jury trial.

One of Arendi's motions in limine asked the

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estopped references, Google was not estopped from raising the public use of the CyberDesk system as part of an obviousness combination with other non-estopped references.

However, Judge Stark's memorandum opinion did not resolve the issue of whether Google was estopped from raising the public use of the CyberDesk system as a reference alone or in combination with other estopped references. He pointed out that the public use of the system is prior art that cannot be raised in an IPR.

However, he also stated the following: "In invalidity grounds, based on a physical product which could not have been raised during an IPR, see 35 U.S. Code 311 (b), may be subject to IPR estoppel if the publication described in the physical product could have been raised as an invalidity ground during the IPR."

And he pointed to one of his previous opinions for the proposition that an invalidity ground involving a physical product is barred in litigation if a publication reasonably could have been raised in the IPR that is materially identical to the physical product. In that circumstance, the physical product is entirely cumulative on the estopped prior art publication.

Regarding Google's assertion that the public use of the CyberDesk system was non-estopped prior art,

Court to preclude Google from taking any position contrary to the Court's prior orders or its stipulations. But, of course, that motion could not possibly have covered Google's introduction of evidence relating to the CyberDesk system because, as I just explained, Judge Stark denied Arendi's motion to estop Google from asserting the CyberDesk system.

At the pretrial conference, Arendi made what I can only describe as a stealth motion regarding IPR estoppel.

In the context of discussing its motion in limine to preclude Google from taking any position to contrary to the Court's prior orders or its own stipulations, Arendi said that Google should not be able to introduce combinations of art that Judge Stark had previously held were estopped.

Then it said -- and this is the stealth part -also the Court will need to rule on other prior art that should be estopped based on inter partes review estoppel before trial, and any -- those should also be excluded.

At that point in time, I had no idea what Arendi was talking about because this hadn't previously been flagged as an issue that needed resolution before trial. We then engaged in a discussion about when Google would disclose the final obviousness combinations that it
intended to raise at trial.
And I said that Arendi could raise whatever

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remaining dispute it had about prior art references in a letter after it received those combinations. But, again, I had no idea at that time, and I certainly wasn't made aware that Arendi's concern actually had to do with prior art references that Judge Stark had already addressed in his prior opinion.

Then on April 11, five days after the pretrial conference, and over a year after Judge Stark addressed the same issue, I got a letter from Arendi that said -DI 256, again asking the Court to preclude Google from presenting at trial any combinations of prior art that used CyberDesk.

Arendi's request is denied for several
independent reasons.
First, the timing. This request is just too late. If Arendi thought there were open issues that needed resolution prior to trial, Arendi had multiple chances to bring them to the court. A motion for reargument before Judge Stark, a request in the pretrial order for a bench trial prior to the jury trial, or an express request in the pretrial order that the court decide the issue before trial on the written record, or even a motion in limine.
in the IPR patents and printed publications that describe CyberDesk. And it contends that those patents and printed
art because it was in public use prior to the relevant date. Public use is a separate category of art from patents in publications. The record before the Court suggests that Google intends to show that the CyberDesk system anticipates and was in public use prior to the relevant date.

The evidence Google seeks to present to prove anticipation comes from testimony of a developer who demonstrated the system in public and various printed publications that describe aspects of the system, including nine printed publications, one conference poster, the developer's thesis notes, and some other materials like source code and slides.

I'm not persuaded that Google could have raised that anticipation argument in the IPR, at least for the reasons that involves combining evidence from multiple sources to show that a single prior art system had all the limitations, and it relies on the public use of the invention which could not have been raised in the IPR.

Likewise, I'm not persuaded that Google could have raised public use of the CyberDesk system as part of obviousness combination in the IPR.

Arendi points out that Google could have raised the pretrial order asked for a ruling that defendant couldn't violate Court prior orders. However, there was never any ruling out of this Court saying that Google was estopped from asserting the CyberDesk system; thus, the arguments it now brings are wholly unrelated to the motion in limine that Arendi did file.

Second, Arendi's request to exclude all combinations of prior art that include CyberDesk is denied to the extent that it is inconsistent with Judge Stark's prior ruling that IPR estoppel does not prevent Google from presenting obviousness combinations that consist of estopped references in combination with non-estopped references.

Third, Arendi says that an evidentiary hearing is not required for the Court to rule on the issue of estoppel. That's that document 463. And on the record presently before the Court, I find that Arendi has failed to meet its burden to prove estoppel.

The law says that: "A petitioner in an inter partes review may request to cancel as unpatentable one or more claims of a patent only on a ground that could be raised under Section 102 or 103 only on the basis of prior art consisting of patents and printed publications."

Google says that the CyberDesk system is prior
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25 intends to present at trial. but he didn't decide it. I'm less receptive.

Instead, I agree with the approach and analysis laid out by Judge Noreika in her opinion in Chemours vs. Daikin. That's at 2022 Westlaw 2643517.

And I conclude that as matter of statutory interpretation, estoppel does not apply to Google's invalidity arguments that rely on a prior public use of the CyberDesk system whether or not its testimonial and written evidence of that system is cumulative to the art that Google could have raised in the IPR.

Arendi says that the CyberDesk system is nonexistent; however, Google intends to present testimony
that it did exist and that it was publicly demonstrated that it did exist and that it was publicly demonstrated even though there was no working system fully presented at trial.

> Arendi also says that pursuant to the corroboration rule, Dr. Dey, a developer of the CyberDesk system, can only testify about aspects of the system that are also described in the printed publications.

Arendi argues that because Dey can't testify about additional aspects, the publications are, by definition, cumulative to what he can testify about.

## Judge Stark seemed receptive to that argument,

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469, and Arendi's response at 472.
Google has, again, reraised the issue of Samsung license defense. Google recently raised this issue in its motion to strike. That was that document Number 419. There, Google asked the Court to strike a portion of Arendi's expert report providing a damages figure that factored in apps on Samsung devices.

At the pretrial conference, I declined to do so stating that essentially Google was seeking a pretrial ruling that infringement is licensed when the accused apps are on Samsung devices. And that's an issue that, in my view, should have been appropriately raised for a motion for partial summary judgment. And, of course, the deadline for filing those motions has long passed.

In its present letter, Google once again asked the Court to preclude Mr . Weinstein's damages testimony to the extent it includes apps on Samsung devices, because according to Google, apps on those devices are licensed.

Google says it will be prejudiced in multiple ways if Arendi is allowed to present evidence of damages that include damages for apps on Samsung devices, but Google's claims of prejudice are all grounded in its assertion that the testimony is improper because those uses are licensed.

Google's request for a pretrial determination

But, of course, we don't know what will happen that I disagree that the corroboration rule prevents Dr. Dey from testifying about aspects of a prior art system that are not described in patents and printed publications.

To be clear, this is not a case where the only evidence of a prior art public use is a reference that a patentee could have raised in an IPR. I could imagine a hypothetical case where there is an advertisement of a prior art device that an IPR challenger could have presented in an IPR as a printed publication.

If the advertisement were the only evidence of a prior public use of an invention, I might be receptive to the argument that defendant cannot escape IPR estoppel by saying that the same reference is also evidence of a prior public use. But the record reflects that is not the case here.

Google says that it intends to prove prior use of the CyberDesk system through a combination of testimony and multiple public and nonpublic documents. Thus, even if there were a narrow exception that precluded evidence of prior public use when the only such evidence is materially identical to a single printed publication it could have been raised in the IPR, that exception would not apply here.
at the trial. Accordingly, my ruling is that Google is not estopped from raising the public use of the CyberDesk system as prior art.

My ruling is without prejudice for Arendi to reraise it should it appear that Google's only evidence of a prior public use is a publication that could have been raised in the IPR.

And that concludes my ruling on that issue.
Hopefully that takes care of letters 456, 457, 463, and 464.

I realized, after I started, that it's possible that Google has furthered limited its combinations to render this issue moot.

Is Google still intending to rely on the CyberDesk system?

MR. UNIKEL: We are, Your Honor.
THE COURT: All right. Okay. Good.
All right. Let's move on to the next issue I have on my list. That is issue is the Samsung license defense. I have letters that 469 and 472.

By the way, the first -- it took me about
12 minutes to read that first ruling. That time will be charged to Arendi.

Okay. Next, we have Google's letter filed at
that its apps on Samsung devices are licensed is denied.
Here, again, Google has essentially requested summary judgment on a defense of license. The request is denied for the same reasons I denied it at the pretrial conference.

To the extent Google believes that it has a valid license defense and that the license at issue needs to be construed by the Court prior to that defense going to the jury, that is something that could be taken care of with jury instructions.

Google's letter also asks the Court to clarify what evidence and arguments regarding the agreement the parties may present to the jury by deciding as a matter of law whether or not the agreement is ambiguous.

To the extent I understand Google's request, it apparently does not want to present certain evidence at trial relevant to its license defense. And it might either win or lose that defense as a matter of law post trial, but that's the point of the summary judgment motion.

Google thought the license defense was dispositive of an issue and had the opportunity to ask for summary judgment on that issue. It's too late to raise that now.

Google says that it wants a ruling from the
court as to whether or not the agreement is unambiguous or ambiguous so that it can determine what jury instructions are appropriate. That, in my view, has it backwards.

If there is a triable defense that's properly part of the case that's not been disposed of on summary judgment, it's going to get tried.

If Google thinks that the jury needs to be instructed on the meaning of a written contract as part of that defense, it is incumbent upon Google to propose a jury instruction, and it has not proposed any jury instructions on this issue.

I say again, I don't have a proposed jury instruction from Google construing the license. If Google had proposed an instruction on the meaning of the license, and Arendi had proposed a competing instruction, the Court might be in a position to make a pretrial ruling in the context of jury instructions that the agreement was unambiguous in favor of Google, that it was unambiguous in favor of Arendi, or that it was ambiguous. But I don't have proposed instructions on this issue.

To the extent the license defense is not raised, the parties can present their proposals at the charging conference.

So that takes care of the second issue that I have.

## 7 <br> - <br> Page 13 of 775 PageID \#: 60592 <br> The third issue has to do with the scope of

 evidence that could be presented on -- that has to do with the IPR proceedings. So this, I think it's fair to say that the parties' positions on this issue have been evolving over time, including since last Thursday.So I've got letters that were filed late last night, including, at least, one after midnight. So let's hear from Google on where things stand now.

MR. UNIKEL: Thank you, Your Honor.
After the hearing on Friday when this issue came up, we had had discussions over the weekend in an attempt to try and at least narrow the dispute, if not get rid of the dispute. Google has withdrawn all of its references to Pandit, which is the one ground that was actually included in the IPR.

We have no obviousness combinations. We are not going to raise Pandit. As a result, our proposal was -- and I think it's the appropriate proposal -- that IPR proceedings should just not come in at all, because at this point, since Pandit is not in the case, those reference to any of the proceedings in the Federal Circuit or the PTAB are going to be confusing to the jury.

And, frankly, I think that what we've seen from Arendi is that they would like to use those proceedings to suggest to the jury that all validity issues have been
the IPR proceedings, and it wasn't because -- were you going to say that you thought it was invalidity based on Pandit?

MR. UNIKEL: No, Your Honor. The only reason that this was coming up at all is because there's a willfulness charge post complaint. The case was stayed for five years based on IPR proceedings. And we felt that it was important, if there was going to be an aggressive willfulness case, to explain there were proceedings going on in the Patent Office, and that's why we reasonably acted as we did.

We do not believe that even that discussion that we were proposing had any relevance to the jury's determination about validity. And we were not planning to use it to suggest validity or invalidity of the patent.

We simply -- frankly, we still need to explain why we didn't -- why there was no action for five years as this case was going on, which is why we've asked, in light of the new developments in the case and withdrawal of certain claims, that there not be a willfulness charge as part of the case.

But even if there is, we'll just have to explain without reference to the IPR proceedings, because it's become clear that introducing a discussion of the IPR proceedings will become vastly more confusing than it

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And so we'll basically just have to explain that we were defending the case for 2013 through 2018 when it resumed, and we would not reference what was happening in the Patent Office during that time.

That was the only reason we were going to reference the proceedings at all.

THE COURT: All right. Thanks very much.
All right. Let's hear from Arendi.
MR. ARD: Thank you, Your Honor. Seth Ard from Susman Godfrey.

First, we think this issue has been raised. They could have raised this long ago in motions in limine. They've been telling us ever since -- you know, up to three days ago, they're going to raise these invalid- -this IPR, and that was their intent to do so. And we think it's too late now. We have our opening prepared. We have our witnesses prepared. It's too late to do it now.

Second, it does go to willfulness. He just -Mr. Unikel just said that they reasonably acted the way they did with respect to their belief in invalidity. Their own cases that we've cited back to the Court say that for our willfulness affirmative case, we can show that they took their best shot in trying to invalidate the
patent, and they failed to do so. And that shows they didn't have a reasonable belief in the invalidity of the patent. In cases, you know, that we cite say that.

And the third point, Your Honor, is, I think, as Your Honor just explained, they can't show invalidity based solely on the features that were exposed in the written publications of CyberDesk, for example, their anticipation defense. And the jury needs to understand that. Otherwise, the jury could make a finding of invalidity that is contrary to the law of estoppel.

THE COURT: There's no way that they could have raised CyberDesk public use as an anticipating reference in the IPR; isn't that right?

MR. ARD: Well, Your Honor, we agree with what you -- I mean, we accept what you just said about the fact that Dr. Dey is testifying to CyberDesk features that were not disclosed in the publications, but that doesn't mean that those -- what he disclosed -- what he testified that was not disclosed is material to this case in any way. He may have testified to something that wasn't disclosed.

But I think, as Your Honor said at the end of your ruling, you know, if what they're really doing and what really ends up happening, is that the publications themselves expose features that invalidate the patent, then that's something that can't be used to invalidate the
if you actually look at their proposed stipulation that they submitted last week, and I think they submitted a version of it today, there's two basic facts that are relevant. One is that they sought to cancel the patent in 2013, and that they failed.

The Federal Circuit -- they took their best shot, and the Federal Circuit held that they were not able to cancel the patent. And that goes to whether they reasonably believed that they -- the patent was invalid. And that's something the courts have found. And we cited -- I can't remember the case we cited again this morning and we cited last week -- that Google's own cases that recognize that their affirmative case of willfulness, that's relevant to reasonable belief in invalidity.

THE COURT: All right. Thank you.
MR. UNIKEL: Your Honor, may $I$ be heard on two

## points?

THE COURT: Yes.
MR. UNIKEL: First, on the issue of was it too late, I just want to point out that after we had submitted all of the pretrial materials, they added the Federal Circuit decision and the IPR to their exhibit list late. We pointed that out to them. We objected to it. We could not have filed the motion in limine on it because there was no indication before we filed motions in limine that
they had any desire to introduce it to the case.
Second, as to the notion that we took our best shot, we are restricted in IPRs as to what we can present and what we cannot present. We could not present CyberDesk. We could not present Apple data detectors. And those are the grounds that we are presenting here.

So to give the jury the impression that we presented the things that we thought were best in the IPR and are now sort of bringing up the dregs at trial, it gives not only the wrong, but a false impression because we couldn't have raised these things in the IPR proceedings. So there's going to be tremendous confusion on the part of the jury, well, didn't the Federal Circuit and the Patent Office already decide this.

And last, when they say we brought this and then lost, the Patent Office found the patent unpatentable. The Federal Circuit reversed it on a procedural ground as to whether they could use common sense to fill in a missing element or not. To try to explain to the jury what the impact of the Federal Circuit's ruling on a procedural matter as -- such as what could common sense be used or not used for in an obviousness combination, I think, is beyond the jury capability and will grossly prejudice the case. We think this should come out -- and by the way, it comes out to
didn't invalidate the patent at issue. And then in 2017, is the release of feature that's accused in the applications of infringing. And in the multi-factor test that both sides agree to goes to the jury on willfulness, there is a question about whether the defendant had basis to believe the patent was invalid at the time that it engaged in infringement.

And that is why they wanted to be able to use the IPR to say we had a good faith belief that the patent was invalid, and so we didn't engage in willful infringement. But that's not just a defense position. It's not that one side gets to argue about that evidence for willfulness purposes; it is bilateral. And it's fine if they don't want to raise that argument, but we are also entitled to show that at the time they were engaging in infringing activity, they didn't have a basis to believe the patent was invalid because their issue had been resolved in the Federal Circuit.

It doesn't mean they can't come, of course, to court and seek, you know, to invalidate the patent now, but it's about their temporal belief. And what we've tried to do over the past two days is come up with a simple stipulation. So we're not trying to show pleadings and asking the jury to figure out the details of the proceeding, and really to whittle it down to, I think, two
there's this long period of time where nothing was happening in the case and we were defending ourselves, but we will not reference the IPR proceedings in an effort to do that.

So, Your Honor, I think that, basically, 403 would suggest that when something is unduly prejudicial relative to its probative value, it's the kind of thing that should not be included in the case. These decisions certainly fall into that category.

THE COURT: Okay. Thank you.
MS. SRINIVASAN: Your Honor, may I?
the court: Yes.
MS. SRINIVASAN: Just to be clear, there are --
there is a timeline of events, and counsel just referenced it. Not being able to explain what happened in that timeline is prejudicial to us because we brought a complaint and nothing got litigated for many, many years. And you'll see later in argument about their defense to willfulness and what they knew. That's going to turn on the fact that this case, this proceeding was stayed for many years.

But the timeline is such that when they sought IPR review in 2013, this case was stayed. That process ended in 2016 with no determination or -- you know, they
fairly simple propositions.
There was an effort to seek review in the Patent Office in 2013. It did not ultimately result in the patent being invalidated in 2016 before the infringing conduct took place. And I think that the stipulations are not really that far apart. Our view is this should be factual, and maybe it could be narrower. Google has offered one that we felt was a little more about argument.

But at the end of day, I think that those are two points that, in the absence of understanding what happened, one, it's to our detriment because it doesn't explain what happened with the case. And, two, it does bear on willfulness. That goes both ways. So for Google to say, well, we were going to rely on an adverse final written decision to show that we had a good faith belief, we weren't actually willfully -- and they don't want to do that anymore. I understand that's their election. But we are also entitled to use it to show that they didn't have a basis to believe the patent was invalid at that time that they released their infringing product.

And I think that is really the crux of what the IPR proceedings should be used for. It can be whittled down, frankly, to those two propositions. We've really tried to make it factual, but even the stipulation could be shortened to just say that.

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put in this position that is prejudicial to us. And Google has intended to use this. They have the IPR petition and the final written decision on their exhibit list, and they intended to rely on it. And now they've effectively brought a motion in limine to say we were going to rely on it; you can't. We may or may not rely on it. And yesterday they said they didn't. It's a concession that is relevant.

But I just want to be clear, we're not talking about spiraling into some rehash of what happened in the petition for institution. I think that we should be able to advise the jury of the basic premise that Google sought review of the patent, that that resulted in a stay of this case, and that, ultimately, the patent was not invalidated in 2016 before the launch of the functionality that's accused in this case. Those bear directly on the issue of willfulness.

THE COURT: Couldn't we tell the jury -- can everybody agree that we can tell the jury that the case was stayed and that it's not your fault that the case was stayed.

MS. SRINIVASAN: We can. But I think that it's critical, frankly, to understand how we got here. I mean, Google's going to make an argument about how our patent is
expired and how much time has elapsed. And these are things that are being placed as prejudicial to us. And it is relevant to the question of willfulness and what Google knew at the time that it began its infringing conduct. Surely, they are going context that.

THE COURT: But if we didn't say anything about the IPR, the jury's going to sit here and think that there was a valid patent during this time period. I mean, how is that different? You want to be able to tell them that their challenge was rejected.

MS. SRINIVASAN: That's it. That their challenge was rejected, and I -- and that, you know, that was part of the reason this matter was not told. To go back to the Patent Office and to seek a review, and that was rejected, and that is relevant to their state of mind at the time that the infringing conduct began.

And then I don't think that we need to turn into some, you know, side proceeding about what was in, what was out. We can keep it that simple. But it is relevant, and there are many themes in Google's presentation of its defense that are aimed at, you know, making it look like these patents are expired, so much time has elapsed, we couldn't know, we didn't know.

The fact that they -- that the case was brought and then they were able to understand the patents

And we can do that with instructions; right?
MS. SRINIVASAN: We could. But I -- you know, ultimately, and we could also come back to an instruction about whether it's appropriate in a limiting instruction to say that Google couldn't raise the systems they raised at that time. And then I think that's something that we could work on for the purposes of the charge conference.

But I think we are now trying to patchwork something that is very clearly part of the time line of what has evolved here. And I don't think -- I know we're going to hear from Google about what they knew and the extent to which they knew it and why it was appropriate for them to not, you know, that they didn't engage in willful conduct. And I don't think we should be limited in at least being able to explain those facts.

We don't have to say that there were -- you know, can certainly advise the jury that there were things that they couldn't bring to the Patent Office. But the things that they -- but they did pursue further review. And they did it knowing the content of our patents. So to say now, well, we didn't know, we didn't know what you were accusing, or we lacked notice. We should be able to contest that for that purpose and to show their state of mind.

And I understand. They're going to be able to
say, look, we still had a good faith belief in invalidity because we had these systems in 2017. They're going to have that defense. And that's going to be a fact issue for the jury to resolve. But I don't think that we should be deprived of being able to tell the jury that they had at least attempted to invalidate the patent on certain grounds and that that was not successful.

They're going to say, we couldn't have brought the system stuff to the Patent Office, and that's okay too. But I think, again, all of these relevance grounds are the reason that Google intended to rely on the IPR proceedings up until yesterday. And they apply in both directions, and if it was Google's intent that they would be able to and we wouldn't, that should have been teed up in a motion.

But we're not asking to -- what we're trying to do is avoid putting before the jury pleadings and having a debate about the interpretation of that. We think, again, if you look at the parties proposed stipulations, they agree on the basic facts. This happened in 2013. This happened in 2016. And we'd like to be able to tell the jury that. If the court deems that the parties should then come with limiting instruction of what they couldn't do in 2013 when they went to the IPR, we can do that too. But I don't think it's right for Google to have assumed
objection to using it only came yesterday. So on Wednesday -- I think it was Wednesday, whenever the last letter brief was submitted by Google, they said, we want to use it for this purpose and we've attached a proposed stipulation and instruction to accomplish that.

And we had a different view about what that stipulation should include. It isn't -- it is not right to say up until 24 hours ago that they didn't have a view this should be --
the court: I agree. I agree. Yep, have a seat.

MR. UNIKEL: May I make one final point, Your Honor, very quickly?

THE COURT: That's fine.
MR. UNIKEL: The reason this became a dispute is when we were originally going to use it just to explain why the case was stayed and what was happening without trying to create validity issues about it, when we started going back and forth about what a proposed stipulation or instruction would look like, it became immediately apparent that what this was going to be used for by Arendi was to suggest to the jury that we took our best shot, the Federal Circuit rejected it, and now, basically, we're going back for third, fourth, or fifth try, even on art that we could not have raised to the IPR.
they would put this into play for their benefit and made a decision not to -- which is their choice, trial
strategy -- but then tell us that we're not allowed to use it in any capacity.
the court: Okay. Stand by.
Mr. Unikel, do you -- I'm hearing now a
proposal that you've got a stipulation that you want to introduce those facts about the IPR?

MR. UNIKEL: No.
THE COURT: You want it out.
MR. UNIKEL: We want it out. We offered, if it
has to come in, if the Court rules that it's coming in, then we do believe the only way it should come in through a stipulation from the Court and a limiting instruction from the court. But we don't think that would solve the problem.

THE COURT: All right.
MR. UNIKEL: So, no, I don't think that's the right approach, Your Honor.

MS. SRINIVASAN: To be clear, the letter
Wednesday.
THE COURT: Understood.
MS. SRINIVASAN: And we, the parties, have been trying to reach agreement on that stipulation or a form of a stipulation. The objection of -- the wholesale

The concern at this point is, again, whatever probative value it would be to say this is what was happening during the stay period is vastly outweighed by the confusion in trying to explain to the jury how they're supposed to process this proceeding that is in a different forum, had a different ground than we're presenting, different standards, different constructions, and what should they do with that.

THE COURT: Okay.
MR. UNIKEL: I don't think it's necessary --
THE COURT: How is it fair to them that this is coming up last night when they've already had their opening demonstrative? I mean, what are they supposed to do with their opening slide?

MR. UNIKEL: Well, I had suggested we met and conferred on it last night. I had no problem with their opening slide. I suggested to them just put: Stay begins, stay ends. They wanted to include in that, that we had gone to the Patent Office for a review, as I actually told them, please create an alternative version of the slide that says the stay started and the stay ended.

You could still describe the timeline. You could still say Google knew about the patent in 2013 and they still launched their product in 2017.

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don't want to now introduce is the side show of what happened during the stay. And we're willing to say there was a stay pending and we were always defending ourselves, but that's it and not mention anything about the Patent Office at all. Because it just -- it goes on a spiral.

THE COURT: Originally, you wanted to use this as part of your defense to the willfulness defense, true?

MR. UNIKel: True. Because we needed to explain, we felt, what was happening, why was this case stayed, because we didn't want the jury to think that nothing was happening. But when it became clear that if this got introduced, it was going to become a free for all about how should the jury basically -- what should they do with that information?

Frankly, sometimes you have to realize that a position that you're going to take is not tenable in the case. And so as it became clear back and forth how this was going to be used and how the confusion was -- we were going to all have to keep doing explanation on explanation about why the jury should or shouldn't listen to what the Federal Circuit did, it became clear that the best course was to keep it out.

THE COURT: Okay. All right. Thank you. All right. This is challenging for me, but I can tell you

So in light of that, on this issue we are going to keep out all of the IPR evidence. I think we all agree that evidence of the IPR is not relevant to the ultimate issue of invalidity. The only possible relevance this evidence could have goes to willfulness.

On the issue of willfulness, I understand that Google is going to make an argument that Google believed the patent was invalid based on prior art that it couldn't have raised in the IPR. As I mentioned earlier, I agreed with Google that the references having to do with at least the CyberDesk could have been in the IPR. I take Arendi's point that it wants to say that Google couldn't have believed that these prior art systems were invalidating as it had similar art that it did raise in the IPR or could have raised in the IPR, and that the IPR was ultimately unsuccessful.

The jury can decide for themselves if certain elements are met by these prior art systems. I've given
that they could, and there were things that they could not bring at that time. Doesn't that address the concern that the relevance is being outweighed by prejudice? Because I don't think we can contest that it's relevant. I mean, they conceded it's relevant, and they've said it's relevant to willfulness.

So now we've been -- you know, I just, what I heard from counsel is that we thought we were going to use it for willfulness, then we decided it could be used to argue the opposite about willfulness. And so when we realized that, we took it out of contention. I -- that's not right. I mean, it is plainly relevant. But is there a way where we can agree that it can be raised, but with -- expressly in the context of saying that what they did when they went back to the Patent Office, there were things they weren't allowed to raise.

THE COURT: You can work with them on a proposed instruction that we can tell the jury. As of right now, that's the ruling that it should stay out. If they open the door in any way, my ruling is subject to be revisited. But that's what we're going to do for now. And I'm open to an instruction if you have a proposal you want to make in light of today's ruling, that's fine.

MS. SRINIVASAN: All right. Thank you, Your Honor.

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 to deal with these deposition designations before we begin opening statements?MR. UNIKEL: No, Your Honor.
MS. SRINIVASAN: No, we don't, Your Honor.
THE COURT: Okay. All right. Do we need to address this damages issue before opening statements?

MR. UNIKEL: It's possible, Your Honor. Do you want me to address it briefly and you can decide if we need to?
the court: I've skimmed the letters again. We got up real early this morning, but we still had a stack from you. Let's hear what you want the Court to do.

MR. UNIKEL: After the jury was impaneled on Friday, we got -- at the end of the meet and confer that we had asked, they notified us at the end that they were dropping half of the case that related to Content Detectors and Quick Actions in Chrome. They then said -I asked them what the new damages number that they were going to be offering. They said they'd get back to me. Two hours later, about 11:00 at night on Friday, they sent me a marked up exhibit to one of the experts' reports that cobbled together numbers to create a new damages model for the new case, which only includes Smart Text Selection.

THE COURT: They didn't have a spreadsheet with
hypothetical negotiation date is five years off. It doesn't account for the fact, for example, that there's only 11 -month license that we would be talking about in the hypothetical negotiation.

Our expert did account for that and did offer an opinion, because his model is not as variable based on some of these things. It's based on just a single license purchasing a single comparable technology. But to use their model doesn't work when you change the date of the hypothetical negotiation and when you eliminate the infringing allegation from 2013 to 2017.

So the problem is, we now have cobbled together expert theory from them, no ability to know how it was based, and, frankly, it's fundamentally flawed based on the absence now of one of the accused functionalities. That's our concern with letting them put on a damage theory based on an expert opinion that doesn't appear anywhere in the expert's actual --

THE COURT: Okay. So there are two issues. There's one hypothetical negotiation for the wrong date.

MR. UNIKEL: Correct.
THE COURT: And the second issue is they've had to rejigger the damages numbers, and you say it doesn't make sense because they weren't --

MR. UNIKEL: They can't apportion it properly.

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line items for these once before in the report that you had?

MR. UNIKEL: No. Part of the problem is this: For the period from 2012 until 2017, the only accused product was Google Chrome using Content Detectors and Quick Actions. Once they dropped those out of the case, their only infringement now in the case starts in December of 2017 and goes to the expiration of the patent in 2018.

There were units, but the problem is the
hypothetical negotiation from their expert perspective started 2012, not in 2017. All of their analysis of the Chrome downloads, for example, made sense from 2012 to 2018 when there was Content Detectors and Quick Actions involved.

When you take it out, the problem is this: Upon the launch in 2017, downloaded Chrome apps in particular are not going to be infringing on certain versions of Android. They're only infringing on other versions of Android. So you would need to have to delve into how many of the downloads were to which versions of Android. That wasn't relevant while Content Detectors and Quick Actions were still in the case for that relevant time period.

There is no ability to apportion what their expert said for the relevant time period. The

THE COURT: -- before.
MR. UNIKEL: Correct.
THE COURT: Okay. Let me hear from the other side.

MS. SRINIVASAN: So on the first issue of the hypothetical negotiation date, of course, this isn't -- I don't want to say it's -- Google clearly contemplated that this was going to happen. The damage expert offered an alternative scenario that's just what we have right now. And he did so, and he said that he opined on a hypothetical negotiation date.

Likewise, our expert testified that there it didn't really matter whether that date was 2013 or 2017 for his analysis. And, in fact, all that's happened is that the experts are now closer aligned on the hypothetical negotiation.

THE COURT: And your expert can be crossed on the issue of --

MS. SRINIVASAN: Correct.
the court: Okay. So let me hear back. I'm
going to have to see the exhibits so I can --
MS. SRINIVASAN: Sure.
THE COURT: -- understand the second part of it. Or can you tell me where they are.

MS. SRINIVASAN: Are they attached to the

MR. ARD: Yeah. It's docket 482.
MS. SRINIVASAN: Okay. 482, Exhibit A, and I can hand these up to you if you prefer, Your Honor.
the court: Sure. That's great.
ms. SRINIVASAN: So may I approach?
the court: yes.
MS. SRINIVASAN: When the supplemental report of our expert was served, he did bring it out app by app, year by year. So that is how the report is prepared. The exhibit gives an amount per app over various year periods. And so when we removed certain apps containing the CDD functionality, it's just a question of taking out those line items.

The only thing that is -- one of the -- for one of the applications, it went from being the full year of 2017 to August to December of 2017. That's straight 12-month apportionment.

So everything is in there in the exhibit. It's application by application, and the applications that are impacted by the removal of this functionality, we just showed them. We sent them the same schedule that had been disclosed to them before highlighting what was out and what was in.

THE COURT: So what they're saying in your view
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is that it's not -- so you're just saying we're just going to -- we're taking -- no. We're just going to present the blue stuff, or we're just going to take out the blue stuff.

MS. SRINIVASAN: Blue is out. Pre2017 blue stuff is out.

THE COURT: So you're just subtracting all the blue stuff, and they're saying there's a problem with that.

MS. SRINIVASAN: Yes. I guess -- yes.
Nothing has changed in the methodology, the manner in which what remains is calculated on a per unit rate is exactly the same as it was. The units which are provided to us from Google are the same. It's just that the pre2017 applications are removed. And the devices that use that pre2017 functionality are removed. So that is what we sent them.

And again, if you look at their expert rebuttal report, he did a calculation and offered a rebuttal number based on what we have now narrowed the case to. So he understands what units are in play, their expert, because he did the work to offer an alternative rebuttal scenario.

THE COURT: And every number that appears in
your supplemental exhibit, that was a number that your expert could have been cross-examined or examined on

## versions of Android

Once they told us on Friday night that they are eliminating Content Detectors and Quick Actions, now there's a question whether those downloads, what operating system version did those downloads go to. They would have to prove that. There was no discovery on that in the case because it wasn't an issue while Content Detectors and Quick Actions was there. I don't even have the ability to quantify and then cross-examination on the fly their expert to say: How do you know which operating system of the devices these apps were made to because there are some that are non-infringing and others that are infringing. The problem is now, by throwing in this theory that basically just tries to blue-out the numbers for the periods that they no longer are accusing, it creates new apportionment issues that we can't cross-examine him on, we never did cross-examine him on because they weren't even apportionment issues while the whole time period was at play.

That's the concern, Your Honor. It's their burden to prove the damages. They would have had to have an expert do that apportionment if they were going to ask for damages for all of it. Now they're just saying, well, we don't have that so we're going to ask for all of the downloads in 2017 from December on and all of the

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downloads in 2018. But the reality is that probably less than half of those downloads would have been to devices that actually have the operating system that could have infringed. But we can't address that because we never knew this was going to be a model they were going to pursue.

THE COURT: Okay. Counsel --
MS. SRINIVASAN: May I respond to that?
the court: Yes.
MS. SRINIVASAN: Except for Google Chrome, all of the other applications were from 2017 forward. So if Google wanted to argue, we don't know what Android operating system those applications apply to, that issue it could have raised at any time. It is not impacted by the narrowing of the applications that are from pre2017.

There's -- all the other applications that are in there from post 2017, if Google wanted to take discovery on it or wanted to raise in a motion, it didn't raise this in Daubert, could have raised it and said, well, we can't identify for these other applications what operating system, whether it relates to Android 8 or not. That issue is one that, as Google has framed, could have been raised at any time. It is not specific to the fact that the pre 2017 units are not -- no longer being asserted.

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MS. SRINIVASAN: Your Honor, we understand that some information that might be raised in opening Google has asked that the courtroom be sealed for, and there are some third-party licenses that are referenced in opening, and at least one of those third parties has made a request for sealing. And so we obviously want to understand how the Court would like to best handle that. Those are definitely going to be presented in opening argument.

There are probably two discrete sections where that happens, but they are not together in the opening, so it would require sealing in the middle. And the Court can also consider whether -- in our view, is that when Google has asked us to seal in terms of number of downloads or the number of installed applications, doesn't provide a basis for sealing the courtroom.

We understand if we're talking about source code we may need to seal the courtroom. But these are unit numbers, and we don't see that as a basis for sealing the courtroom at this --

THE COURT: Can we get -- are we talking about information that's on an opening slide that's going to be up on the screen?

MS. SRINIVASAN: Yes.
the court: Is there a way we can deal with this where we can give the jury a copy of the slides?

So I think there's a little bit of confusion created that is not clear here. All of the things from post 2017 that are in the case today, that were in the case before, that's the argument that counsel is talking about. He wants to say, I don't know which one corresponds to the 2018 -- or to the Android 8. But that was true a week ago, two weeks ago, six months ago.

So that's not a new argument. That has nothing to do with the fact that the pre2017 units are out. It is -- all of those other applications that are unmodified besides Google Chrome. They are exactly as they were post2017.

If Google wanted to argue that they can't figure out what operating system they connect to, that should have been raised before.

THE COURT: All right. We are not going to exclude any evidence at this point. That said, that doesn't say anything about the merits. So if the evidence gets presented and plaintiff failed to meet its burden of proof that these numbers correspond to infringing products, that's what it is. Google can move for JMOL or we can deal with it in post-trial briefing, but the evidence is going to go forward.

All right. An issue about closing the courtroom.

MS. SRINIVASAN: We could do that and not publish it.

THE COURT: Counsel?
MR. UNIKEL: That would be fine, Your Honor, if we just not publish the information to the whole courtroom, but the jury gets the slides in hard copy, we wouldn't object to that.

THE COURT: I just want to make sure -- I just want to make sure -- I don't want to hear any arguments of counsel later about certain slides being given undue weight because we handed up copies of these slides but not other slides.

So I guess we could explain to the jury that we're going to give them a copy of all of the slides with the idea being that the -- that's not a great solution as I'm thinking about it. We could give them a copy of just the slides that have the confidential information and explain to them that we are giving it to them because it's got confidential information we don't want published to the Court.

Anybody have any ideas about what the best approach is going to be?

MS. SRINIVASAN: I think that would work fine, at least for my purposes because the two major things we'd be talking about these third-party licenses, I could certainly say there's an agreement by this party, which, you know, that can be shared publicly, and the number and the amount of that I can't say out loud, but you can look at it on your slide.

THE COURT: Okay. Counsel?
MR. UNIKEL: That would make sense as long
as -- the only thing I would ask that if those slides are given, they be given at the time that it would normally show up in the presentation.

THE COURT: So they're not sitting there
looking at them?
MR. UNIKEL: Right. The whole time. And then obviously they shouldn't be evidence that they're taking back, and so we can collect those at the end as well.

THE COURT: Everybody agree?
MS. SRINIVASAN: That's fine.
THE COURT: How quickly do you think you can get all of that prepared so that we can hand it out?

MS. SRINIVASAN: Just need to print probably about four slides.

Okay. We have a printer here, so I think we can do that in 10,15 minutes.

THE COURT: Okay. All right. Is there
anything else? Have a seat. Anything else we need to deal with?

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So we are going to be able to do openings
without closing the courtroom?
MS. SRINIVASAN: With that, for Arendi, yes.
THE COURT: Yes?
MR. UNIKEL: I believe yes, Your Honor.
THE COURT: Okay.
MS. SRINIVASAN: And I believe in the
examination of our first witness, Mr. Hedloy, we'll have a similar issue where there will be some discussion. Now, in that case, because he's offering evidence and testifying about it, we probably will need to seal the courtroom so he can talk about the terms of those agreements.

THE COURT: Can we cabin it to one module of the direct examination?

MS. SRINIVASAN: I believe so, yes.
MR. UNIKEL: And we can cabin the cross
similarly. I have it in one module.
THE COURT: So the idea is that we're going to kick everybody out, leave the jury where they're seated, do it, bring everybody back in. That's going to happen twice during the course of the examination?

MS. SRINIVASAN: Yes.
MR. UNIKEL: Yes.
THE COURT: Okay. All right.

THE COURT: Just out of curiosity, do you have a sense of how long your opening will be?

MS. SRINIVASAN: It will be under an hour, 45 minutes to an hour.

THE COURT: Forty-five minutes to an hour.
Counsel?
MR. UNIKEL: I would guess about 40 minutes, Your Honor.

THE COURT: Okay. So I think what we'll try to do is do the openings, and then we'll take lunch after that.

MR. UNIKEL: Great. Thank you, Your Honor.
THE COURT: All right. Let's bring the jury in.
the clerk: Yes, Your Honor.
(The jury enters the courtroom at 10:21 a.m.)
THE COURT: Please be seated. Good morning, ladies and gentlemen of the jury. I want to apologize to you for the late start we had this morning. There were some matters that I needed to discuss with the attorneys before we began the trial, but we are now ready to go. We thank you very much for your patience. The trial is now going to begin. First we're going to hear opening statements from each side.

Counsel.

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MS. SRINIVASAN: Good morning, ladies and
gentlemen of the jury. My name is Kalpana Srinivasan. I'm a lawyer for Arendi. I have the great privilege to represent this company and to represent its principal and the inventor of this patent, Mr. Atle Hedloy. And he's here with us today at counsel's table, and I wanted to introduce him to you.

You know, when we're in grade school, we learn some basic lessons about sharing, and sharing fairly. You learn that you don't go and take something from your classmate or, if you take something, you give it back or you find a way to make it right. You don't let your classmates do all the work when you have a school project. You do your fair share.

We're here today because Google did not pay its fair share for using Arendi's technology. And we're going to need your help to resolve that and to hold Google accountable.

Now, Mr. Hedloy, he invented something that truly helped benefit consumers, a software invention of great value. You all were here on Friday. You saw the video from the Patent Office that explains how a patent is granted. And over the course of this trial, you're going to hear a lot about the hard work that went into Mr. Hedloy's invention that he will present to you here.

## 1

 2You will hear that Apple and Samsung and Microsoft all paid because they had used or wanted the right to use the Arendi patent. It's only Google here that didn't learn the lesson that we all did in grade school about playing fair and sharing fairly. And so we're going to ask you at the end of this case to hold Google accountable for that.

Now, I know you got a very good preview about the patent system during the video. I want to talk a little bit more about what it means to have a patent and a patent right. The U.S. Constitution provides for this right. It was so important to our founding fathers that it is in our constitution. United States Constitution, Article I, Section 8, Congress shall have the power to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. The right, exclusive right to the things that they discover as inventors.

And there's a reason for this. The U.S. patent system is meant to attract people from all over the world and in this country to disclose their inventions. You could come up with something and keep it secret, but the Government wants to give you a reason to share it so others can learn from it. May be they can build on it.

He came up with this invention in 1997, more than 25 years ago. And he came up with a way for consumers to seamlessly use information while they were working in different programs.

For example, if you're in an e-mail and you're typing up an address, that you'd be able to see that in a map without having to cut and paste information into a map program. Some of that might sound common to you today, but keep in mind, we're talking about an invention from 25 years ago. And at that time, when Mr. Hedloy came up with his invention, he brought it to the Patent Office. The Patent Office carefully reviewed it, and they decided that he was entitled to have a patent on his invention because it was useful and it was new.

You saw during your video on Friday the way that a patent is laid out. The patent at issue in this case is the 7,917, 843 patent. You are going to hear it referred to as the $\quad 843$ patent in this case.

The invention that Mr. Hedloy came up with was important to him and to his company, Arendi. But as you'll hear, Google used this patented technology. And to this day, Arendi is still trying to pursue payment for it. And Google is unusual in this respect because other technology companies paid for the right to use or because they had used the Arendi patent.

And in exchange for that, you get the right to a patent. of a patent is like a deed, a deed to property. And it is same way that you get a deed to a piece of land, a patent gives you the ability and right to exclude others from a certain type of property.

You can see here that the patent grants the right to the person having title to this patent the right to exclude others from making, using, offering for sale or selling the invention throughout the United States of
America. That's what the Government gives you and that's America. That's what the Government gives you and that's what Mr. Hedloy received when the ' 843 patent issued.

Now, I want to talk a little bit about
Mr. Hedloy. He is the center of our story here over the next few days. He grew up in northern Europe, in Norway, in a small town. And even as a young man, he had a strong interest in computers and technology. After high school, he served in the Norwegian Army, and he wanted to decide what to do next to build on this interest he had in computers.

Nobody in his family had been to college and so he asked people, if I want to learn more, if I want to become better at this, what should I do? And people urged

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him, encouraged him to look, to come to the United States where learning about computer science and math was a critical part of university education here. So he applied to schools here and he got in. He was accepted to a number of places, and he chose to attend Harvard. He was able to pay for that because the Norwegian Government helped support his education. And he received scholarships from Harvard.

At Harvard, he had to do a whole array of jobs to be able to stay there -- washing dishes, working in the cafeteria, and then eventually being able to serve as a teaching assistant in the computer science department.

You will see today, and you're going to hear from Mr. Hedloy when he gives his testimony about the time he spent at Harvard. And you'll see some pictures of him on campus as he was studying as a student here, left his family because he believed that he could learn the subject matter that he was interested in better in this country. His degree -- in four years, he earned a degree in applied math and computer science. After that, Mr. Hedloy took another journey from the East Coast to the West Coast. He came to California because that's where computers were being developed, the center of software and personal computer development. And that's really where he wanted to be to help improve and refine his skills.

He worked for computer companies, Convergent Technologies, NCR, and there he worked on software programming and personal computers. And he learned his craft and he improved his skills.

After that time where he was working in California, in 1986, he decided to get a business degree because he had this interest in computers and software, but he wanted to combine that with his own entrepreneurial nature, a desire to work on businesses and to develop companies around software.

He got his business degree, and then not long after, he launched a company called Arendi. Now, Arendi -- and I asked him myself what that meant -- it was kind of a play on words, RND, research and development, and he called it Arendi.

How did he start this company? He and his wife, they used their own money to start this business. And they wanted to develop software products that would make it easier for people to use computers. Of course, Mr. Hedloy had been using computers his whole life, so that came second nature to him. But what he wanted to do was figure out how people who were starting to use computers, how it could become more accessible to them.

So his company, Arendi, one of the first
products it launched was called OneButton. And the idea
with an address database to populate information and addresses at the touch of a button.

A lot of interest in his product and a great horizon on the way for his company. But Arendi and its product as a business fell victim to what was happening at the time in the economic market. You all may remember in the early 2000s when the dot.com bubble burst, impacting a lot of startup companies and technology companies and many, many people and consumers all over the country.

So what did that mean for his business? Well, Mr. Hedloy and his wife had been financing their company and they -- as I said, had launched a great success. They had been building deals and starting relationships. But at a time when he would be getting investment or looking to people to fund it, that investment had dried up because of what was going on in the economy generally. So his operating business, Arendi, as a company could no longer continue. But Mr. Hedloy still had his most important asset, and that is his patent.

During the time when he was working on OneButton and the company, he was doing all of that, but at the same time, he was working on drafting and preparing a patent, his invention. The OneButton product that we talked about, that was a starting point.

But his patent disclosed much more

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functionality, the same concept: Software that could make things easier for consumers by allowing them to get information while they're working on an application.

You can see here, the 843 patent that he continued to have even after the Arendi company itself and business stopped operating.

Now, the '843 patent, as you've heard, went through -- and as you'll hear over the course of this proceeding, went through extensive review. And it gave him rights to be able to control who could and could not use his technology. And as you'll hear over the course of the proceeding, Google is one of the parties that took advantage of the technology contained in the art.

Now, I expect you're going to hear Google say "What exactly did Arendi invent?" And they're going to make it sound like you can't figure out what Mr. Hedloy came up with and what it's value was.

What he invented is contained in his patent, which was issued in 2011. And most importantly, it's contained in the claims of the patent. For purposes of deciding whether somebody entered your property in a patent, the most important thing are the patents.

In this case, you will hear about two claims: Claim 23 of the ' 843 patent, and Claim 30 of the ' 843 patent.
were working on.
Mr. Hedloy received his patent in 2011. In 2013, he filed this action against Google. Shortly after that, the action was stayed. It was put on pause for a period of time.

And as you'll hear over the course of this case, in 2017, Google released a feature that it put into its application that did just what was claimed by the Arendi patent claims. It did that knowing already about what was in the Arendi patents, many years after knowing that.

I told you earlier that Google is a little different from other players in the industry because it has brought us to this point here where we have sought to compensate Arendi for its rights. Other companies did that when Arendi approached them after litigation to try to get a license from them for use of the Arendi patent. And I'm going to talk you through it because some of that information is confidential. We are not going to have it up on the screen. The Court is going to provide you with a copy of the slides for you to see as I talk through them, but you will notice that I am going to avoid saying the numbers out loud in open court because those numbers have been treated as confidential.

THE COURT: Ms. Garfinkel?

Now, you're going to hear about these in depth over the course of the case. We're going to spend a lot of time on it. As you can see, the claims are extremely detailed. But they define the scope of Mr. Hedloy's invention that Arendi had in the patent. And although you may hear Google ask, "Well, what it is that Arendi invented," that's why the government gives you a patent, and the patent makes clear what belongs to you.

There are some examples in the back of Mr. Hedloy's patent showing a very early version of an example of a way in which his technology could be used. And you can see there, reference to OneButton that allowed the information associated with a person's name, like their address, to be populated by the touch of a button.

This isn't the full scope of Mr. Hedloy's
invention. It's an example. And when Google tells you that everything he invented is just in this one picture, that's not the case. You're going to hear that what he invented is defined by those claims I showed you at first, not by any individual example you will see in the patent.

These examples are illustrations.
Now -- and we'll show you a demonstrative --
thanks, Mr. Boles -- that shows exactly one of the ways of the examples that Mr. Hedloy provided, that you could use a button to enable information to be brought into what you

THE CLERK: Yes, Your Honor.
MS. SRINIVASAN: I told you before, and I
showed you a picture when Mr. Hedloy was at this convention called comdex. And one of the things that happened there was that Microsoft came to talk with him about his products. Not long after that, Arendi saw that Microsoft had released a product functionality that used its patents. And Arendi pursued and asserted its rights under its patent with Microsoft.

Microsoft paid Arendi for its use of the Arendi technology. And you can see the date of that agreement, November 28, 2011. You can see the amount of that, which is what I am not going to say in open court, that Microsoft paid to Arendi twelve years ago for using its technology.

Microsoft was not the only one. Samsung, in 2019, also paid for its use of Arendi's patent. And you can see there in your slides the amount that Samsung paid to Arendi for being able to use the Arendi patent.

And last but not least, Apple paid Arendi for the use and the right to use the technology in its patent license. That happened a couple of years ago in 2021. And in your slides, you can see the amount that Apple paid.

Each of these companies reached a deal with

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Arendi. And I'll tell you, those were deals that were meant to avoid this, coming to a trial, having to go through this. So those companies got a discount for that.

They enabled Arendi to receive money for the use of its invention without having to spend as much time, without having to have as much delay, and without coming to this point in time. Google did not.

THE COURT: Ms. Garfinkel, please collect the hard copy demonstratives from the jurors at this point.

MS. SRINIVASAN: And, Your Honor, there will be a few more

THE COURT: There will be one more?
MS. SRINIVASAN: Yeah. Towards the end.
THE COURT: Okay. My apologies.
MS. SRINIVASAN: Samsung, Apple, and Microsoft,
they used Arendi's property and they paid for that.
Google is using Arendi's property without paying to do so. And let me be clear, they are making and made great use of Arendi's technology.

I talked to you a little bit about this feature called the Smart Text Selection feature. Google released that feature in 2017. And when it did, it announced it with great fanfare. And you can see here -- and you're going to see this whole video when our expert testifies probably later today or early tomorrow.

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And in 2017, Google's vice president for
engineering for Android, Dave Burke, did -- to a crowd of thousands, unveiled this new technology that Google said it had come up with, when, in fact, it practiced the Arendi patents.

But Google was very excited about it. Why? Because it felt it made the lives of consumers easier. It was something that it wanted its customers to know about. And it was showing them exactly how they could use it.

You see the example right here. Mr. Burke will
do this on video when you watch it later today with our expert.

He has a Gmail, a message open that has an
address in it, and by clicking on the address, he can get access to Google Maps directly. Doesn't have to cut and paste and then go into the Google Maps. Doesn't have to go type the address into another program. That's something that Google views as extremely valuable. It's a benefit to their customers.

And you're even going to hear some of the customer feedback they got. Customers felt that this was a wonderful feature that made things easier, that it was very intuitive for them. They could go to a map or go to a phone without having to go between different
applications. They found it to be extremely valuable to
kinds of materials. He looked at Google source code, Google's internal technical documents. He did his own testing of their devices and their applications. And he confirms that every step called for in the patents was performed by Google's applications.

I'll tell you now that Dr. Smedley's testimony will be the longest part of the presentation of our case. We will spend a lot of time with his testimony going through the evidence, piece by piece, bit by bit, because we want to show that Google used these patents. It practiced these claims. And we are going to do that element by element, step by step with his testimony.

On Friday, the Court instructed you about what our burden is, to show that Google infringed the Arendi patent. You received a preliminary instruction on that. For Plaintiff Arendi to prevail on its claims, it must prove to you, in light of all the evidence, that what it claims is more likely so than not so.

To say it differently, if you were to put the evidence favorable to Plaintiff Arendi and the evidence favorable to Google on opposite sides, Arendi would have to make the scales tip somewhat on Arendi's side. That is our burden to prove that Google does what's in the patent. And the evidence will show that we will meet that burden to show that that is what has been done.

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confusing when we talk about patents, Google did not have to know about or intend to use our property for us to find that they infringed our patents.

It's kind of like if you have a piece of property and somebody uses it, steps on it, maybe they didn't even know it was your property -- that's still infringement. They didn't need to know in order to be using Arendi's property to find infringement.

But in this case, we will also ask you to find that their infringement was willful, that it was intentional, because in this case they did know. They knew about Arendi's patent. They knew because we had brought suit against them in 2013 with the complaint there. And at the time that they released the Smart Text Selection feature in all of their applications in 2017, four years later, they were well aware of our patent and they did it anyway.

Just like for infringement, you'll be asked to find whether the infringement was willful, whether it was intentional by the same standard, more likely than not. And after you hear the evidence, we believe you will find that Arendi has shown that it is more likely than not that Google infringed and that its infringement was willful, knowing about the Arendi patent and the Arendi technology.

They went through all of that material and they decided that this patent still could issue because it was valid.

You will see that there are an extensive number of references. And you may recall Friday, may have passed you by quickly, but there was a reference to the term "prior art." What was out in the field at the time of the invention.

The Patent Office, I submit to you, looked at a lot. They looked at a lot of material. And Mr. Hedloy participated in an extensive process before they made the decision that his patent was valid and it should issue.

In order to overcome that presumption, Google has a high bar. You heard on Friday that their burden for trying to tell you this patent should be taken away, shouldn't even exist, is by clear and convincing evidence.

What does that mean? Clear and convincing evidence is evidence that produces in your mind a firm belief or conviction that the allegations sought to be proved by the evidence are true. Clear and convincing evidence involves a higher degree of persuasion than is necessary to meet the preponderance of the evidence standard.

So our burden, to show that it's more likely than not that they infringe, that's the preponderance

Google will ask you to find that the patent's not valid.

Now, when a patent has been issued by the Patent Office, it carries with it a presumption of validity. A patent shall be presumed valid.

And in this case, the patent when through extensive review before it was issued.

I mentioned to you on that timeline, that Mr. Hedloy had come up with his invention in 1997. He got his patent in 2011. He spent years going back and forth with the Patent Office to make sure he was entitled to get his patent, that it was new and novel and useful. So you will hear about all the things the Patent Office looked at.

You'll remember from the video you watched Friday that there are patent examiners. People who are special -- specialized, technical, trained in the field, who sit there to make sure that a patent should issue. They go through a very detailed review.

And in this case, how do we know that they did that? Well, in the patent itself, you will see pages and pages and pages -- in each of these, there are different references of documents and materials that they looked at, the Patent Office looked at before they decided to give Arendi its patent.

## standard.

Google trying to say this Arendi patent should never have been issued in the first place; that, they must do by clear and convincing evidence. That is their burden.

And as you've heard, this patent already went through close examination to even come out of the Patent Office when it was issued.

Some of the things they'll talk to you about, over the course of the proceeding, will show that aspects of those were considered even before the patent was issued. They're going to talk to you about something called Apple Data Detectors, a system, a product from Apple. And they're going to say that this is a basis for invalidating Mr. Hedloy's patent. But you'll see references to Apple Data Detectors right on the face of the patent. Things that the Patent Office already looked at.

And one of the things you heard on Friday, was that in weighing the evidence, you should use your common sense.

And in this case, I would urge you to consider this: As you have before you -- and I am not going to say it out loud -- Apple paid Arendi for its technology and to use its patent. If Apple Data Detectors really did what

Google claims, if it's -- that system really was a basis to get rid of Mr. Hedloy's patent, you might ask yourself -- common sense -- would Apple have paid that money?

Google is also going to talk to you about a system called CyberDesk. And you'll see, again, examples where references to CyberDesk are on the face of the patent in the materials the patent examiner looks at, aspects of CyberDesk materials. Again, extensive review of this patent before it came out of the Patent Office.

And Google is here asking to you undo that.
We submit it will not be able to meet its very high burden to show you this patent that has been around has -- from its invention in '97, all the way through 2023, that Google's not going to be the one to invalidate this patent.

Finally, you're going to be asked what should Arendi be compensated for Google's use of its technology.

I want to know that -- as I mentioned to you, Mr. Hedloy's invention dates back 25, 26 years. He got his patent in 2011

One of the deals the inventors make with the government when they get a patent, is that it's for a limited time. So the government gives it the right to exclude people, but that doesn't last forever. It's a

Mr. Hedloy is not here asking to be paid or compensated for use of his technology after his patent expired. That's the deal he made with the government. It's available for use today.

What he is doing is asking Google to compensate him for the amount that they used his invention back in 2017. And we're still here trying to get that.

You may hear Google say, well, you know, the patent is expired now. That was a long time ago. That's not a defense to having to pay for using somebody's patent.

If somebody was on your property and you sent them a bill, and five years later you're still pursuing them from that, they don't get to say, well, it's too long ago. That's not how it works.

But I want to be clear that Mr. Hedloy is only pursuing what he's entitled to. After his patent expired, it was available for use. But while he had the exclusive right to that invention, Google did not have the authority to use it. And that's what he is seeking compensation for today.

Arendi has an expert, Mr. Roy Weinstein, who has calculated the value of damages in this case. And one
downloaded applications. Why? Because Google wants its consumers to use this technology.

And if you look at the very last slide you have printed out for you, the second-to-last slide, it has a number PDX-1-52 at the bottom. You're going to see there all of the different applications that Google used Arendi's patent with. They're all listed out there. Accused applications.

And then you're going to see the number of installations of those applications, and they're significant.

What does that mean? Users are installing the applications that have the Arendi technology in it. That's what Google wants. It wants its users to be installing applications like Gmail and Google Docs. That's a lot of use.

But the rate that Mr . Weinstein came up with was just 10 cents an app, a dime, for the time period in which Google was infringing on and using Arendi's technology.

The slide after that, shows you the devices I talked about, the Pixel phones in which Google also made use of Arendi's technology.

Mr . Weinstein calculated the royalty rate of
48 cents per phone. And so he looked at the number of

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phones that Google sold during that period using Arendi's technology, and he calculated that a royalty of 48 cents was owed back to Arendi. Taking all of that together leads to the final damages number of $\$ 45.5$ million.

And one of the reasons we didn't show all of
personal and professional obligations, and for many of you to have to drive long distances in order to be here. We don't underestimate the impact of that. And we very much appreciate your service. And we appreciate you listening to all the evidence before you make up your minds about what this case is about.

You're now aware that this case is about one patent. What everybody is going to be calling, quite a bit, the ' 843 patent. And that's because it's the last three numbers of patent number itself.

The patent is titled "Method System and
Computer Readable Medium for Addressing Handling from a Computer Program." You can see in the highlighted, that the patent was issued on March 29, 2011. Interestingly, this particular patent application, you'll see, was filed on July 29, 2008.

Now, you will also see -- and that's why I'm trying to get the dates in order for you -- that this patent claims to be what's called a continuation of a patent that was earlier filed in the United States.

A continuation just means that there was an original application filed with the same disclosure, but then later, the inventor decided to file a follow-on patent to add additional claims to what they were saying they invented.

I say that on behalf of myself, Mr. Hedloy, and the rest of our litigation team. And you're going to see them over the course of the case.

I will have an opportunity to speak with you again at the close of case, directly like this, after the evidence is in. And I thank you for the time and attention you're going to pay to this important case on behalf of my client who seeks to make sure that Google pays its fair share at last.

Thank you very much.
THE COURT: Ms. Garfinkel, can I ask you to collect the demonstratives.

Now we will hear the opening statement from the other side.

MR. UNIKEL: Forgive me. I'm just making sure my slide show is working.

Good morning, ladies and gentlemen. My name is Rob Unikel. I represent Google. I'm here today with my colleagues Andrea Roberts, Chad Peterman, Matthias Kamber.

And on behalf of Google, we have here Mr. Ted Choc, who is the director of engineering for Google Chrome. You'll be hearing from him later in the case.

First, we'd all like to thank you very much for your service on the jury. I know it's extremely difficult to give up more than a week of your life, to give up

Now, you'll see -- and it's in the bottom left corner -- that this patent claims priority to the first U.S. application that was filed on November 10, 1998. This is a very important date for you to keep in mind as you go through the trial, because this defines the date when Mr. Hedloy and Arendi first applied for a patent in the U.S., first claimed to have a patent in the U.S. And that's a legally important date.

As you heard from the Federal Judicial Center video the other day, to get a patent, Arendi was required to have come up with something new and not obvious over what came before those are the requirements of the patent laws. That's what gives you an invention.

So the November 10, 1998 date is an extremely important date, because you'll have to look and see what was known before that date, and what did Mr. Hedloy add, what did he do that was new.

Over the next few days, we're going to look really closely at what did exist before that, before November 10, 1998. We're going to see some of the systems that existed. And you're going to see what Arendi itself admitted to the Patent Office did exist. And you'll see what Arendi itself said it added to that, what did it say was new.

And one more important fact that Arendi's

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counsel pointed out, you'll see on the bottom right of the slide, the patent expired November 10 of 2018. Now, we are not casting aspersions. The patent runs out when the patent runs out. What we're going to talk about is all the things that happened before that date. The product that they are accusing, which is called Smart Text Selection, as you saw, was launched in December of 2017. That's when users could first use the Smart Text Selection. It was 11 months before the patent expired, and you will see, Google took a very different approach than Arendi did.

So there's one core question, and Arendi's
counsel also agreed on this question, that I want you to focus on for the next week. It's really the most important question of the case. What exactly did Arendi invent? What was new about what they invented in November of 1998? And that's important because the only thing you can claim rights on, the only thing you can ask for money on is what you actually added. Not everything that came before, but what you added. And that's what we're asking you to think about is, what, if anything, did Mr. Hedloy add to what came before?

You are going to see when you answer this question, that what Arendi says it invented is an approach that is opposite from the approach that Google took.

There are a variety of technological approaches that you can take; Arendi went one way, and Google went another way. And we're going to show you that. We're going to document it for you. To be frank, they went left, we went right.

And to understand how and why this is the case, what did they invent, you first need to know where to look. What is it that you're going to be focused on? Well, Arendi's lawyers and their expert during the case are going to ask you to look mostly at, what does a user see on their phone? They want you to believe, and I think it was part of the presentation, that Mr. Hedloy invented the idea of creating shortcuts that would allow you to take a name, look up a name, and use information. Or take a phone number, dial that phone number. Or take an e-mail address and send an e-mail.

But that is undeniably not true, and Arendi itself will show you that it agreed when it applied for its patent that wasn't true. You'll see that there were many well-known systems in 1996 and 1997, long before Mr. Hedloy filed his application, that actually already identified names in texts and acted on them. That identified e-mail addresses in texts and acted on them. That identified phone numbers and street addresses. All of these things existed before Mr. Hedloy filed for a
the same things of what Arendi is saying it put into its patent.

You will learn about another system that's called Apple Data Detectors. This was very publicly displayed in 1996 and 1997. You're actually going to see some very outdated videos of presentations from 1996 and 1997 by Apple Computer at their annual conference called Macworld where Apple Data Detectors were publicly displayed and shown as doing all of the same things that Arendi says is in his patent. It took a document. It identified it, picked out phone numbers, e-mail addresses, names. It then would look those up to find additional information. It would give the user options of what they could do with those phone numbers and e-mail addresses.

In fact, you're going to see in the video that
there was actually something called a write-a-letter shortcut where Apple Data Detectors would find a name, and then if he you pressed the menu item, it would go to a contact database, look up the address for the name, and then it would create a letter in your word processing document that would be prepopulated with the name and the address put in. You will see it's going to look an awful lot like what's in the ' 843 patent.

And you will see not just the videos, but you'll hear from the person who actually led the team at

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Apple to create the Apple Data Detectors, and his name was Jim -- James Miller. You'll hear from him.

So given the existence of all these preexisting shortcut systems, the question will come back to what exactly did Arendi invent? What did they add?

To answer the question, you're going to have to look under the hood so to speak. And what do I mean by that? Well, to use a car analogy, if you were to sit in the driver's seat of a gas powered Ford Mustang or an electric powered Tesla, you might think they work the same. There's a speedometer. There's a steering wheel. There's an accelerator pedal. If you press it, they both go. But if you pop the hoods, you see that the way those cars work is completely different from one another.

In this case, you need to look under the hood. Because the patent claims, those long groups of text that were shown to you, what they require is that under the hood these computer systems work in a very particular way. And so under the hood is where all the difference lies. Because if all you looked at was what a user sees, you would see that what a user sees using something that Arendi said was in this patent, is identical to what existed with Apple Data Detectors and CyberDesk and other things. What makes anything different is what's under the hood in this system.

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And Arendi doesn't want you to look under the hood too hard because under the hood, Google does a very different thing than what theirs does. Google took a very different path.

So you just heard a little bit -- I want to get into one of those paths. You just heard a little bit from Arendi's lawyer about how this all came about from Arendi. Mr. Hedloy made his own version of a shortcut tool that he called OneButton contact manager. And this is the picture that appears in the patent itself, and as you can see, this OneButton program allowed a person working in a Microsoft Word document -- you can see this is a Microsoft Word document -- to type in a name, push that OneButton, and that would invoke instructions that Mr. Hedloy had programmed into Microsoft Word to get the address and insert the address back into the document.

Essentially, OneButton was like a spell checker for names. Where a spell checker looks in your document for words that are not spelled correctly, goes looks up the possible spellings that you might want, gives you the option to put them back into the document, OneButton took a name, allowed you to look for the address that might go with that name, and then put it back into the document.

But as you have seen a little bit of and you'll learn more about, there was nothing new about identifying
did it write into its patent claims?
You will hear that working from the OneButton program, which we just saw the example of, Arendi told the Patent Office that its claimed invention was different than CyberDesk and different than Apple Data Detectors. It required the document editing program, what they called first computer program in the claims that we'll look at, to be directly involved in the setting up the button, to be directly involved in searching for that information.

Essentially, what you're going to see is that Arendi's idea was put the shortcut tool inside of a single word processing program or a single spreadsheet program.

And this is important because you're going to learn from Google's engineers, you're going to learn from experts in the field that there were essentially two basic ways that you can create a shortcut tool, whether it's a spell checker or a way to look up a phone number.

The first approach is place the instructions, the code for that tool entirely into a single program so that that single program and only that single program gets the benefit of the tool. You can customize it that way. The other way to do it is place the instructions outside of any single program so it can be used by multiple different programs at the same time. Or different times.

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 anybody practicing in computer design or software design in the 1990s. There was nothing unique or new or revolutionary about either of these. They were just basic choices that you had to make when you were designing a tool. Do I make them separate? Do I put it all in one? Arendi didn't invent either of these approaches; these were just basic computer science knowledge.

But you are going to see that Arendi very clearly told the Patent Office what made its invention different than CyberDesk or different than Apple Data Detectors was that Arendi used the first approach. They put the instructions inside of a single program. As you saw in the figure, in the particular example, OneButton, it was inside of Microsoft Word.

And to make this clear, Arendi wrote into its patent claims requirements that the first computer program had to do three very specific things. The first, as you can see here with the Number 1, the first computer program had to display the document electronically. The second, is that it had to provide an input device that was configured by the first computer program. And the third was that, in consequence of receipt by the first computer program of the user command from the input device -- and we'll show you what those are -- you had to cause a search
for the search term. The first computer program had to be intimately involved.

You're going to learn that the Court in this case has given a very explicit definition of what a computer program means in this patent claim. So when we talk about first computer program, what does that mean? Lots of people, lots of different context might define a computer program a different way. But in this patent, the Court has already ruled what does mean.

It means a self-contained set of instructions, as opposed to a routine or library, intended to be performed, executed on a computer so as to perform some task.

And in particular, I want you to pay attention to the fact that it has to be a self-contained set of instructions; one container, self-contained. So for the first computer program to do what is required by those claims, those three things that are required, there has to be one self-contained set of instructions that does those three things.

Arendi told the Patent Office that CyberDesk and Apple Data Detectors were different because they followed the second approach. They made their instructions separate from the computer programs that used them. Arendi told the Patent Office that what made
when users could actually begin to use it on their devices, but as you'll hear, it took a while to actually ramp up so that users could, on a regular basis, actually use that functionality on their phone.

And remember the patent expired in November of 2018. So when we're talking about what is the period that Arendi is accusing of infringement, it's about an 11-month period. You're going to hear a lot about STS and how it works from Google and Google's engineers over the next week.

This product was developed from scratch within Google entirely by Google engineers. You're going to meet three of those engineers over the next few days. For example, Mr. Toki, who you see on the right here, personally developed and created and wrote most of STS. He will be here in the courtroom to show you and explain to you why Google took the second approach. They made the instructions separate from any individual application so that it could be used by many different applications

You're going to learn that the instructions for STS, Smart Text Selection, are actually part of the Android operating system. And that is done precisely so that it is available to all the different apps, not just one particular program.

So the menu, what's called the input device,

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that you're going to hear about, it looks like that. It looks like what's up on the top of the screen. When a user long presses on text using Smart Text Selection, you get that menu bar. And that menu bar is created by the instructions. It's set up by the instructions that are in the operating system, not in any particular application.

And when a user presses on one of those buttons, which is the user command you're going to hear about in the claims, you're going to learn that that command goes to the operating system to something called intents handling instructions. Those instructions handle the intents that come from all the different apps, not any one particular program. And then those intents handling instructions send it out to other apps, other programs so that it could be used. There is no set of instructions that is self-contained that does everything that Arendi is saying their invention requires.

And you're going to hear not just from Google's engineers who actually made the products, but you're also going to hear from a world renowned expert in computer science and engineering, Dr. Martin Rinard. He studied the Google systems. He studied all the code that they said their experts studied. He reviewed all of the pleadings in this case, and he looked really deeply under the hood of both Arendi's claimed invention and Google's

As you think of this, as you go and listen to the evidence, you might think of this as the difference between two kind of restaurants: The kind of restaurant that has a central kitchen where the kitchen prepares the food for all of the different tables, or one of those Japanese Hibachi restaurants like Benihana where the cooktop is part of the table, and the chef can cook at the table and deliver the food to the patrons who are sitting there. But while all the patrons in both kinds of restaurants get their food in front of them, it's an extremely different way of approaching restaurants. It's an extremely different way of setting up and delivering the food.

You'll hear that Google's system is like the restaurant with the central kitchen. All these different tables, all these different apps, can place their orders, but it's all filled by the central kitchen, by Smart Text Selection and Intents Handling. Arendi's is more like the
showed you the highlighted references to CyberDesk and Apple Data Detectors when -- that are on the cover of the patent. But what Arendi's lawyer did not tell you is that when Arendi presented CyberDesk and presented Apple Data Detectors, they disclosed only some of the capabilities of those systems, not all, and more importantly, they made a very express argument to the Patent Office about why they were different than those systems.

They were different, they said, because they covered Approach 1, and they did -- the others were Approach 2.

So when the Patent Office considered the references, they relied on Arendi's arguments, as they were entitled to do because of the duty of candor, and the patent issued because there was a difference in their mind. But again, it now appears that Arendi has changed its mind for purposes of the claim against Google. Now they're saying that the patent does cover the use of separate instructions. So they're saying, essentially, they now cover both kinds of restaurants; the restaurant that has the cooktops at the table, and the restaurants that have a central kitchen, both.

But if that's the case, then the patent is invalid as you'll hear. In fact, you're going to hear from Professor Edward Fox, who is a long-time professor in

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the industry at Virginia Tech, extremely accomplished. He's studied the invention. He has studied the patent. He has studied what was said to the Patent Office, and he has studied the prior art systems: CyberDesk, Apple Data Detectors, Microsoft Word.

And what he's going to tell you and explain to you is that if Arendi is correct that its patent covers Approach 2, it covers the use of separate instructions from the apps, then it covers CyberDesk and Apple Data Detectors, because those did all the same shortcuts, they presented users with all the same options, but they did it with separate instructions rather than the self-contained instructions that are required by the claims.

And if at the end of case, you really believe that the patent is broad enough to cover Google's products, which use separate instructions from the apps, then you're going, I think, have to see that it also covers systems that existed well before Mr. Hedloy ever filed for his patent application.

So by the end of the trial, I think you're going to see that Google's accused products do not perform two critical elements of the ' 843 patent. Those that specifically require actions from the first computer program. They don't provide an input device that's configured by the first computer program, and they do not
only if you find that the patent is valid will you have to consider the question: If Google used Arendi's approach, how much was it really worth to Google?

Once again, you're going to hear that their invention was to put all of the instructions inside a single computer program. Google went a different way and put the instructions outside of any specific computer program.

So it raises the question of how much would Google pay for a technology that was the opposite of what it wanted, that did the exact opposite thing of how it wanted to construct its systems. And Arendi, as you've seen, wants more than $\$ 40$ million from Google for the period from December 2017 to November 10, 2018, 11 months, for Google's use of a technology that it didn't want, that it didn't need, and, frankly, that it wanted the opposite of.

But if you ultimately get to consider damages, despite the fact that we went one way and they went the other, you're going to hear from an expert by the name of Douglas Kidder. He is a gentleman who has 30 -plus years in the area of patent damages and financial damages analysis. And you're going to hear from him about what the appropriate way to consider the possible value to Google of this would have been.
satisfy the inconsequence of receipt by the first computer program of the user command from the user device causing a search element.

And as you just heard, it's Arendi's burden to prove infringement. If -- the evidence will show you that Google went a different approach. They went right; Arendi went left. And Arendi will not, we believe, be able to show that there's infringement of these elements by Google's use of an opposite technological approach.

When you look under the hood, when you really consider how Arendi's patent invention needs to work and how Google's products actually do work, I think you're going to see they're very different approaches, even if the user might see food on their table at the end of the day.

Now, we get back to the question, what exactly did Arendi invent? Because it's only what they actually added that's new that they can ask for money based on.

So the question you're going to be asked is, is there infringement? Is the patent valid? If you find there's no infringement, if you find the patent is not valid because it should not have issued in light of CyberDesk or Apple Data Detectors, then you'll never have to consider damages in this case.

Only if you find that we have infringed and

There's a little context, though, that I would like you to consider. Before Arendi filed this suit, it did not contact Google in any way about the patent. It didn't send us a letter. It didn't call us on the phone. Not a single contact to say: I have this patent. I think you might be interested in it, or I think you might be using the technology.

Now, remember, when they filed suit in 2013, there's not a single product that's being accused of infringement from that period of time. There's not a single product right now, from 2013 to 2017, that's being accused of infringement in this case, and yet they didn't reach out to us before they filed suit to say: We think you're infringing or we think you're using our patent; you might want a license.

As you will hear, since the year 2000, Arendi's company's only business is getting patents and enforcing patents. Since the year 2000, they do not make any products, they do not sell any products, they have not tried to develop any products.

And as you will see, from the moment that they filed suit against Google, Google has defended itself at all times on the basis that it doesn't use the technology, it does not want the technology, and it wants to go in a different direction. It has defended itself by pointing
out the prior art CyberDesk systems and Apple Data Detectors systems, and it has defended itself throughout the case.

Now, Arendi pointed multiple times to settlement agreements with Apple, Samsung, and Microsoft. And the strong suggestion was made that these companies took a license because they somehow valued and wanted the ' 843 patent. First thing I'll note is that two of those agreements, the Apple agreement and the Samsung agreement, were signed after the patent had expired. After litigation. They did not come to Arendi before the patent expired and say, hey, we really want your technology; please let us introduce it. They signed the agreement after they were sued to settle litigation and did this after the patent was expired.

And there are some more critical things about these agreements that Arendi doesn't really want you to focus on.

First, these companies expressly stated $\square$

You will see that on the face of the agreements themselves. So when they say that these were agreements that were because the patent -- these companies really valued this technology or thought Arendi was a pioneer, you will see that's not true from the face of the

they suggest that it was because there was such great value to the ' 843 patent that these companies licensed it,
> $\square$ But Arendi is going to ask you to attribute all of the payments that you just saw to just the ' 843 patent, which doesn't make any sense.

Next, what you will hear is that the total
amounts paid under those agreements, $\square$


If Google were to pay the same percentage of revenues roughly, Google would owe between $\square$
$\square$ And Mr. Kidder is going to take you
through all the specific numbers so that you can see for yourselves how the license agreements would result in these numbers if Google was to pay even close to a similar

THE COURT: This will be quick. I am looking at the time. We were quicker than I thought we were going to be. I mentioned we would probably take lunch after openings. At this point, I think we could get at least 35 to 45 minutes of time in before lunch. I didn't want to catch anyone unaware. I didn't know what you told witnesses. Are you prepared to --

MS. SRINIVASAN: We are prepared to call our first witness.

THE COURT: Okay. That's what we will do.
MR. UNIKEL: Thank you, Your Honor.
(Whereupon, sidebar concludes.)
THE COURT: Counsel?
MS. SRINIVASAN: Arendi calls its first witness, Mr. Atle Hedloy. And my partner, Mr. Kemper Diehl, will be handling the examination.

THE COURT: Thank you. Please approach.
THE WITNESS: Can I get my glasses?
THE CLERK: Please state and spell your name for the record.

THE WITNESS: Atle Hedloy, A-T-L-E,
H-E-D-L-O-Y.
THE COURT: Please raise your right hand.
ATLE HEDLOY, having been called as a witness, being

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first duly sworn under oath or affirmed, testified as follows:

## THE COURT: Please proceed.

 DIRECT EXAMINATION
## BY MR. DIEHL:

Q. Good morning, sir. Could you please introduce yourself to the jury?
A. Can I move the chair a little bit so -- I can hardly see you.
Q. Oh, yeah. Let's get it set up right.
A. It's stuck. Okay. Sorry. Say that again, please.
Q. No problem. Are you all set?
A. I'll look over.
Q. I will try to lean this way a little bit, too.

Can you please introduce yourself to the jury?
A. Yes. My name is Atle Hedloy. I am the inventor, as you heard, and also the owner, together with my wife, of Arendi, the plaintiff in this case.
Q. Where are you from, sir?
A. I live in Luxembourg.
Q. Are you originally from Luxembourg?
A. No. I am originally from Norway.
Q. Where in Norway are you from?
A. I was born in a town called Fredrikstad. It's a small town of about 20,000 people a little bit south of

## Hedloy - Direct

A. I played the bugle. The trumpet without the valves.
Q. Did you have plans when you were in the military for what you wanted to do afterward?
A. Yes. I wanted to go the U.S. and study, yes.
Q. Have your parents gone to college?
A. My dad had done one year in Leeds, the UK. I'm not sure if it was college or trade school. But at that point after high school. My mother finished after high school.
Q. What led you to want to apply to colleges in the U.S.?
A. Well, the alternative would have been to study at the business school in Norway, but two reasons. One is the U.S. was exciting. That's where things were happening. And the universities in the U.S. are well known to be good. But the other thing is also more practical because in Europe, you can -- after high school, you have to decide what you want to become. If you want to become a hairdresser or a carpenter or an engineer or lawyer. So you cannot -- then once you start university or special school, vocational school, you cannot change or you have to start again if you change.

In the U.S., it's called "liberal arts" in the UK -in colleges. So then you can explore different subjects and you can combine things. I wanted to combine things. So that was one of the advantages.
A. No, I did not.
Q. How did you learn English?
A. I started learning English in school in fourth grade, and I'm still working on it, so bear with me.
Q. No problem. We'll go slowly, too, so the court reporter can get everything down.

Where did you go to school in Norway, Mr. Hedloy?
A. I went to public school from first grade up through high school.
Q. What did you then do after graduating from high school in Norway?
A. I did the military service.
Q. What did you do for your military service?
A. Well, after basic training, there was selection, and I played the trumpet. So I auditioned to try to become a member of what was called the Majesty, the King's Guard Band. And I was lucky I was selected. So I played in His Majesty The King's Guard Band.
Q. What did you play?

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Q. With that broader range of possible study in the U.S., what were you interested in studying?
A. I have always been interested in technology. I wanted to do some engineering-type, more technical stuff and combine that with a business degree.
Q. Mr. Hedloy, I realized you didn't get a water when you first came up. Would you like one?

THE COURT: You may approach.
the witness: Thank you. Sorry.
BY MR. DIEHL :
Q. Where did you go to college, Mr. Hedloy?
A. I went to Harvard in Massachusetts.
Q. What year was that that you flew from Norway to Boston to go to Harvard?
A. I started in 1979 .
Q. And how did you happen to go to Harvard?
A. Well, it was -- I applied to several schools. In fact, I was in the summertime in the U.S. and then told them I wanted to study in the U.S. And someone gave me a list of the best schools. I think they got it out of USA today or something similar, hardest ones to get into. I applied to them all. I got into a few of them, including Harvard. And the choice was so easy. Harvard is Harvard, I suppose.
Q. Everyone knows Harvard is expensive. How were you

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 able to pay for that, Mr. Hedloy?A. Well, in Norway, university is free. All school is free. But the state will still give you -- the government will still give you loan and scholarships to pay for food and cost of living and books and things. They will also do that if you study abroad at certain colleges, including Harvard.

So I got scholarship from Norway. And then Harvard covered the rest, including giving me the opportunity to work on campus.
Q. What were your jobs on campus?
A. Many, many things. One of the things I did was I did the dishes. It was actually sort of nice because I got to know the kitchen personnel very well. So when I came to pick up my dinner, they gave me the best pieces. So that was nice.

And after a while, I was -- when I got to be older and more senior in school, I became a teaching fellow, it was called. I helped the professor teach the younger students.
Q. I want to put the photos on the screen of you in college. What are these photos, Mr. Hedloy?
A. Well, that was shown before, I think so. In the left, I'm sitting, studying in my dorm room. I think it's sophomore year. And -- in my bed. And on the right, I'm

## Hedloy - Direct

Q. Yes. And what about that course sparked your interest in becoming a computer science major?
A. Well, I liked it. It was -- you get -- computers, you get a lot of feedback. When you program computers, you get feedback. I thought of it almost like a computer game. I'm actually not a big computer gamer, but similar when you do things on the computer game, you get feedback as things happen as a result of what you do. Same thing happens when you program. Takes a little bit longer before you get the feedback, but still, same kind of feeling.
Also, I think -- I always liked to do technical stuff. So I could then find solutions to problems. And it was very easy way to do that on the computer programming. Your whole job is to find solutions to solve the problem.
Q. After you got out of that computer science 110 boot camp, what kind of things did you study as part of the computer science major at Harvard?
A. It was a broad set of studies. Everything from the history of the computer to theoretical computer science to algorithms to programming operating systems, applications, networking, databases. A lot of stuff. Large area would I say.
Q. And so this is 1979 that you got there. Did you have

Mr. Hedloy, how many other Norwegians were there with you on campus?
A. In college, no. No other Norwegians. In fact, I think the rooms -- I think there had been 15 years after or five year before or between five and ten years before. And then I don't know, you know, how soon after. But while I was there, I was the only one.
Q. Fair to say no one else was named Atle in your classes?
A. No. And then probably -- to this day, probably no one.
Q. What did you study at Harvard?
A. I took several courses, wide range of things. Used this opportunity to explore different subjects. But one of my first courses was a computer science course and programming course called Applied Math 110. It was a very, very busy course. It was a very intensive course, almost like a boot camp. So I think I spent, on this course alone, I spent about 40 hours a week just on the computer. So I had allnighters and things. In addition to the course, there was lectures and homework and other things to do that was part of the computer. But, yes -did I answer the question?

## Hedloy - Direct <br> a computer yourself that you were able to work on?

A. In 1979, no. But IBM came up with their first computer in 1982-ish, and I bought it as soon as I could. So I had one in my dorm room at the end of the last year, I think.
Q. Was that common in 1982 to have a computer in your dorm room?
A. I don't know of anyone else at Harvard who had it at the time. So that doesn't mean I knew them all, but I don't think it was very common, no.
Q. How were you able to afford that, to buy a computer while you were in college?
A. Well, it was much more expensive relatively than it is now, but I used my savings and what I was able to get with part of scholarship and part of when I worked. I guess I had a few dinners or something outside of college. Q. Did you write any computer programs while you were at college?
A. Of course. Lot of coursework was programming. But I also did some programs on my home computer.
Q. What kinds of programs were those that you wrote while you were in college?
A. Well, one was for my roommates to learn Norwegian. They were super interested in learning Norwegian. But -so it was basically a program where you type in the word
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 you the translation of it. Or you can type in the word in Norwegian and they had to say what it meant.Another program was -- that one was more fun, I was more proud of. I don't know if anyone -- if you have seen it, but there was a worm program where you have a worm working around the screen and you had to make -- it grows bigger and bigger as you move. And you have to make sure it doesn't eat itself and fall into holes and dying. So I
made a program like that. As time went by, I kept tinkering with it. I'm sure it had a hundred different versions with more difficulty, his head is coming off, starting the worm holes it could fall into. Other worms, you know, didn't have to crash into those kinds of things. So fair time programming that and also playing it.
Q. And you were still able to graduate?
A. I was.
Q. What year was that?
A. $\quad 83$.
Q. What degree did you graduate with?
A. I got a bachelor of arts in computer science.

Actually called applied math combo computer science at the time. I also did a master's because of my high school coursework, Harvard gave -- tied into some of the work there. That would count towards my degree. So I could
Q. And what did you do after you graduated? What was your next move?
A. I went to work in Silicon Valley.
Q. So you moved even further from Norway, from Boston to California?
A. I suppose, yeah.
Q. What brought you out to California?
A. It was Silicon Valley. It was the hub of everything computer. It was -- I think it was more the hub of everything computers then than it is now. Now you have Silicon Valley, or Washington or Amsterdam or London or, you know, in India. But it was really where things were happening so, of course, that was the place to go.
Q. Where did you move within Silicon Valley?
A. Palo Alto.
Q. What did you do once you got there?

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A. It was a company called Convergent Technologies that I worked for.
Q. What was Convergent?
A. It's a relatively young company started a few years
earlier. They made personal computers also. And originally, by this time, they started to make bigger computers. Yeah.
Q. What did you work on when were you were at Convergent?
A. I made -- I was part of a team that made a word processor for one of the bigger computers, called mini computer, which is one computer that has terminals so maybe 10 to 20 people can work on the same computer. So I made -- I helped make a word processing program for that computer.
Q. Why did you choose, of all things, to join Convergent after college?
A. It was an exciting company. And it had been
depressed a little bit. There were -- people knew what it was doing. But I think the main reason was that one of the founders was a former Ph.D. student of -- doctorate student of my main professor at Harvard. So my professor suggested I called -- I think his name was Ben Isaacs -at least Ben. So I got in touch with him, and they gave me an offer.

## Hedloy - Direct

Q. So how long did you spend working on the word processing software at Convergent?
A. I was there for one year.
Q. What did you do next or what led you to move on?
A. Well, I was there on a -- did my student visa to go to the U.S. to study it included an option for me to work for one year after school. So I told -- by the end of that year, I had to decide what to do. And I actually got an offer from a company called NCR to go back to Norway.
Q. What was NCR?
A. It's short for National Cash Register. It's an old company. I think it was started in the 1800 s probably. They made old-fashioned cash registers, that kind of stuff, mechanical originally. And I think they had that market almost -- or at least they were very big in that market.

By this time, they were moving that into computer-based systems.

What was the question? Did I answer your question?
Q. Yes. You got it.

What opportunity did NCR have for you to take in Norway?
A. It was sort of funny because in conversion technology, where I work in Silicon Valley, they didn't sell computers under their own name. It's called OEM,
 companies like NCR and -- so I sold computers to companies or people, individuals, with their label on it.

So NCR had a contract with Norwegian Savings Banks, a huge contract actually to -- which included those computers.

I forgot to mention NCR was also very big in ATMs. I think they still are. They were also very big then. This was part of the contract with Norwegian Savings Banks. But I worked with them on the computer side.
Q. What kinds of work did you do as part of the computer side at NCR?
A. I was a product leader. So I was helping coordinate what the customer needed, what the Savings Banks needed, what NCR had to develop. So NCR had to, you know, a development -- lab or facility with hundreds of people working on software development in Columbia, South Carolina. So I spent a lot of my time in Norway between Norway and Columbia, sort of coordinating, making sure that that happened.
Q. How long did you stay with NCR?
A. Two years.
Q. What came next?
A. I went back to university to do a master's in computer science in business, an MBA.

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Q. Where did you go for business school?
A. I went back to Harvard.
Q. What year was that?
A. Started in '86 and finished in '88.
Q. Okay. Why did you want to go to business -- you were developing this computer experience. Why did you then want to go to business school?
A. I guess there's always been a small entrepreneur inside of me so I wanted to take the technology that I had gotten a good grip on, from project leading, and seeing what customer needed. I wanted to create a company as an entrepreneur, and then I needed a business background. So to complement my education in that field.
Q. After graduating from business school in '88, what did you do next?
A. I worked for a number of small technology companies, some in software, some in other types of technologies, mostly in Norway, and a stint for about a year in London also, in various positions.
Q. As you heard during openings, we are here today because you are an inventor. So I want to go to that next and ask you, what were the circumstances that led to the invention that brings us here today?
A. Well, by then, I started the company and -- Arendi -together with my wife. And I had this need to write some
types -- of course, when you have a company, you have to communicate to the customers or partners. So I had ad need to write letters. And so I was sitting there on my computer writing a letter, typing the name. And I discovered that I need the address. So I had to then go to my -- not physical -- but in my physical notes or the book with addresses or on my computer where we also had the addresses, and then get out of the word processing program, go into the contacts program on the computer, and then cut and paste back and forth. It was cumbersome.

I thought that was just plain stupid, actually, because the computer can do that much better than I can. In fact, one of the programs that our company had was an address database with names and addresses. So I was trying to write the letter. I needed to get the address in from our own product. Could also be from out -- I'm going to have some water.
Q. Yes. Go ahead. Have a sip of water.
A. So the sort of idea was, basically, that -- or the discovery was that I'm sitting here in the letter, the name is there. The computer has all the information it needs. So how can I simplify that process. And that was the beginning.
Q. How did you go about simplifying that process?
A. Well, the smallest amount of work a user can do is to

## Hedloy - Direct

click a button or just do one command. So that's -- that was -- that's what the invention does. It lets you use one command, get access to the information that's in the document. In this case, it was a name. Get access to get the -- get the address. You click a button, the computer, right, does analysis of the document, finds that there is a name. If there is a name, it goes into the database and searches the database. If it finds an address with the name, just puts it into the document.

So the computer is doing the work in the background. All the user needs to do is click a button or some command and what you see is the address is in the document.
Q. Now, you mentioned you had a company, Arendi, at this point.

Did your company create a product to address that problem and fix it?
A. Yes. We developed that product, yes.
Q. What was that product?
A. We called it the oneButton. It was a button. It wasn't very inventive, maybe, but it was descriptive, I thought.
Q. What did OneButton do at a high level?
A. Again, it let the user, with few hands as possible, get access to -- the OneButton, just put the address into the letter, that all they had the name in it. That's one
of things it did. It also did -- if it didn't find an address, there were other things, also. But that was the main thing it did.
Q. Mr. Hedloy, I want to show you an image that we saw during the openings, if we can go to the next slide.

Now, what is this image? Let's start on the left.
What does this show?
A. That's one of the figures from the patent.
Q. And what is it showing? I see a Microsoft Word document.

Can you describe what this shows?
A. It is basically the starting point. The user has the Word document on the screen and it has a name in it. You can also see the oneButton highlighted there. It was yellow in real life, but I guess it's highlighted so it's easy to see.
Q. Exactly right.

And what would happen if the user has a name in the document then clicks on the OneButton?
A. You get to the second, the Figure 4 on the right. So the address is then in the document.
Q. Now, what if a user already had the address in the document, like you see on the right, and then hit the OneButton when the address was already there?
A. The system would try to guess what the user was

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Q. Another permeation. What would happen if you have a name in the document, you click the OneButton, it does the -- finds the name, it does the search, but it finds two addresses in the database with the same name?
A. It would give the user the option. So it would show the user the two addresses and it can say we need the home address and the office address originally. So the user would then say use the home address and it gets put in.
Q. Mr. Hedloy, when did you first come up with the idea for -- the idea that underlies OneButton and underlies the patent? When did you first come up with that?
A. I found some documents dated July '97. So I know it was at least then, or before, yes.
Q. Mr. Hedloy, I'm going to hand you a binder of exhibits.

MR. DIEHL: And I'll hand a copy to the -- two copies to the Court as well, if I may approach.

THE COURT: Please approach.
MR. UNIKEL: May I get a copy as well, please?
MR. DIEHL: Yes. Do we have one more?

## BY MR. DIEHL :

Q. Mr. Hedloy, if you could turn to Exhibit PX-393 in the binder. It's toward the back.
A. Okay.
Q. Do you recognize that document?
doing. So it would analyze the document and discover that it's just a name. It's both the name and an address there. So it would go into the database, see if it can find the name and the address. Then if it's on both and they were the same, then it would assume that the user wanted just to check whether the address was correct or not, and do nothing.
Q. And what if the user clicked the OneButton and, you know, it didn't have the address in there yet, but there was no address in the database, then what would happen?
A. So then it would -- you're starting on the left side? Q. On the left side, yes.
A. So you just have a name. And so it didn't -- program would search for the name, discover the name in the document, analyze the document and find the name. It -going to the database and find no address, is what you said, right?
Q. Right.
A. So then it would assume that the user needed an address. So it would basically put a little screen up on the little window up on the screen where the user could type in the address. And then it would put it -- after when the user clicked okay or something, it would put address into the document and also save it in the database.

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A. That's the document $I$ just described that $I$ found that describes the invention.

MR. DIEHL: Your Honor, I offer PX-393 into evidence.

MR. UNIKEL: No objection.
the court: All right. It's admitted.
(Exhibit PX-393 is admitted into evidence.)

## BY MR. DIEHL :

Q. Mr. Hedloy, now that this document is up on the screen, can you describe what the jury is seeing?
A. First of all, I apologize, it's in Norwegian. It was a note to myself in preparation to go to the patent agent to see if I could patent it. So it describes on the top.

In fact, my mother-in-law worked for a patent agent. And -- sorry. The -- so when I had this idea, of course, I talked to my friends and my family about it. And especially my wife, she was very eager that $I$ patent it. So since I was going to the Patent Office of my mother-in-law, she wasn't a patent agent. She was just -not just, but she was an administrative person in that company. I just -- her name was Ruth. So that's why it says Ruth, you know, patent it, it basically says.

But the document describes what I wanted to tell them about the invention.
Q. And you mentioned you went back in your files and

happens in January or February. But it was then, at least that year, in November.

So it was big, huge companies, Microsoft -- big companies from all over the world, and also small companies like ours.
Q. And what did Arendi do? How do you spend your time at Comdex?
A. Demonstrated the product. So we tried to get people to want to see and show it to them. It was not so easy -difficult, actually, to get them to want to see it.
Because as they pass by, I would say, "Do you have time for a 30-second demonstration?" And most couldn't say no, so I showed them the demonstration. It took about
30 seconds to click on the button. And, of course, I got them a little bit interested, so they spent some more time with -- to show them more of the features and technology we had.
Q. Did Arendi have any meetings with those passersby at Comdex that stick out in your mind?
A. There were lots of people, but one that I remember particularly is, of course, Microsoft.
Q. Why does that stick out in your mind?
A. Well, they came with a group of people first. And then they seemed very interested. So they came back a couple of days later with a bigger group, and then showed
 quite a bit of interest.
Q. And did Arendi demonstrate the OneButton program at those times that Microsoft dropped by?
A. Of course. That was what we demonstrated, yes.
Q. Now, what happened with Arendi after Comdex '98?
A. Well, we continued developing products. And -- yes.
Q. That's a good answer.

And did Arendi have any odd sales? We talked about the product development.

Did it get to the point of selling?
A. Yes.
Q. Can you describe that? Did Arendi have any major product sales that stick out in your mind?
A. Well, there was -- the products were for individual users, right? So there was the individual sales, but we had a couple of big ones. One was 50,000 copies to a company called click. So then that -- yes.
Q. Did you have any other bulk orders like that 50,000-copy order?
A. There was a computer magazine called HomePC.

Actually, it was called HomePC translated in English. It was called HjemPC, which means HomePC.

It was a monthly magazine that came out. And they included in their magazine, a $C D$, our program on it. So that was distributed to about 35,000 .

## Hedloy - Direct

company. So we -- instead of -- or we developed OneButton further, as far as everybody.net concept or service. So we made the prototype of that first, which covered about 35 countries, several European countries, the U.S., Mexico, South American countries, African countries, even some Asian countries. And then it was quite cool. We also actually put Everybody. net on the cell phone at the time.
Q. And what steps did Arendi take to bring the Everybody. net product to market so that people could use it?
A. We contacted -- we contacted some potential partners, and one of them was Compaq.
Q. Mr. Hedloy, if you go to Exhibit PX-439 in your binder, should be the next one.

Do you recognize that document?
A. That is a contract we signed with Compaq.

MR. DIEHL: Your Honor, I move Exhibit PX-439 into evidence.

MR. UNIKEL: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit PX-439 is admitted into evidence.)
MR. DIEHL: If we can put that on the screen.
BY MR. DIEHL:
Q. Mr. Hedloy, what does the jury see here on the

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Q. Was that a common way of distributing a computer program at that time, put it on $C D$ and mail it?
A. The Internet wasn't a -- that up and going. So CD were the way to distribute mostly, yes.
Q. And what was Arendi's next product after OneButton?
A. Well, we really liked OneButton. So we thought it had a lot of potential, and actually refocused the company to focus on OneButton. And we introduced what we call the service. We call it "Everybody.net," because it was cool and great to have the OneButton. You can see in the letter or the document, and it would look like a local database.

But you remember the white pages and the yellow pages that phone companies gave out? At the time, they were starting to give those out on CDs also. So people can buy them on CDs and also on the Internet.

So the idea was to have OneButton not look up -- just on your PC, but look on the $C D$ or the Internet.

So we wanted to create that as a service and people subscribed to the service and use the oneButton to have the power of all those addresses in the entire world, you know, eventually.
Q. How did that new access to the phone book information factor into the product development Arendi was doing?
A. So we -- like I mentioned, I think we refocused the


## screen?

A. To the left is a cover letter which includes the contact. On the right is the first paragraph of the contract itself, yes.
Q. This is the contract you referenced between Arendi and Compaq?
A. Correct.
Q. What was the sort of general purpose and scope of this contract?
A. It was -- it's quite big. Compaq was the biggest computer manufacturer in the world at the time. So this was a contract between Arendi. And it says there -- you can see at the bottom, it says "Compaq EMEA," it says on the second line. EMEA stands for Europe, Middle East, and Africa. So this was a contract between Arendi and Compaq for that area.

And the idea was -- or the contacts, that they would put the OneButton on all their PCs as they sold them to users or to companies, so all their PCs would have the OneButton installed.

And then if people -- there was a free version that would last for a certain amount of time or would have a limited functionality. And if users that wanted to get more functionality or extend the use of it, then you would have to buy a subscription.
Q. And what year did Arendi and Compaq reach this deal?
A. 2000 .
Q. This is right about, you can see on there,

March 2000?
A. 31st of March, it says, yes.
Q. And what were the financial terms of this deal?
A. So it was a profit-sharing deal. They would put it on their PCs without us paying anything for it. And if users wanted to buy an upgrade, then they would share. And I think for the first 500,000 users, it would be 40 percent to them and 60 percent to us. It had different percentage, a little more units.
Q. Did Arendi reach distribution deals along these lines with anyone else besides Compaq?
A. Yes. Also with Scandinavia Online.
Q. And what's that? What's Scandinavia Online?
A. It's sort of like AOL, America Online, except for Scandinavia. That's Norway, Sweden, and Denmark.

And at the time, when people opened their browser to go on the Internet, you would normally not open it with the search page like Google, like many people do today, but you would open with a -- it's called homepage or -that's not the correct word.

But, basically, you would go to -- in the U.S., you would open it and get to AOL's front page, which had some
didn't take any income, but the -- from our savings and mortgage on the house and that kind of thing. And we also had some Norwegian investors, yes.
Q. How long did that initial money last?
A. It lasted into the year 2000. And then we needed to get more money.
Q. Did Arendi reach out to try to do some fundraising to keep going with the product development?
A. Yes, we did.
Q. And what year was that?
A. We started, I think, seriously at the end of 1999, and into 2000.
Q. End of '99 into 2000. What was the result of that outreach to potential investors?
A. We were not successful. We had -- basically, our timing was super bad. It was -- the dot.com crisis -- I don't know if you remember that. But everything stopped. I think it was March of 2000 -- the year 2000. We were close to signing deals and people were lining up, and then everything stopped and no one gave anyone any money, including not us.
Q. Without accomplishing the fundraising, what happened to Arendi?
A. Well, we couldn't go on. We couldn't pay our employees and things, so we had to close the company.

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Q. What year was that?
A. 2000, end of 2000 .
Q. And did Arendi have any intellectual property at that point, when the company closed down?
A. We had a patent application, yes, or two.
Q. And why had Arendi filed patent applications?
A. I mentioned that my wife urged me to do it. That's one reason. And I think she gave good advise. But it was, basically, as a small company, to protect your intellectual property, to protect our product ideas, that was one way to do it. It was made -- almost the only way to do it.
Q. And did you subsequently receive patents for your inventions at Arendi?
A. Yes.
the court: Counsel, is this a good time to take a break? Go to lunch?

MR. DIEHL: Yes, absolutely.
the court: All right. Very good.
All right. Ladies and gentlemen of the jury,
at this point in time, we're about to take our first
recess in the case. And I just want to remind you of the instruction that I gave you on Friday, which is during this recess, and any other recess, you must not discuss this case with anyone, including your fellow jurors.

## Hedloy - Direct

side and just come up with a list of what's left so we can efficiently get through them? And then if I could have a hard copy, at least, you know, maybe highlighting what's left, we can run through those.

Should we do it after the close of evidence
today? Would that work?
MR. UNIKEL: Yeah. There's quite a few designations, about an hour of video. So we want to make sure we can get you full transcript.

THE COURT: Understood.
MS. SRINIVASAN: I believe that should work. The person who had been working on that with counsel, Mr. Diehl, and it's his examination. So --

THE COURT: Understood.
MS. SRINIVASAN: -- I'm definitely sure we should confer about it. And I do agree some objections are going to fall out.

THE COURT: Is it something we could raise tomorrow morning before we start?

MS. SRINIVASAN: I think that would be best.
THE COURT: I think that's probably better
idea, that way you all can have a clean thing and we don't interrupt counsel preparation for witness examination.

One other question that I had was -- and I just want to make sure -- please have a seat.

Also remember to keep an open mind until all of the evidence has been presented and you get the chance to hear the views of your fellows jurors.

Okay. Ms. Garfinkel, let's take the jury out.
the clerk: Yes, ma'am.
(Whereupon, the prospective juror exits
conference room.)
(The jury exits the courtroom at 12:26 p.m.)
the court: Mr. Hedloy, you may step down.
Okay. Please be seated.
Okay. We will take our first lunch break. Do
we need to straighten out the deposition designations
before we resume after lunch, or is that something that can wait until later?

MS. SRINIVASAN: That's going to be played in Google's case, so we have a little time.

MR. UNIKEL: At some point -- it's not urgent that it be played at lunch. We do need to get rulings out so we know how to create the video and the exhibits for it. That's the only hangup on it.

THE COURT: It seems to me that at least some of the objections, if not most of them, will resolve by at least one of my rulings earlier; is that right?

MR. UNIKEL: That's correct.
THE COURT: Do you want to get with the other

Anything else we need to address before we break?
the court: All right. We'll see everybody back here by 1:30.
the court: Please be seated. I understand you've got a matter to address before we bring the jury back in.

MS. SRINIVASAN: Yes, Your Honor. This morning of course, we talked about the issue of IPR proceedings. During opening today, we heard at least three things that we believe opens the door or raises the very concerns that we expressed this morning.

First, counsel said a few times that, other than the applicant and the examiner, nobody else is involved in the process of getting a patent. And then he said that the applicant has to say what it believes its


#### Abstract

I just want to make sure everyone understands -- and I recognize that some of the exhibits that were presented today were in counsel's openings. I want to make sure that anything that's published to the jury has been admitted before we put it up on the screen. So let's just ensure that that happens going forward.


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MR. UNIKEL: I don't think so, Your Honor.
MS . SRINIVASAN: No, Your Honor.
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(Whereupon, a recess was taken.)
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M. SRINIVAsan: Yes, Your Honor. This morning
invention is and clearly express it to the Patent Office. The Patent Office wants to rely on those statements, and then on the basis of that exchange, a patent can issue or not issue.

That's true for the patent prosecution process, but it ignores the fact that there was a contested proceeding on the validity of the patents in which Google participated. So if they're going to say to the jury, well, part of the reason things didn't get before the examiner is because the examiner had to rely solely on what Arendi said, that is, frankly, opening the door, and is a sword and shield to the fact that there was a contested inter partes review proceeding.

Second -- and they said it again. When the Patent Office considered the CyberDesk and Apple Data Detector references, they relied on Arendi's arguments, as they were entitled to do because of the duty of candor, and the patent issue because there was a difference in their mind.

And counsel said they disclosed only some of the capability of those systems, not all. Again, when there's a subsequent proceeding in which a party, the party that is the defendant here, has the ability to raise art but is then saying that the plaintiff, the patent holder failed -- and implying that we failed to disclose

## some capability in the references we put before the

examiner, and they are then part of inter partes review proceeding where they have every opportunity to put every capability before the IPR, before the Patent Office, that leaves an improper implication in the mind of the jury.

And finally, there was quite a bit of reference to, from the moment that they filed suit against Google, Google has defended it at all times on the basis that it doesn't use the technology, it doesn't want the
technology, and it wants to go in a different direction.
Arendi should be entitled to say that that
position is inconsistent with running to the Patent Office within months of the suit being filed to ask to invalidate the patent. Their position now is, we don't practice what's in the patent; we are going in a different direction. But the fact that they went and sought -- they put the case on hold, they didn't defend themselves against noninfringement, and they sought to invalidate the patent for that period of time is responsive to this assertion they've made.

And there was a discussion about how they
weren't given notice and nobody came to them to ask for a license, and they're exploiting the timeline in exactly the way I feared.

But these statements that imply that, you know,

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the examiners, the Patent Office only had whatever Arendi put before it, is wrong, and you can't take advantage of a contested proceeding and then leave the jury with the impression that all the Patent Office ever saw was what Arendi put before it. And so, you know, the implication is if they didn't put everything properly before the office or they didn't meet their duty of candor, that the patent might have issued even though it was not valid.
the court: Thank you.
Counsel?
MR. UNIKEL: Your Honor, first, everything that was just said about proceedings to prosecute a patent was 100 percent accurate and came right from the Federal Judicial Center video.

Second, they put up slides in their opening that showed CyberDesk and Apple Data Detectors highlighted in the references cited in the patent. The Court has already ruled that those systems could not have been presented as part of the IPR. All we argued to the jury was that the Patent Office did not have all the features of those systems in front of it, and, therefore, that it's going to be a matter of validity for the jury to decide.

I don't know if you have a questions.
THE COURT: No questions.
All right. I just -- it's all right, counsel.

Google's opening statement that she believed were inconsistent with the court's ruling regarding the IPR and/or opened the door to raise IPR proceedings.

With respect to the second and third issues that counsel raised, I don't think that Google's opening statement opened the door. And I watched that portion of the opening statement, and I do believe it was consistent with the video that was played for the jury.

With respect to the first statement, that's a little bit closer of an issue; however, Arendi's objection is overruled for two reasons. One is that this was an opening statement, and I can put an instruction to the jury to the extent that Arendi believes that there was prejudice. Second, in context, I understood counsel to be saying that the patent examiner didn't have the system art that Google was going to present at trial before it, and I think to that extent, the opening statement was accurate. So that's my ruling.

All right. Can we bring the jury back in, Ms. Garfinkel.

THE CLERK: Yes, Your Honor. (The jury enters the courtroom at 1:39 PM.)

THE COURT: Please be seated. Shall we continue with the examination?

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So I've heard counsel raise three points from rom

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MR. DIEHL: Yes, Your Honor.
THE COURT: Mr. Hedloy, I will remind you that
you are still under oath.
the witness: Yes, Your Honor.
MR. DIEHL: Thank you, Your Honor. May I
proceed. Thank you, Your Honor. May I proceed?
THE COURT: Yes.
BY MR. DIEHL:
Q. Are you ready to go, Mr. Hedloy?

Mr. Hedloy, was OneButton, Arendi's product, an inventive product?
A. Yes, it was, of course.
Q. And is OneButton different from the patent?
A. Yes. OneButton is just one thing you can do with the patent. The patent can do many more things. It is much broader than OneButton.
Q. Mr. Hedloy, if you go to your binder and look at

Exhibit PX-1. It should be the first document in your binder.
A. What was the number, just 1 ?
Q. Yes.
A. Okay.
Q. Do you recognize that document?
A. I do; it is the patent.

MR. DIEHL: Your Honor, I offer Exhibit PX-1

## Hedloy - Direct

Q. Yes. And what kinds of devices can include the patented functionality?
A. The patent talks about a computer, so it can be small computers, big computers, personal computers, cell phones, any type of computer.
Q. Mr. Hedloy, what are the advantages of the invention that's described in the ' 843 patent?
A. All of -- I think the first benefit or advantage is that the user can do exactly that, access very easily information related to the document you are working on without having to exit that document.
Q. Are there any other advantages that come to mind for you?
A. It's super easy.
Q. That's the one click?
A. That's one click. It is difficult to make it easier, I think.
Q. What other advantages are there? Are there any others that come to mind for you?
A. Well, the user does not have to know about the database. The database doesn't have to be on the local PC. It could be on the network somewhere. It could be on the Internet somewhere. The user doesn't have to learn how to use the database. He or she doesn't have to have a license to it.
A. That is correct.
Q. Who owns the ' 843 patent?
A. A company called Arendi S.A.R.L.
Q. And who owns Arendi S.A.R.L.?
A. My wife and I.
Q. At a high level, what does the ' 843 cover?
A. I can't hear you very well.
Q. I'm sorry. At a high level, what does the '843 patent cover?
A. It covers users working in one application, one program, and then can access very easily information that's related to information in that document, in that program, from a different source. Was that clear?

## Hedloy - Direct

Q. I want to step back and talk about the process of getting the patent. So what process did Arendi go through to obtain the ' 843 patent?
A. We submit an application to the Patent Office. And there is a lot of back and forth between the Patent Office and the applicant -- that's us -- to make sure the patent -- where the patent is double checking that the patent should be granted or not or whether it should be granted.
Q. What's your understanding of what the Patent Office examined as part of that process?
A. It looks at the -- I guess, a couple things. It looks at the description, the first part of the patent and sees that what's actually in the claims is described in the description, so what the claims are saying. And then it's double checking that what are the claims did not exist before. When they did exist before, then you don't get a patent.
Q. What was Arendi's role in providing information to the Patent Office in order to help with that examination process?
A. It's the Patent Office requires that we send them everything we know. So every document, everything we know about something that could be related, have to do with the patent, whether or not is or similar or not, we have to
Q. Mr. Hedloy, what are the jurors looking at on the screen?
A. It is -- to the left is the front page of the patent, and to the right is the top part of the front page of the patent.
Q. And is this the ' 843 patent that jurors heard about during opening statements?

THE COURT: It's admitted.
(Exhibit PX-1 is admitted into evidence.)
MR. UNIKEL: No objection.

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## send to the Patent Office.

Q. As far as things that existed before the application, what kinds of references -- or you've heard the term "prior art" -- did Arendi find and submit to the Patent Office?
A. We found there were several patents that were sort of in the vicinity. There were some manuals, documents, academic papers, everything. So everything we had, we sent everything.
Q. And if you go to the next slide, Mr. Hedloy, can you describe for the jury what's shown on this slide.
A. That is the beginning of the section which lists all the things that the patent examiner knew about, and, therefore, looked at. I think it's actually from the left-hand part of the first page.
Q. So it starts on the first page of the patent, and then if we go to the next slide, Mr. Hedloy, could you describe what these subsequent eight pages of the patent are showing?
A. Those are showing the names of all the references, of all the documents and patents and other things we had that we submitted to the Patent Office and that the Patent Office found themselves. I think that what the Patent Office found is marked with a star, and the rest we submitted to them.

## Hedloy - Direct

Q. We heard about things like CyberDesk and Apple Data Detectors during the opening statements. Did Arendi happen to find any references related to those?
A. Yes, we did. And we sent it to the Patent Office.
Q. Mr. Hedloy, how did you feel when you got the patent?
A. Great, of course. It was a patent, a U.S. patent.

It was verification that it was new, and I felt great.
Q. Is this case the first time that Arendi has sought to protect the 843 patent from infringement?
A. No.

MR. DIEHL: Your Honor, at this point I do need to seal the courtroom to begin talking about some of the confidential documents.

THE COURT: Okay. Ladies and gentlemen of the jury, at this point we're going to have people who are not authorized to view certain confidential information that's been exchanged in this case to leave the courtroom. So please stay seated.

Ms. Garfinkel, can we seal the courtroom.
MR. UNIKEL: Can I ask a quick question?
THE COURT: Yes.
(A discussion was held off the record.)
MR. UNIKEL: We are just making sure that the corporate representatives can stay for this.

MR. DIEHL: On behalf of Arendi, that's okay.

MS. SRINIVASAN: That's fine. It is not our objection. I know the Apple lawyer came here for that purpose.

THE COURT: If what we are concerned about is somebody coming in to court and raising objection in the middle of testimony. I rather we take the easy path forward if everybody agrees.

MR. UNIKEL: Yes.
MS. SRINIVASAN: Yes.
(Whereupon, the discussion at sidebar concludes.)

THE COURT: The courtroom has been sealed.
(The following discussion is held under seal:
MR. DIEHL: Thank you, Your Honor.
BY MR. DIEHL:
Q. Mr. Hedloy, what was the first time Arendi had to bring a lawsuit to protect the l 843 patent?
A. When we had to file suit against Microsoft.
Q. What happened with that lawsuit?
A. Well, they took a license.




Do you see that language?
A. I saw that, yes.
Q. I assume that you agree with that statement since
it's the first paragraph in the text of your patent; is
that right?
A. I do.
Q. Before you filed your patent application, you
understood that people were able to search for contact
information in a contact database by entering information
manually or cutting and pasting information; is that
right?
A. Yes.
Q. And cutting, copying, and pasting information, those
were features that existed before you filed your patent
application, correct?
A. Of course.
Q. One purpose of your invention was to allow users to
perform searches without having to cut, copy, or paste
into a contact database; is that correct?
A. One of the purposes, yes.
Q. If we might look at Figure 3 of your patent, please,
in PX-1, this is the description of Figure 3 in the patent
itself, correct?
A. Yes.
Q. And Figure 3 is a screenshot illustrating the
that right?
A. That is correct.

MR. UNIKEL: If we can look at the next figure in the patent, Figure 4, please. We will just look at the figure, please.
bY MR. UNIKEL:
Q. Correct, sir, this is Figure 4 from your patent?
A. Correct.
Q. And am I correct that if the user clicks on the oneButton, as shown here, that the name is searched for and address is found and the address is inserted back into this document?
A. Correct.
Q. And the user command would be, in your view, clicking the OneButton, Number 42 in this picture; is that right?
A. Yes.
Q. And in Figure 4, because street address was found, the OneButton instructions caused that information to be inserted back into a word processing document; is that right?
A. I think that's right.
Q. And this could be useful, I think you said, in writing a letter; is that right?
A. Yes.
Q. The only screenshots in the patent are from your

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inputting of a name to be searched and an address handling button within a word processor according to an exemplary embodiment of the present invention. That's how you described it, correct?
A. Correct.
Q. So let's look at Figure 3 itself, please.

Am I correct this is one of the screenshots of your program called OneButton Contact Manager; is that right?
A. It's one of the screenshots showing the OneButton I don't know if you can see the program in the screen shot but it's I can say yes, sure.
Q. Okay. And this shows a Microsoft Word document correct?
A. That is correct.
Q. And you have typed information into the Microsoft Word document as you've shown here Atle Hedloy, correct?
A. Correct.
Q. And your claims in this patent require there to be a first computer program; is that right?
A. That is correct.
Q. And in this particular illustration, the first computer program is Microsoft Word, correct?
A. I think that's right.
Q. And the figure shows an input device that is configured by Microsoft Word and that's the OneButton; is

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OneButton Contact Manager product; is that right?
A. Yes.
Q. And you then included some claims in the patent that defined the specific requirements of your invention, correct?
A. Correct.
Q. And in this case you are asserting two claims, Claim Number 23 and Claim Number 30 against Google; is that right?
A. That is correct.

MR. UNIKEL: If we can please pull up Claim 23 from the 843 patent.
BY MR. UNIKEL:
Q. Sir, this is Claim 23 of your patent; is that right?
A. Yes.
Q. And this is one of the claims you are asserting against Google in this litigation, correct?
A. Correct.
Q. You understood and believed that all of the elements in this patent claim need to be looked at as a totality and must be present for someone to be practicing this invention, correct?
A. That's my understanding.
Q. If any one of these elements is missing, even if all of the others are present, you understand that someone
would not be practicing your invention?
A. That's my understanding.
Q. In this claim, you specify a number of things that
have to be done by the first computer program; is that
right?
A. Yes.
Q. And again, in the OneButton Contact Manager
screenshots that you included, that first computer program
would be Microsoft Word; is that right?
A. Yes.
Q. The first thing that a first computer program must do
is display the document electronically; is that right?
A. Yes. That's the first thing that's mentioned here.
Q. So the specific requirement in the claim is
displaying the document electronically, using the first
computer program, right?
A. Right. Say that question again. I'm unsure if I got
it right.
Q. Yes. So this element specifically requires, quote,
"Displaying the document electronically, using the first
computer program."
Is that right?
A. Absolutely.
Q. And the second requirement for the first computer
program starts with the words, "Providing an input
device."
Do you see that language?
A. I see that.
Q. And that requires, quote, "Providing an input device
configured by the first computer program" and continues on
"that allows a user to enter a user command to initiate an
operation."
Do you see that?
A. I do.
Q. Am I correct that is a second requirement for the
first computer program; it must configure the input device
that is provided to a user?
A. You are right.
Q. Then there's a third requirement for the first
computer program that begins with the language
"Inconsequence of receipt."
Do you see that, sir?
A. I do.
Q. Am I correct this element says, quote, "In
consequence of receipt by the first computer program of
the user command from the input device causing a search
for the search term in the information source." Unquote.
Do you see that?
A. I do.
Q. Again, this is a third requirement, then, for the
A. I did.
Q. You were asked the following question and gave the following answer:
A. Okay.

MR. UNIKEL: Would you play clip four.
(Video clip plays as follows:
Q. And is it important to you, then, that the first computer program configure the input device as opposed to the operating system configuring the input device?
A. This claim is focused on the invention where the first computer program is configuring it.
(Clip ends.)
Q. Sir, am I correct that according to you, this claim is focused on the invention where the first computer program is configuring the input device?

MR. DIEHL: Objection.
Your Honor, I think that's improper impeachment.

THE COURT: Let me see counsel at sidebar.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: What actually are you objecting to about the impeachment?

MR. DIEHL: I don't think it's corresponding to
the question. I don't know what the basis was. It was not inconsistent.

MR. UNIKEL: I asked him the exact words from this. He said he didn't think so. I asked him to confirm. He didn't think so. I confirmed it; I played his video deposition.

MS. SRINIVASAN: In his video, he didn't say "yes."

THE COURT: Here's how I want to do this going forward. I want to confirm with the other side the question that was asked before the deposition is played. That way we can resolve any objections.

The issue I had here is that we didn't get the objection from you until after it was played. We are in a situation where we need to untangle -- let me have the court reporter read back, starting with the question before the deposition clip was played.
(Discussion off the record wherein the
transcript was reread.)
MR. UNIKEL: I do have one question, when it's the appropriate time.
the court: Okay. What was the deposition
question?
MR. UNIKEL: Here is the deposition question and answer right here.
the court: With respect to this particular impeachment, I agree with counsel for Google that it was inconsistent with his prior response. However, in the future, when we are going to impeach by a prior statement under oath, I would like counsel to ask for leave to show the other side the inconsistent statement. If we have a disagreement about whether or not it's inconsistent, that can get resolved before video clip is played to the jury.

MR. UNIKEL: What about if I'm going to ask -read a question and answer if there's --

THE COURT: My view is if you are going to read verbatim a question from the deposition, no one needs to know it's coming from the deposition. So you can read that question. We can get an answer. If it's
inconsistent with the exact same question and answer that happened at the deposition, we deal with it then.

MR. UNIKEL: My only question is should I be showing them the question and answer I am going to read from the deposition to opposing counsel before?

THE COURT: No.
MR. UNIKEL: Okay.
MS. SRINIVASAN: For impeachment purposes,
though.
THE COURT: If you are going to ask a question that you asked at a deposition, you are allowed to ask

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## Hedloy - Cross

the first computer program must do, and that's the in consequence of receipt by the first computer program language, correct?
A. Correct.
Q. And it's important to you that the search be performed in consequence of receipt by the first computer program because that is what you wanted to claim in this claim, correct?
A. It is what we wanted to claim in that claim. That is correct.
Q. And in your view, the first computer program needs to receive the command as opposed to the second computer program receiving the command because that is the specific invention that you wanted to claim in this claim; is that right?
A. Correct.
Q. You believed that there were some advantages to having the first computer program receive the user command; is that right?
A. Yes.
Q. And in particular, some advantages, in your view, to having the first computer program receive the user command could be similar to the fact that the input device was configured by the first computer program; is that correct?
A. That is correct.

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Q. And in your view, if you had a second program after "receive the user command," that would be disadvantageous because the other program would have to be running at the time to receive the user command; is that correct?
A. That's one reason, yes.
Q. And you recognize that it's possible to construct a system where the operating system receives a user command rather than the first computer program receiving the user command, correct?
A. Of course operating system can receive previous commands, yes.
Q. But in your particular claim, which we're looking at, Claim 23, you deliberately specified that the input device must be configured by the first computer program and must receive the command from the input device; is that correct?
A. Yes.
Q. And in your view, there is an advantage to having the first computer program receive the input device from the input -- receive the command from the input device as opposed to having the operating system receive the command from the input device; is that right?
A. Yes.
Q. Again, you felt that one of the advantages of having the first computer program receive the user command was
that the programmer of the first computer program would have control in that instance; is that right?
A. That's one advantage.
Q. And that may not be the case if the operating system receives the user command, correct?
A. Depends on circumstances, correct.
Q. And so you deliberately claimed and wanted to claim the invention where, in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term; is that right?
A. Can you please repeat that question.
Q. Yes. And you made a deliberate choice to claim in this claim that in consequence of receipt by the first computer program of the user command from the input device causing a search for the search term; is that correct?
A. That's why it's there. I want to correct something I said before because I think you made -- you said the first computer program as opposed to the operating system. It's --
Q. Sir, there's no question pending.
A. But I want to correct my answer.
Q. Okay.
A. If I may.
Q. Sure.
A. If you say so, sure.
Q. And one of the advantages, in your view, of having the user command received by the first computer program is allowing the programmer to have control that is not dependent on something that may be in the operating system, correct?
A. Yes.
Q. So once again, you deliberately included in your patent claim the requirement that, in consequence of receipt by the first computer program of the user command from the input device causing the search, correct?
A. I put those words in deliberately.
Q. The claim later requires a separate element. It says, "If searching finds any second information related to the search term, performing the action using at least part of the second information."

Do you see that?
A. I do.
Q. Just so we're orienting the jury, am I correct: First information can be something like a name; is that right?
A. Correct.
Q. Or it can be a phone number, right?
A. Correct.
Q. Or it could be an E-mail address, correct?

## Hedloy - Cross

Answer: Yes.
That was your testimony, correct?
A. Because I think everything that comes into the system goes through the operating system. So the operating system sees everything that happens. So there isn't an either/or. It's both.
Q. In your view, having the first computer program receive the input from the input device as opposed to having the operating system receive the command is advantageous, correct?
A. That is what I do not agree with. Okay? I would not put it that way.
Q. Have you ever put it that way in a deposition in this case?
A. I tend to agree with the answer in the depositions.
Q. Sir, do you recall being deposed in this case?
A. I do.
Q. And you were testifying under oath, correct?
A. I was.
Q. You were asked the following question and gave the following answer:

Question: Is there any advantage in your view to having the first computer program receive the input from the input device as opposed to having the operating system receive the command from the input device.

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A. Correct.
Q. And it could be a street address; is that right?
A. Yes.
Q. And second information -- when we see "second
information" is information that is associated in some way with that first information, correct?
A. Yes. It's found by the search.
Q. And so if the first information is a name, the second information might be something like an address, correct?
A. Correct.
Q. Or if the first information is an e-mail address, the second information might be a name that goes along with the e-mail address, correct?
A. For example.
Q. And you believe that performing an action using at least part of the second information includes simply displaying the second information on the computer screen, correct?
A. I do.
Q. So, in particular, for example, displaying a map that is associated with the street address would be performing an action using part of the second information?
A. That action would be displaying a map, yes.
Q. Before you filed your patent, you were not sure whether there were any systems that would identify pieces
A. That's probably correct.
Q. There might have been such a system; you are just not sure?
A. Correct.
Q. Before you filed your patent, you were not sure if there were any systems that would identify pieces of text as being phone numbers; is that right?
A. Correct.
Q. Those systems might have existed, you're just not sure?
A. Correct.
Q. Before you filed for your patent, you were not sure if there were any systems that could identify pieces of text as being e-mail addresses; is that right?
A. No. I -- you're referring to before filing the first patent --
Q. Yes.
A. -- not this patent?
Q. Correct.
A. Yes.
Q. There might have been such systems that identified text as e-mail messages, but you're just not sure?
A. Correct.
Q. And to finish off the group, you don't -- you're not

Microsoft Word; is that right?
A. Yes.
Q. And your patent does not describe the details of how to create the specific functionality that you described for OneButton in Microsoft Word, correct?
A. Not until the last appointment -- not until the last period, no.
Q. And you did not describe the details because it's your view that a person of skill in the art would understand how to create OneButton functionality in Microsoft Word in 1998; is that correct?
A. Yes, that's correct.
Q. You created OneButton, your OneButton product on top of Microsoft Word because it saved you a lot of time in the development process, correct?
A. Correct.
Q. And more specifically, creating your OneButton product on top of the existing Microsoft Word product, allowed you to save a lot of time in developing, because Word already had a lot of the much needed functionality already built in; is that right?
A. Right.
Q. In your view, the appeal of the invention was that it was so easy and obvious, correct?
A. To use, yes.
Q. Let me show you a document, sir. If you might turn to DT -- what I've marked as DTX-71 in your book, please.

Please let me know when you have that open in front of you, sir.
A. I have it.
Q. Am I correct, sir, that this is a memorandum from you; is that right?
A. Yes.
Q. And this was on Arendi memorandum stationery, correct?
A. Correct.
Q. And the date of this is September 2, 1998, correct?
A. Also correct.
Q. And this -- that is a date one day before you filed the Norwegian patent application, correct?
A. Yes.
Q. And, sir, am I correct that you were the author of this document?
A. Yes.

MR. UNIKEL: I'd like to move DTX-71 into
evidence.
MR. DIEHL: No objection, Your Honor.
THE COURT: It's admitted
(Exhibit DTX-71 is admitted into evidence.)

## Hedloy - Cross

that's an unfair characterization of the document.
MR. UNIKEL: I am not characterizing the
document. I'm asking the witness --
THE COURT: Overruled.
BY MR. UNIKEL:
Q. Sir, the invention being described in the memo is the invention of the ' 843 patent; is that correct?
A. This was -- I have to study it more carefully, because this was written, you know, ten years before we applied for that patent. So -- but it was described partial what was described. I guess the answer is yes. Sorry.
Q. Okay. You then describe -- you have a section here in this memorandum entitled "OneButton In The Word Processor."

> Do you see that?
A. Yes.
Q. And the text you wrote says, quote, "The invention lets the user from OneButton in a word processor get access to person and address-related information. E.g., in Microsoft Word. We make a button available (e.g., on the toolbar), or a menu item, that intelligently interprets what the user wishes to do, related to maintenance and use of data from one or more databases with person and address-related data," unquote.

MR. UNIKEL: Can we please display DTX-71,
please.
BY MR. UNIKEL:
Q. Now, this memorandum is from you to someone named Dag Tellefsen at Vision Capital, correct?
A. Yes.
Q. And when you sent this memorandum, you were looking for Mr. Tellefsen to give an investment to Arendi; is that right?
A. I think Vision Capital was a venture capital firm, yes.
Q. And the subject of this particular memo is
"Arendi/'OneButton in Word,'" correct?
A. That is correct.
Q. And the first line -- well, the second line of this memorandum says, quote, "This is a short description of a potential patent, according to our conversation earlier today," unquote.

Do you see that?
A. I see that.
Q. And in this invention you are describing the -- I'm sorry -- in the memorandum, the invention that you're describing is the invention claimed in the ' 843 patent, correct?

MR. DIEHL: Objection, Your Honor. I think

You wrote that, correct?
A. Yes.
Q. And it says, next, quote, "One might say that almost the entire power from a contact management system becomes available to the user through a single button in the program they all use most frequently, the word processor," unquote.

## Correct?

A. Correct.
Q. And if I may, if you turn to the second page of your memorandum, just before your conclusion to Mr. Tellefsen, do you see you wrote, quote, "The invention is exactly that it is so easy and obvious," unquote.

Do you see that?
A. Yes.
Q. Am I correct that Mr. Tellefsen ultimately did not invest in Arendi?
A. Correct.
Q. Sir, am I correct, the OneButton product that you created and sold could not detect or act on phone numbers; right?
A. Correct.
Q. And the OneButton product that you created and sold could not detect or act on e-mail addresses?
A. Correct.
Q. And the OneButton product that you created and sold could not pull up a map for a street address, correct?
A. That is correct.
Q. The one product your OneButton product could do was, detect a name and insert an address back into a document after a search for that address; is that correct?
A. That's not correct.
Q. It could also insert the information into the contact database?
A. For example.
Q. Arendi tried selling the OneButton contact manager product, correct?
A. Correct.
Q. You do not personally consider the OneButton contact manager to have been a commercial success, do you?
A. Not particularly.
Q. In fact, while you can't remember how much you
actually made in sales of OneButton, you know for sure that it sold less than a million dollars' worth of product over its entire lifetime, correct?
A. That is correct.
Q. You currently do not have a single working version of the OneButton Contact Manager product, correct?
A. Correct.
Q. You looked for it in the course of the case in

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response to our questions, but you could not find one single working version of OneButton Contact Manager?
A. That would work on the computers I had, that's correct.
Q. So the jury can't see the -- a working example of the OneButton Contact Manager product, sitting here today, correct?
A. Correct.
Q. And in the course of this case, you could not remember exactly how the OneButton Contact Manager actually worked, correct?
A. In detail, no.
Q. Sir, earlier today, in your testimony, you talked about an agreement you had with Compaq Computers.

Do you recall that?
A. I do
Q. And your agreement with Compaq related to a product called "Everybody.net"; is that right?
A. We called it a service, yes.
Q. A service called "Everybody.net"?
A. Yes.
Q. And in your agreement with Compaq, you promised to pay Compaq a share of the revenues of any product that you actually sold, correct?
A. Of course, yes.
A. Correct.
Q. And at that time, Arendi AS stopped selling any products in two -- this is in 2000, right?
A. Yes.
Q. And as part of the bankruptcy, you and your wife purchased all of Arendi's patents and patent applications that existed at the time; is that correct?
A. That's correct.
Q. And for all of Arendi's patents and patent applications, you paid a grand total of somewhere between $\$ 4,000$ and $\$ 8,000$, but you can't remember the exact price within that range; is that right?
A. Correct.
Q. And that payment amount represented the best price that the bankruptcy trustee could get for Arendi's patents because nobody else was willing to bid more than $\$ 8,000$, to your knowledge; is that right?
A. That is correct, except we didn't have any patents. We just had a patent application.
Q. And so nobody else was willing to bid more than $\$ 8,000$ for that patent application at the time; is that right?
A. We were able to pay that money for it. I don't know what happened to the trustee. But that's reasonable to assume, I think.
Q. And following the bankruptcy, you did not develop any product or services on behalf of any Arendi company, correct?
A. Correct.
Q. And after Arendi AS went bankrupt, no Arendi entity continued selling Arendi's OneButton products or services ever again, correct?
A. Correct.
Q. And after you purchased the intellectual property portfolio of Arendi AS, you and your wife then transferred that portfolio to a company called Arendi Holding Limited, right?

MR. DIEHL: Objection, Your Honor. This goes beyond the scope of the agreement.

THE COURT: Let me see counsel at sidebar.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: Let me understand the basis for counsel's objection.

MR. DIEHL: Yes, Your Honor. We have an agreed motion in limine, Number 4, that precludes prejudicial references to Arendi and its corporate history, including corporate transactions involving current or prior Arendi entities that -- Hedloys and/or their investors.

MR. UNIKEL: If I may, the same MIL says the agreed to MIL does not extend to evidence or argument concerning whether Arendi AS product were not a commercial success Arendi AS declared bankruptcy in 2000, neither Arendi Holding or Arendi S.A.R.L. sold further products focused their business on fate licensing.

THE COURT: Can I see counsel's --
MR. DIEHL: The next question was because a
transfer between two Arendi entities that's a corporate transaction between Arendi entities.
the court: Stand by.
The question that was objected to, as I
understood it, had to do with a -- a corporate transfer. And I guess I'm not understanding the scope of the MIL requires preclusion of prejudicial references to Arendi and its corporate history. So your view is, you can't have any more questions about corporate transfers.

MR. DIEHL: We think transactions between the Arendi entities are clearly prohibited by this MIL that talks about corporate transactions between current or prior Arendi entities.

MR. UNIKEL: We specifically carved out that neither Arendi Holdings sold for the products, instead focused their business on patent licensing. I can't do that unless I say how the patents got into the hands of
A. Yes.
Q. Now, the ' 843 patent application was filed in July of 2008; is that right?
A. That's right.
Q. And that is while Arendi Holding Limited was conducting its business of managing and exploiting patents, correct?
A. Yes.
Q. And that was eight years after Arendi stopped developing and selling any products, including the OneButton Contact Manager; is that right?
A. Except for the bankruptcy, correct.
Q. In 2010, Arendi's patents were transferred to an entity called Arendi S.A.R.L.; is that right?
A. Right.
Q. And Arendi S.A.R.L. is the company that filed this lawsuit against Google, correct?
A. Correct.
Q. And that is the current existing Arendi company that you are the CEO of; is that correct?
A. Yes.
Q. And both Arendi S.A.R.L. and Arendi Holding Limited were owned exclusively by you and your wife; is that right?
A. That is right.

Q. And Arendi S.A.R.L.'s entire business is to own, manage, enforce, and license patents, correct?
A. Yes.
Q. And the patents that Arendi S.A.R.L. manages, enforces, and licenses are only the patents that are related to your original applications, which you filed in 1998 and 1999; is that correct?
A. That is correct.
Q. Arendi S.A.R.L. did not attempt to develop any technology beyond what was claimed in the patents that came from those original 1998 and 1999 applications; is that correct?
A. Correct.
Q. And Arendi S.A.R.L. has never sold any products of any kind, right?
A. Beyond the licenses.
Q. Beyond the licenses to the patents, right?
A. Correct.
Q. And your entire role as CEO of Arendi S.A.R.L. is to oversee litigation at this point in Arendi S.A.R.L.'s life; is that correct?
A. It is to protect our property, correct.
Q. And that includes through litigation like this one?
A. Yes.
Q. Before you filed your original patent application in
A. That's correct.
Q. Sir, if I could ask you to look in your binder, it's a very big document, DTX-2, please.

MR. UNIKEL: And please don't display it just yet. THE WITNESS: Okay.
BY MR. UNIKEL:
Q. Sir, this is the prosecution history of the ' 843 patent. And, again, you were personally involved in the back and forth with the Patent Office, correct?
A. Yes.
Q. And you were the applicant who was applying for this particular patent, correct?
A. Yes.

MR. UNIKEL: I move to admit DTX-2, which is
the prosecution history of the '843?
MR. DIEHL: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit DTX-2 is admitted into evidence.)
MR. UNIKEL: To make things go a little faster, in the binder, I have put a green tab on everybody who's got the binders for a particular page.
the witness: This one?
BY MR. UNIKEL:
Q. Yes, please. And if you could go to that; that is

November 1998, you did nothing to determine whether others had already addressed the problem you were trying to solve, did you?
A. Nope.
Q. No, you didn't do anything?
A. Correct.
Q. Similarly, when were you working on your products, OneButton Contact Manager, in 1997 and 1998, you did nothing to find out how others in the industry had approached the same problem that you were trying to solve in their various solutions; is that correct?
A. That's correct.
Q. Sir, in your discussion with counsel on your direct examination, you described the extensive process that the patent went through in order to be issued; is that right?
A. I did.
Q. And you stated that you were personally involved in that back and forth with the Patent Office, correct?
A. Yes.
Q. And your -- Arendi's role was to help by providing everything we -- Arendi knew at the time; is that correct?
A. Yes.
Q. And you, then, quoted to some pages from the front of the patent, showing the different references that were cited as part of the prosecution; is that correct?
page DTX-2.168. You can see that in the bottom middle. A. I see it.

MR. UNIKEL: Can you we put up that page, please.
BY MR. UNIKEL:
Q. Sir, am I correct, this is a page that has got the title of "Response A"?

Do you see that?
A. I do.
Q. And at the top left, we see that the applicant for -this is Hedloy. That's you, correct?
A. That is me.
Q. And this was -- this shows the filing date of July 29, 2008, which is the filing date of the ' 843 patent application, correct?
A. Yes.
Q. And here, the very first line of the document you say, "Dear, Sir/Madam: In response to the Office Action dated October 28, 2010, the Applicant submits the following amendment and remarks."

Do you see that?
A. I do.
Q. And you're aware that an "Office Action" is a
communication from the Patent Office potentially about a rejection or a question concerning the patent; is that right?
A. Yes.
Q. And here, you are responding to an Office Action from the Patent Office that was dated October 28, 2010, correct?
A. That's what it says, yes.
Q. If I can ask you to look in the same response at the Page 180. So it's on the bottom you'll see that it has DTX-2.0180.
A. 180?
Q. One-eight-zero, please, sir.
A. Okay.
Q. Sir, in this communication between you and the Patent Office, do you see there's a section entitled
"Objections"?
A. Yes.
Q. And in the second paragraph, it begins, "The

Applicant files with this response a corrected information disclosure statement, relisting those references that the Examiner did not consider in the previous IDS of
January 26, 2009 and also listing new references," end quote.

Do you see that?
A. Okay. Yes.
Q. And an IDS, an Information Disclosure Statement, that
A. That's what it says.
Q. Why don't we take a look at that AESD document please. If you could look at DTX-925, which is in your binder. Please let me know when you've got it up in front of you, sir.
A. I do.
Q. Do you see that this document is entitled:
"Accelerated Examination Support Document"?
A. Yes, I see.
Q. And I see you've looked back and forth. Would you confirm that the July 22, 2010, date on this document corresponds with the AESD you directed the examiner to in Response A.
A. I am sure that's right; I can't remember.
Q. Am I correct, sir, that you -- and you understand that an AESD is submitted in order to get a faster answer from the patent examiner as to whether or not an application is patentable, correct?
A. Correct.
Q. And you personally reviewed all of the AESDs submitted by Arendi, correct?
A. I personally, I'm not sure that's correct. I can't remember that specifically today. It was we had help also from the lawyers. I think I looked at it all, but, yes, go ahead.

Filed $0 \$ / 21 / 23$ Page $60^{\text {nigto }} 775^{5 r P r a g}$ ID \#: 60639 was something by which you alerted the Patent Office to certain prior art references that they should be aware of, in your view; is that correct?
A. Correct.
Q. Two sentences down, you say, quote, "Applicant notes that Application Serial No. 12/841,302 (also before the Examiner) and the prior art references analyzed in the Accelerated Examination Support Document (AESD) of July 22, 2010 are of particular interest in relation to the present application," unquote.

Do you see that?
A. I do.
Q. "The present application," this is the application for the ' 843 patent, right?
A. Right.
Q. And there "Applicant" is you, correct?
A. Yes.
Q. You are telling the examiner that he should look at something called the Accelerated Examination Support Document in another case that's in front of the examiner, correct?
A. Yes.
Q. And you say that the prior art references analyzed in that AESD are of particular interest in relation to the '843 application; is that right?

## Hedloy - Cross

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Q. And as part of creating this document, you recall being asked by Arendi's lawyers to evaluate the references deemed most relevant to the subject matter of the claims; is that correct?
A. Sure.
Q. And the text included in this document was drafted by Arendi, you, or its counsel, correct?
A. Correct.

> MR. UNIKEL: I move for admission of DTX-925.
> MR. DIEHL: No objection, Your Honor.
> THE COURT: It's admitted.
(Exhibit DTX-925 is admitted into evidence.)
BY MR. UNIKEL:
Q. So, sir, just so now that the jury has the benefit of seeing the document, this is the accelerated examination support document that you directed the examiner considering the ' 843 patent application to; is that correct?
A. Yes.
Q. And this was dated July 22, 2010; is that right?
A. Correct.
Q. Sir, if you could please find Page 10. I'm just going to use the numbers of the actual document, so Page 10 of this document.
A. I have it.
,
Q. And do you see that there is a section here entitled:
"9(A), References Deemed Most Closely Related."
Do you see that?
A. I see that.
Q. And in this, you have a listing of various pieces of prior art that you are going to -- that you have disclosed that are the references deemed most closely related?
A. To this --
Q. Is that right?
A. To this application.
Q. Yes. And this AESD document, you directed the ' 843 examiner to look at, correct?
A. Yes.
Q. And in this list, do you see that there is a bullet point "Apple Data Detectors User's Manual, Apple Computer, 1997."

Do you see that, sir?
A. Yes.
Q. And one more down, there's an entry for "Anind Dey, Gregory D. Abowd, Andrew Wood, CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services, Knowledge-Based Systems, Volume 11, 1998", correct?
A. Correct.
Q. And one below that is a bullet point that reads "Getting Results with Microsoft Office 97, Microsoft
 corporation, copyright 1995 to 1997," correct?
A. Correct.
Q. So these are prior art references that you deemed most closely related to this application that you filed the AESD on; is that correct?
A. Yes.
Q. And then these are prior art references that you told the ' 843 examiner would be of particular interest to consider in connection with the 843 patent?
A. That's correct.
Q. Sir, if I could ask to you turn to Page 101 of this AESD, 101.
A. I'm there.
Q. Do you see that here you have a section that's called "Detailed Explanation of Patentability."

Do you see that?
A. I see that.
Q. In this section, you are providing Arendi's narrative description of each of the prior art references that you cited; is that right?
A. Yes.
Q. And you also, then, identify elements of patent claims in this application that you were seeking that you believe were missing from the identified prior art references, correct?
A. Correct.
Q. So let's look at what you said about CyberDesk publication. If we could look at Page 114, please. relating to CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services, correct?
A. Yes.
Q. And you wrote in the following paragraph: "The Dey reference describes a tool called CyberDesk. CyberDesk is a framework that supports the automatic integration of versus software applications. In one user -- "in one example, a user highlights a URL in an e-mail message, and CyberDesk offers the user the following options: 1 , search for the URL using a search engine, 2, find pages that reference the URL using a search engine, or, 3 , display the URL using a web browser," unquote.

Do you see that?
A. Yes.
Q. And a URL is an Internet address, correct?
A. Correct.
Q. In the last sentence here, Arendi writes, quote, "In another example, the user highlights a name in the e-mail message and CyberDesk offers various options that are specific to the name, (e.g., look up the name in a contact manager)."

Am I correct here we see that article from 1998

## Hedloy - Cross

A. Correct.
Q. And you don't say anything in this description about CyberDesk's ability to search for a map and display a street address on a map, correct?
A. Correct.
Q. In the course of this case, you stated that you have no recollection as to how CyberDesk actually worked; is that right?
A. You have to repeat the question; I didn't hear that.
A. Yes, that's what it says.
Q. And one of the options for a name was look up the name in a contact manager; is that right?
A. Yes.
Q. Now, in this description, you don't say anything
Q. Now, in this description, you don't say anything
about CyberDesk's ability to find a related phone number, correct?
A. Correct.
Q. And in this description, you don't say anything about
CyberDesk's ability to use the e-mail address to actually
Q. And in this description, you don't say anything about
CyberDesk's ability to use the e-mail address to actually send an e-mail, correct?

And then there is a citation; is that correct?
A. That's correct.
Q. And in this description, you are recognizing that CyberDesk offered various options that are specific to a name; is that correct?
Q. In this case, you stated that you have no recollection as to CyberDesk actually worked; is that correct?
A. Correct.
Q. And you don't remember when you became aware of CyberDesk; is that right?
A. That's also correct.
Q. After becoming aware of CyberDesk, you don't remember doing anything to acquire more information about that system, do you?
A. That's correct.
Q. And you don't even remember whether you looked for any information on CyberDesk through a basic Internet search, correct?
A. Correct.
Q. And you don't remember whether you looked at any materials about the CyberDesk system other than this one 1998 article that you discussed in this AESD; is that right?
A. I know we submitted more CyberDesk documentation to the Patent Office, so I assume he looked at those.
Q. But you personally don't recall if you ever saw any of those other materials; is that correct?
A. Today, I don't remember.
Q. And you don't remember whether you ever went to the

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Filed 0\$/21/23 Georgia Tech website concerning CyberDesk and tried to use the actual sample version of CyberDesk that was provided on that website, do you?
A. I don't remember.
Q. Let's look back at your description of CyberDesk to the Patent Office in the AESD, please. If you could look at the next page, please, 115.

Do you see that you write, quote, "The Dey reference does not meet several elements and limitations of the claims. Among other things, the Dey reference does not disclose contact information handling implemented by a document editing program. For example, Dey does not disclose analyzing selected textual information by the document editing program as required by the claims.

CyberDesk itself analyzes text highlighted by the user, and CyberDesk is separate from any document editing programs."

That's what Arendi said to the Patent Office about this reference, correct?
A. Yes.
Q. And you felt it was an important distinction in this AESD that CyberDesk was separate from the document editing program, correct?
A. Yes.
Q. And you told the ' 843 patent examiner that he would simply does not disclose, teach, or suggest inserting second information into documents," unquote.

Do you see that?
A. I see that.
Q. Were you aware that CyberDesk did allow for insertion of text into documents at the time you wrote this?
A. Apparently not.
Q. And, sir, is there any limitation in the actual claims of the ' 843 patent that require causing insertion of at least part of the second information into the document?
A. '843, no.
Q. But these are all statements that Arendi itself wrote to the Patent Office in this AESD, correct?
A. Correct.
Q. And these are the statements that Arendi directed the examiner considering the ' 843 patent to because they were of particular interest in regard to that application?
A. That's what you said, yes.

THE COURT: Counsel, is now a good time to take the afternoon break?

MR. UNIKEL: I think it's a great time. Thank you, Your Honor.

THE COURT: Ladies and gentlemen, we will take

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you out for your 15-minute afternoon break.
(The jury exits the courtroom at 3:09 PM.)
the Court: Please be seated, Mr. Hedloy. You can step down.

All right. We will be in recess for 15 .
(Whereupon, a recess was taken.)
THE COURT: Okay. Please be seated everyone.
MS. SRINIVASAN: Your Honor, I have one issue to raise before we resume, if I may.
the court: Sure. That's fine.
MS. SRINIVASAN: As I understood the discussion during the prior break when we talked about concerns about opening the door, I understand the court to say, well, because they were talking -- or in the opening, the discussion was about the systems that could not be before the Patent Office, that that was permissible and did not open the door.

Well, we just saw for the last 20 minutes was walking through the prosecution history itself and talking about whether the references were properly disclosed or whether the examiner was directed in the right way to look at the right thing about those references. That was not what I understood the Court's ruling to be, but in any event, now the implication is, these references -CyberDesk so far, maybe there are others -- were not, you
process.
And, you know, we've admitted the prosecution history, counsel did that. He's walking through it. The IPR proceedings are part of that prosecution history. It is extremely prejudicial to suggest -- again, we're beyond the systems now; we're talking about the references that were submitted to the Patent Office, and the kind of cross-examination we just heard is to say, well, yes, CyberDesk was there, but you described CyberDesk as X , or you said it had to do with Y , as though there was some effort by Arendi not to properly disclose what that art was about or direct the examiner away.

Google, of course, had the opportunity to put forth those exact same references and put them before the patent examiner if it thought that there was something that was not properly conveyed. And so now we're in a different realm because we are explicitly talking about references that were presented to the examiner and what was done with them.

And, again, the impression that, well, Arendi did this, and when Google came in after the fact and had an opportunity to be before the Patent Office, we should be able to at least reference that because I think it's extremely misleading, again.

THE COURT: Counsel, I want to make sure I
know, they were put before the examiner, but the examiner wasn't led in the right direction as to the contents of those.

And, again, the IPRs are part of the
prosecution history, and Google itself if it's position is somehow Arendi didn't direct the examiners properly,
Google itself had the opportunity to do that. I think we have gone beyond what we even talked about in the last break in terms of creating this impression that, yes, CyberDesk was in the original prosecution, that Arendi somehow didn't point out to the examiner or describe the reference in a way that wouldn't have allowed the examiner to look at it carefully. And, of course, we know that there was a subsequent proceeding in which Google itself had the opportunity to create any misimpression it thought or direct the examiners as to the references.

He's not asking him about systems. He spent quite a bit of time just now talking about the references in the prosecution of the patent related to CyberDesk. And the implication that is left there, we should be able to rebut that with the fact that Google itself could have raised -- if it really thought, looking at the prosecution history, that the examiner wasn't properly shown or properly directed on those references, Google could have done that. It had every opportunity during its own

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## Hedloy - Cross

understand. So the Court doesn't rule on impressions; it rules on evidence admitted.

MS. SRINIVASAN: Yes.
THE COURT: So I want to make sure I
understand, are you saying -- before I heard what you were saying was that evidence of the IPR proceedings was potentially relevant to willfulness. Are you now saying something differently, that there's something new that's been opened up --

MS. SRINIVASAN: Yes.
THE COURT: -- that the IPR proceedings are relevant to?

MS. SRINIVASAN: Yes.
the court: I didn't hear you object to this evidence being admitted when counsel was asking him about it.

MS. SRINIVASAN: Well, Your Honor's instruction at the last break when we raised the concern about making the argument that something had happened in the patent prosecution process, Your Honor said, well, you know, if they're talking about the system which couldn't have been before the Patent Office and the process of getting the patent, then that was not -- you know, that's not a basis for opening the door.

Now we're talking about something else. We're . 64 PagelD \#. 60643
talking about the actual references. Those have been put into evidence, the full prosecution history, and the questions to Mr. Hedloy are, well, here's how you described CyberDesk. You didn't describe it as X. You didn't describe it as Y. Yes, you -- you know, it was before the patent examiner, but the implication is that somehow there was a failure of candor to the Patent Office. And this is what I raised before, but now it is directly about references that are in the prosecution history.

THE COURT: All right. Thank you, counsel. Why don't you have the seat.

MR. UNIKEL: May I be heard, Your Honor?
the Court: Yes.
MR. UNIKEL: We are not actually going to say at all that there was any breach of the duty of candor. We believe that the duty of candor was followed and that they said exactly what they meant about the articles. The problem is the system has many more features than the articles reveal. The systems were displayed publicly. You're going to hear from the inventor of Apple Data Detectors and from CyberDesk that's going to talk about features of system that were not available in the publications.

We're not disputing that what he said was
Q. Okay.
A. I will drink some.
Q. Please.
A. Thank you.
Q. Are you ready, sir?
A. Go ahead.
Q. You then continue, quote, "The user can use a contextual menu to initiate an action that is related to the recognized data. For example, if ADD recognizes a web address, the user may use the contextual menu to initiate viewing the website associated with the web address," unquote.

## Do you see that?

A. I do.
Q. So would you agree from this description that Arendi was not the first to come up with the idea of analyzing text to determine whether it recognizes some portion of the text as an e-mail address or web address?
A. I think, yes.
Q. And you also agree that Arendi was not the first to come up with the idea of using a contextual menu to initial an action that is related to the recognized data, correct?
A. Correct.
Q. You don't recall when you first learned about Apple
it analyzes the selected textual information and configures any input device," unquote.

> Do you see that, sir?
A. I do.
Q. Do you regard that as an accurate statement that ADD is a part of the operating system and analyzes the selected textual information and configures any input device?
A. I think that's true.
Q. You then write, quote, "As ADD is a part of the operating system, which is separate from the document editing program, ADD does not meet the limitations of the claims," unquote.

Arendi wrote that, correct?
A. Arendi wrote that on the application.
Q. And this is the AESD that Arendi directed the ' 843 patent examiner to look at because it was of particular interest, correct?
A. Correct.

MR. UNIKEL: Your Honor, I think this will be a module where I probably have to close the courtroom in order to ask the questions of the witness.

THE COURT: Okay. I'll ask Ms. Garfinkel to please close the courtroom.* * *

Data Detectors technology, correct?
A. Correct.
Q. Specifically, you don't recall whether were you aware of Apple Data Detectors technology before you filed your first patent application in 1998; is that right?
A. That's correct.
Q. If we could look at the last paragraph on this page, it goes into the next page. You see you say, quote, "Apple Data Detectors does not meet several elements and limitations of the claims."

Do you see that?
A. Yes.
Q. And Arendi then writes, "Among other things, ADD does not disclose analyzing selected textual information by the document editing program, as required by the claims."

MR. DIEHL: Objection, Your Honor. This goes to a different patent. This goes to a different patent; it's not about the ' 843 patent. This is not relevant.
the court: Okay. We will have you address that on cross-examination.

## BY MR. UNIKEL:

Q. Sir, you then continue, quote, "Also, ADD does not disclose providing an input device configured by the document editing program as required by the claims.

Instead, ADD itself is a part of the operating system, and
(The following discussion is held under seal:

THE COURT: Courtroom has been sealed. Please proceed

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MR. UNIKEL: Thank you, Your Honor.
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## BY MR. UNIKEL:

Q. Sir, if I could ask you to look in your binder at what has been marked as DTX-633.

DTX-633 is identical to what has already been identified as Plaintiff's Exhibit 66, as the Apple agreement. I spoke with counsel about that before. I'm just going to refer to it by the plaintiff's number, if that's all right.

Sir, am I correct that Plaintiff's Exhibit 66 is a copy of the agreement that was signed between Arendi and Apple?
A. Yes.

MR. UNIKEL: If we could please put up a copy
of this exhibit.
BY MR. UNIKEL:


## $\square \square$









Document, this actually related to a different patent application; is that fair?
A. That is correct.
Q. Okay. Now, if we go then -- Google's counsel then brought you from this page to the Accelerated Examination Support Document.

Do you recall that?
A. I do.
Q. Okay. And that was -- I'm missing the exhibit number to that one. I believe that was DTX-925.

MR. DIEHL: Mr. Boles, can you pull up 925.

## BY MR. DIEHL:

Q. Okay. Right. And this is the Accelerated

Examination Support Document that was referenced. And now, we've just left the '843 application; is that fair?
A. Repeat, please.
Q. We've just left the ' 843 patent application. This is a document that related to something else, right?
A. That is correct.
Q. And in the ' 843 patent application, which is the patent at issue in this case, you had just referenced this document as something that listed some prior art that could be of particular interest?
A. That's exactly what it said, yes.
Q. And do you recall what patent this Accelerated

## Hedloy - Redirect

Q. Not the '843?
A. Not the '843, yes.
Q. Okay. And then Google's counsel focused in
particular on the third sentence here that begins, "For example, Dey does not disclose analyzing selected textual information by the document editing program, as required by the claims."

## Do you see that?

A. I do.
Q. Do you recall Google asking about that?
A. Yes.
Q. This discussion of what CyberDesk did or didn't do was not related to the claims of the ' 843 patent?
A. That's correct. The claims for the ' 843 patent has nothing -- it says nothing about when the analyzing should happen. So it is not relevant.
Q. This isn't irrelevant to the ' 843 patent, because this is -- actually isn't a requirement of the ' 843 patent claims?
A. Exactly.
Q. Okay. And when Arendi -- if we go back to the actual patent application for the $\quad 843$ patent -- when it referenced this AESD document, all it said was, "the prior art cited in this AESD would be of particular interest"; is that right fair?

Examination Support Document related to?
A. I actually don't, no.
Q. It was a different one from the ' 843 patent?
A. It was.
Q. Okay. And if we go to Page 114 of this document, we see here a reference to CyberDesk.

So what Arendi did here, was it pointed out CyberDesk to the Patent Office for the ' 843 application; is that fair?
A. Yes.
Q. Okay. Now, the discussion here which Google walked through, in particular --

MR. DIEHL: And, Mr. Boles, if we can get the next page on the screen as well.

BY MR. DIEHL :
Q. -- this relates to the patent application for a different patent; is that right?
A. That is correct.
Q. Okay. And if we look at Page 115 here, it says, at the top -- I believe Google's counsel went through this in detail -- "The Dey reference" -- meaning CyberDesk, as the author is Dey -- "does not meet several elements and limitations of the claim."

What claims was it talking about here?
A. The claims of the other patent.

## Hedloy - Redirect

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A. That's what it said.
Q. Okay. And if you go to Page 10 of this AESD document that Google walked through with you, this lists a bunch of interesting prior art; is that fair?
A. Yes. It does, yes, correct.
Q. And we've got Apple Data Detectors on here, we've got CyberDesk on here, we've got Microsoft Office 97. Those are all things we heard Google mention in the opening statement.

Do you recall that?
A. I do.
Q. Now, after Arendi identified these specific things to the Patent Office, the Patent Office had a decision to make; is that right?
A. Yes.
Q. And it had the ' 843 patent application before it?
A. Yes.
Q. And it knew about CyberDesk?
A. Yes.
Q. And it knew about Apple Data Detectors?
A. Yes.
Q. And then what did the Patent Office decide to do with
the application that you had submitted?
A. It allowed it. Which means it allowed it to become a patent.

Q. And we only see one reference to CyberDesk on this list; is that fair?
A. That is fair.
Q. But did Arendi provide additional references to

CyberDesk to the Patent Office as part of the application process?
A. Yes. Everything we had. So I think there were six or seven total, maybe more.
Q. And if the jury were to look in their jury binder and look at the -- look through the patent's first ten pages, they would probably see those seven or eight references to the CyberDesk right there in the patent itself?

MR. UNIKEL: Objection. Leading.
THE COURT: Can you rephrase?
MR. DIEHL: Yes.

## BY MR. DIEHL:

Q. Would those six or seven references to CyberDesk, that you mentioned, be found in the first ten pages of the patent?
A. Yes.
Q. And the Patent Office, the Patent Examiner is able to review those references themselves; is that your
understanding of how it works?
A. I think that's their job.
Q. They don't have to rely on Arendi to provide
information about their references?
A. No. Correct.
Q. And so Google asked you question about whether you personally had inspected all of the references about CyberDesk.

Do you recall those questions?
A. I do.
Q. Whether or not you personally inspected all of them,

Arendi had provided six or seven references related to CyberDesk to the Patent Office?
A. Yes.
Q. Now, there were a number of questions about OneButton that Google asked.

Do you recall that?
A. I do.
Q. Mr. Hedloy, were you in the courtroom on Friday when we all watched the video about patents from the Federal Judicial Center?
A. I do.
Q. Do you recall that it talked about a question at the end of the patent -- about a section at the end of the patent that defines the scope of the patent?

MR. UNIKEL: Objection, Your Honor. Foundation to the extent this witness is going to testify about what the law of patents is.

Hedloy - Redirect
Google infringed the patent?
A. I don't think so.

MR. UNIKEL: Objection. Calls for a legal conclusion.

THE COURT: That objection is sustained.
Ladies and gentlemen of the jury, please ignore
the question.
BY MR. DIEHL :
Q. Okay. I want to pull back up one of the exhibits that Google's counsel used. It was DTX-71.

Mr. Hedloy, do you recall Google's counsel asking you about this document?
A. I do.
Q. Can you describe again what this document was at a high level?
A. It was a memorandum to a guy called Dag Tellefsen, who was a -- worked for or was the head of the Vision Capital. And we were presenting our project or company to him.
Q. Is this document the patent?
A. No.
Q. This document is describing OneButton for Word?
A. Yes.
Q. Now, as between a memo that you wrote to Dag

Tellefsen at Vision Capital about OneButton in Word and

THE COURT: Overruled. But let's just make

MR. DIEHL: Yes.
THE COURT: -- questions appropriately of this
witness. Yes. Absolutely, Your Honor.
BY MR. DIEHL:
Q. Should I re-ask the question?
A. Yes, please.
Q. Okay. Mr. Hedloy, do you recall that the video we watched on Friday talked about a section at the end of the patent called "The Claims"?
A. I do.
Q. In the ' 843 patent, is there a section at the end called "The Claims"?
A. Yes.
Q. And do those claims mention OneButton?
A. No.
Q. Are the claims limited to OneButton in any way?
A. No. OneButton was -- is one of things you can do with technology, but you can do many other things also.
Q. And your claims in this case, do you claim that Google copied OneButton?
A. No.
Q. Now, Google's questions about what OneButton did or didn't do, are those relevant to determining whether
the＇ 843 patent，which one is relevant to whether Google infringes the 843 patent？
A．The patent．
Q．Now，using this document，Google＇s counsel asked you about a statement that OneButton was easy and obvious．

Do you recall that question？
A．Yes．
Q．Now，who would OneButton have been easy and obvious to？

A．It＇s easy and obvious for a user to use．
Q．And that was the－－was that part of the purpose of OneButton？

A．Of course．
Q．That the user could click on OneButton and it would
be easy for them？
A．Yes．
Q．Did you mean by this statement that the invention would be easy or obvious？
A．No．
Q．Now，do you recall questions about whether OneButton， the program that Arendi created，recognized phone numbers or things other than names and addresses？

A．I do．
Q．And do you recall your answer to that question as to whether OneButton recognized phone numbers？

A．I remember I said no，it did not．
Q．Now，the patent is not limited to recognizing names or addresses？
A．That＇s correct．
MR．DIEHL：Mr．Boles，if we can put up PX－1， and look at Column 4.

Sorry．The Column 4 comes a little bit later in the document．There it is．Yep．
BY MR．DIEHL ：
Q．And then the first full paragraph here in Column 4， if we highlight down here，there＇s a sentence in here that says，＂The program may be extended to also store and retrieve other information，such as telephone numbers，fax numbers，e－mail addresses，et cetera．＂

MR．DIEHL：Would you mind highlighting that， Mr．Boles．It＇s the beginning of that paragraph．There it is．Thank you．
BY MR．DIEHL：
Q．Mr．Hedloy，do you recall this being part of the patent？
A．Yes，I do．
Q．So although OneButton may not have recognized these other items，the patent talks about them；is that fair？
A．That＇s fair．
Q．Now，while we＇re here on the patent，you also looked

A．No．
Q．Now，Mr．Hedloy，when did Arendi file the application for the 843 patent？
A． 2008 ．
Q．And what invention did that patent application relate to？
A．Invention from 1997，so I believe－－yeah．
Q．And what happened as a result of that application that Arendi put in to the Patent Office in 2008？

A．It became a patent．
Q．And that was despite the Patent Office＇s awareness of CyberDesk and Apple Data Detectors？

A．Yes．
Q．And when did Arendi file its complaint against Google？

A． 2013 ．
Q．Thank you，Mr．Hedloy．
MR．DIEHL：I have no further questions，Your Honor，subject to possible re－redirect．
the court：Thank you very much．
MR．DIEHL：Thank you．
MR．UNIKEL：May I ask a few more questions，

## Your Honor？

THE COURT：Let me see counsel at sidebar．


MR. UNIKEL: I think it would be better if we could do them to tomorrow so that we can make sure that there's no waiting on the deposition clips coming into -as a video. If we could deal with them in the morning, they will be done.

THE COURT: Okay. Great. In light of that -please have a seat -- we'll all get here bright and early tomorrow so we can get started on that sometime between 8:00 and 8:30, so we can have everybody here so we can get moving.

I wish I could promise you an exact time, but we've got issues with lots of folks coming in, in line. And I've also have a family member at home who's not well. So I'm going to -- I endeavor to take the bench no later than 8:30, but if we're all here ahead of time, I might try to get it done.

Anything else we need to address right now?
MR. MOORE: Your Honor, we did have one question about Your Honor's preferences for Rule 50 motions for the logistics in that regard.

THE COURT: Sure. So you're welcome to file a paper if you want to, but it's certainly not required. I'll ask that after one side finishes presenting its case, if you'd like to make it orally on the next break following when the -- when that side finishes closing
away.

Anybody have any further questions about that?
MS. SRINIVASAN: No, Your Honor.
THE COURT: Okay.
MR. UNIKEL: No, Your Honor.
THE COURT: All right. So we will look forward
to --
MS. SRINIVASAN: I had one other question, Your
Honor.
THE COURT: Yes, of course.
MS. SRINIVASAN: As to time used by each party,
I know some of that was attributed this morning in the
motions, and obviously the parties are tracking their testimonial time.

How do you prefer handling that? Do you want us to --

THE COURT: Do you want to meet and confer with each other, and to the extent there are disputes, we'll get them resolved.

MS. SRINIVASAN: Sure.
THE COURT: I know I stated on the record
explicitly certain time this morning. Hopefully we can figure out the rest of it. I don't think the sidebars

## CERTIFICATE OF COURT REPORTER

I hereby certify that the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.
/s/Bonnie R. Archer Bonnie R. Archer Official Court Reporter U.S. District Court
(The proceedings concluded at 4:34 p.m.)

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|  | 222/19 223/4 248/10 252/17 | 123/8 125/9 125/13 138/23 | 244/19 248/11 249/16 250/23 |
|  | wide [1] 114/15 | 168/22 170/2 170/12 170/16 | 255/24 257/11 257/17 261/8 |
| 144/13 155/5 156/10 161/5 | wife [12] 62/17 64/11 109/17 | 170/22 170/25 171/19 173/9 | 261/14 261/18 262/15 268/12 |
| 162/9 166/7 176/21 179/6 | 122/25 128/17 139/24 141/7 | 187/13 187/16 187/22 188/1 | 268/16 269/1 |
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| whether [46] 6/6 7/8 12/11 | will [101] | 192/6 224/14 229/21 260/22 | write [10] 88/16 91/6 92/1 |
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| 65/21 73/20 73/20 92/16 | 57/25 59/1 61/13 65/23 66/20 | wording [1] 248/14 | writes [3] 211/21 224/11 |
| 126/6 152/8 152/25 163/14 | 67/22 69/10 69/12 70/10 | words [8] 5/23 62/14 90/19 | 226/13 |
| 168/6 178/7 185/25 187/2 | 71/15 72/7 72/8 72/24 72/24 | 95/22 173/25 177/3 184/12 | writing [3] 123/4 129/21 |
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| 217/21 224/16 225/17 226/3 | 81/25 82/4 82/13 83/17 85/10 | 46/22 52/23 57/13 57/24 62/9 | written [8] 9/24 12/12 17/8 |
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| 261/1 261/20 261/25 263/2 | 88/24 89/4 91/6 92/2 95/5 | 102/11 102/12 113/10 116/1 | wrong [4] 25/10 43/20 147/2 |
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| 206/1 207/3 218/14 220/21 | willful [5] 27/10 32/14 73/11 $73 / 2073 / 24$ | works [3] 78/17 96/9 257/23 |  |
| 222/2 223/23 227/11 229/21 | 73/20 73/24 | works [3] 78/17 96/9 257/23 | 116/4 117/18 120/3 120/7 |
| 233/10 234/5 239/11 240/8 | willfully [2] 28/16 31/19 | world [9] 59/21 87/8 97/20 | 120/8 122/3 |
| 243/6 243/14 248/13 249/16 | willfulness [26] 20/6 20/9 | 132/24 133/4 135/21 137/11 | 138/1 140/5 140/10 140/18 |



## EXHIBIT B



PROCEED I N G S
(Proceedings commenced in the courtroom beginning at 9:00 a.m.)

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

All right. So we're here for the third day of trial. At the outset, $I$ just wanted to put on the record our current time calculations. For April 24, we charged two hours 22 minutes to Arendi and two hours 28 minutes to Google. For April 25, yesterday, we charged five hours and five minutes to Arendi and two minutes to Google.

I also wanted to hear from everyone how we are proceeding with the source code portion of the testimony today. And we can have a seat for a second. And just as a preview, the reason why I'm asking is $I$ have been giving some thought to making sure that we're making a record that will comply with the Third Circuit's Avandia opinion on the common law right of access and the First Amendment right of access.

And so my understanding of the law as set forth in that opinion is that any side seeking to seal the courtroom or keep the proceedings under seal needs to demonstrate to the Court and the Court needs to make an
explicit finding for each portion that's under seal, that any proposed redaction or closure would, quote, work a clearly defined and serious injury to the parties seeking closure. And that's the common law right of access.

With respect to the First Amendment right of access that applies to jury trials, there is a presumption that the proceedings will be open to the public. The parties seeking closure may rebut the presumption of openness only if able to demonstrate, quote, an overriding interest in excluding the public based on findings that the closure is essential to preserve higher values and is narrowly tailored to serve an interest. And the Court needs to make sure that the proceeding is open unless the denial of access serves an important Government interest and that there is no less restrictive way to serve that Government interest.

So based on what I've seen so far here, we've had no one from the public that is not associated with this case in some way that's been excluded from the courtroom. So I don't think we have any issue right now, and we've also had no one that's made an objection to the sealing of the courtroom. So I don't think we have an issue right now. But I'll put on the record that when we've sealed the courtroom, my understanding is that there were only a couple of people excluded that were related to
in-house people who weren't permitted to see confidential information under the terms of the Court's protective order.

So I don't think we have had an issue about the live proceedings. But we do have a transcript, and we need to figure out what portions of it should be redacted.

So that's what I'm thinking about right now. So let's hear how we intend to proceed today. And we can talk about what the least restrictive means is to doing whatever we need to do to preserve the confidentiality of settlement agreements and source code material.

MS. SRINIVASAN: Your Honor --
THE COURT: Sure. You can go ahead and approach.

MS. SRINIVASAN: So last night we were able to identify files that we wanted printed, and Google printed and delivered them. So we are -- today, we are going to be proceeding without the laptop, with the printed material. Because it is source code and it's one printed copy, we're going to have them moved into evidence. There's not going to be an objection to that by the witness. And then we will -- once that he have -- they've been moved into evidence, we will put them on the Elmo unless there is an objection to that. But I leave it to Google. There may be at that point a request to seal if
it's going to be up on the Elmo.

THE COURT: Is there -- I'm wondering and I'm open to suggestions. Under the law as set forth by the Third Circuit, is there a less restrictive means to preserve the confidentiality besides putting it on the Elmo and sealing the courtroom? For example, could we have handouts that could be shown and then collected, or do we need to put it on the screen?

MS. SRINIVASAN: Well, then that's a question probably for Google. Normally, we're not allowed to make copies of source code pursuant to the protective order, so we certainly did not do that. We got one set and that's the set we're working with. So I defer whether making copies is a possibility. He's on the stand, so one possibility would be to show the jury from up there and not publish it on the Elmo. But, you know, again, I think Google can better speak to whether having it on the Elmo presents a concern for them. But we have one copy set, so we're just working with that because that's -- and that would be normally what we would get for source code productions, though.

THE COURT: And is it important to the presentation of your case that the jury walk through the copy?

MS. SRINIVASAN: I think it would be important
for them to see it. And it doesn't mean that we're going to go through it line by line page by page such that it necessarily has to be on the Elmo. But $I$ do think it's important for them to see the type of code that Dr. Smedley was reviewing.

Could he do that from the stand holding it up for them? We could try to do that. If I can talk to counsel about whether there's a way to direct the examination that way. But to me, that would be the alternative. And, again --

THE COURT: Do you expect his testimony to include certain variable or subroutine names that Google might consider to be confidential?

MS. SRINIVASAN: That is not -- I think it's one layer above that in terms of specificity. So I expect that he's going to talk about some things that he has observed in the printouts, but $I$ don't think he is going to be reading file names into the record, although my colleague can correct me if $I$ am wrong about that.

MR. STRAUS: The intention was to ask about some method and file names, but not to get into the levels of detail beyond that.

THE COURT: Okay. Thank you very much.
Let me hear from Google on this issue.

MR. KAMBER: Your Honor, may I have one moment
to confer with my client? I have an idea.
THE COURT: Of course. Yes.
MR. KAMBER: Your Honor, I think what we can do is have it shown on the Elmo, that way the witness and the questioning attorney can see it at the same time. I don't think that should be a problem so long as we're not showing all of the code. Some of these are longer files, but if we're just showing a few pages and talking about it at that high level that Mr . Straus just represented to the Court, then we would have no objection to that procedure.

THE COURT: Okay. And what you're thinking that it be shown on the Elmo while the courtroom was sealed, or are you okay with not sealing the courtroom at that point?

MR. KAMBER: Yeah. If it's that limited, we don't need to seal the courtroom.

THE COURT: Okay. In light of that, please have a seat.

MR. KAMBER: Thank you.
THE COURT: Is there any other testimony today, I guess, that we would -- besides the source code?

MS. SRINIVASAN: Your Honor, we do expect the testimony of our damages expert after Dr. Smedley, and then we have the issue, again, with respect to the license agreements.

The primary objection has been from third parties who are counter-parties to those agreements, and that's the reason we haven't been -- well, at least in the opening, we didn't publish the number to the jury for Mr. Hedloy's testimony. We did seal the courtroom so he could talk about that in more depth. So that's one issue for Mr. Weinstein's testimony.

The other is he would be talking about the user installations and Google internal information that he relied on for his calculations. I don't know if there's going to be a request to seal on that basis still. There was in the opening, or at least we circumvented that by having the slides for them. But those are the two primary things that $I$ can think of, and that would be in our damages testimony today.

THE COURT: Okay. Thank you very much.
MR. UNIKEL: Your Honor, if I may.
THE COURT: Of course.

MR. UNIKEL: Aside from the third party agreements, it's hard to foresee exactly, but I believe some very confidential Google financial information will be disclosed as part of Mr . Weinstein's direct and cross, as well as some very confidential information about user download information, metrics, things of that sort. So that would be the only other thing I could envision that
we will need to address the sealing issue.
THE COURT: Okay. Why don't you have a seat, Mr. Unikel.

Here's how I think -- oh, Mr. Kamber, did you have something else?

MR. KAMBER: Just one thing, Your Honor. I don't know if counsel -- it occurs to me, I don't know if counsel intends to move all of the source code into evidence. That is we have, I think, five source code printouts. Some of them are longer. That's where things get a little more complicated.

THE COURT: Right. So why don't you have a seat and let me tell you what I'm thinking about doing in terms of how we can proceed.

So we have transcripts from the first two days of trial already. And so what I would ask is for the parties to go back to those transcripts and find out what their proposed redactions are and make a joint set of proposed redactions.

And then what the Court needs to do is, pursuant to the law of the Third Circuit, the Court needs to make a specific finding about why any proposed redacted material being disclosed to the public would work a clearly defined and serious injury to the party seeking closure.

So the Court is going to need information from whoever wants that redaction such that the Court can make that finding on the record. And so I'll ask you with respect to the first two days of trial, if you can get me a proposed redacted version by tomorrow before we begin trial. And then with respect to today, we'll give it, you know, 24 hours. So we'll work on that one the next day.

And if there are third parties that need to be heard, you can put that in the letter and we can give some extra time. I want to be in a position just so we can unseal the Court proceedings.

And it sounds like today that how we are going to proceed really is the least restrictive way of preserving that confidential information. And so I appreciate counsel's willingness to be flexible about that.

With respect to the exhibits, $I$ don't think we need to deal with those right away today, but if we want to continue to maintain exhibits under seal in the Court record, at some point we need to make a finding on the record about why those exhibits should be sealed. I don't think it's going to be challenging to make a finding about why Google's source code should be sealed, but if there are third party license agreements, it may get to the point where I need a declaration from the third parties
who want to maintain those under seal. And I understand that those were produced pursuant to the Court's protective order, but now that they've been put into evidence at a civil trial, a different standard applies.

Counsel?

MS. SRINIVASAN: Your Honor. I just want to make sure we're on the same page, because our intention had been to move the five exhibits that the witness -- or the four I think we're going to use -- into evidence, and then -- so I understood there wasn't an objection to that, but we will have to figure out the protocol for what is going to go back or the manner in which -- I just want to be clear because $I$ don't want an objection --

THE COURT: That's right. And I understand. So I think the understanding would be you would move them into evidence and then someone from Google would request that they be placed under seal at this time, and the Court would grant that conditionally on a later finding that I've described.

MR. KAMBER: That works with us, Your Honor.

THE COURT: Okay. Fantastic.
And I will check with Ms. Garfinkel to see if all of the jurors are here. Okay. We are going to take a brief recess to make sure we've got everybody.
(Whereupon, a recess was taken.)

THE COURT: Please be seated. It's my understanding we have all jurors here. Are we ready to get started?

MS. SRINIVASAN: We are, Your Honor.
MR. KAMBER: Yes, Your Honor.
THE COURT: Ms. Garfinkel, please bring the jury in.

THE CLERK: Yes, Your Honor.
Your Honor, the jury. (The jury enters the courtroom at 9:24 a.m.)

THE COURT: Please be seated. Good morning, ladies and gentlemen of the jury.

Counsel, shall we continue?
MR. STRAUS: Yes, Your Honor.
THE COURT: Dr. Smedley.
Dr. Smedley, I'll remind you that you are still under oath.

THE WITNESS: Thank you.

## BY MR. STRAUS:

Q. Welcome back, Dr. Smedley. Do you remember yesterday during your testimony when we were looking at the source code computer?
A. Yes, I do.
Q. So to make things easier for today, Google has printed last night certain files from that computer rather
than use the actual source code computer during your continued testimony.

Did you have an opportunity to review those files?
A. Yes, I did. Yeah.

MR. STRAUS: Your Honor, may $I$ please approach the witness?

THE COURT: Yes.

MR. STRAUS: Thank you.

## BY MR. STRAUS:

Q. And, Dr. Smedley, because this is Google's confidential code, we only have one printout, so I'll ask you to review those documents there, and then after we've admitted them, we will put them up on the overhead for others to view.
A. Sure.
Q. Are these printed versions of some of the files that you reviewed on Google's source code computer?
A. Yes, they are.
Q. And where did you do that review?
A. It was in Wallingford, Connecticut, the location selected by Google's counsel, and my review there was observed, I guess, by Google's counsel.
Q. And during that review, were you able to print any materials from the source code computer?
A. No, I was not.
Q. If you could please start, we'll take the exhibits on your desk in order.

What are each of these files?
A. So the first one Exhibit DTX-1141.0001. And this is the file TextView.java from the Android 8 framework.
Q. And if $I$ could stop you, just for the record, is that DTX-1141.001 through 0235?
A. Yes, that's correct.
Q. And what is the second exhibit that you have, DTX-1141.0258 through 0271?
A. So that is the file TextClassifierImpl.java from the Android 8 framework.
Q. What is the third file that you have, DTX-1141.0236 through 253?
A. This is also the file TextClassifierImpl.java, but this is from the Android 9 framework.
Q. And then finally, if you could please turn to Exhibit DTX-1141.0254 through 57 --

What is that file?
A. So this is the file SmartSelectionClient.java, and this is from the Chromium_r65 source code.
Q. And yesterday, you testified that you also looked at some nonconfidential source code as part of your review. How did these four files, these four exhibits relate to the material functionality that you observed in that
nonconfidential code?
A. None of these had material differences from the public code that I reviewed.

MR. STRAUS: Your Honor, at this time I'd move to admit into evidence DTX-1141.0001 through 235, DTX-1141.025A through 271, DTX-1141.0236 through 253, and DTX-1,141.0254 through 57.

MR. KAMBER: No objections, Your Honor, pending a forthcoming sealing motion with respect to these exhibits.

THE COURT: These documents will be admitted and they are conditionally placed under seal.

May I please see counsel very briefly at sidebar.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: So I wanted to see if counsel had any objection with the Court saying to the jury along the lines of these are the only portions of Exhibit 1141 that have been admitted into evidence. That way, the jury won't wonder what happened to the laptop that was brought out in front of them yesterday?

MR. STRAUS: We're fine with that. I think the one request $I$ would make the Court make clear that's for
confidentiality reasons, not that there's something wrong with the laptop.

MS. SRINIVASAN: We wouldn't want them to think we offer the testimony. We understand the reason to sending it back. It was on their list.

THE COURT: Understood. I was trying to make things easier, not make it more complicated. What if I said something like because of the Court's -- the Court has determined that only these portions of Exhibit 1141 should be admitted into evidence, and the parties have agreed.

MS. SRINIVASAN: Your Honor, could we say something along the lines of due to confidentiality limitations, the Court and the parties have agreed that these portions will be admitted and sent back to the jury rather than the entire computer?

I don't want them to think there was an evidentiary objection to the computer, and that's the reason it's not going back.

THE COURT: Okay.
MR. KAMBER: We don't have an objection to that, Your Honor.

THE COURT: Okay. All right. Very good. Thank you.
(Whereupon, the discussion at sidebar concludes.)

THE COURT: Ladies and gentlemen of the jury, due to confidentiality concerns, the Court has determined that only those portions of Exhibit 1141 that been printed out and admitted into evidence should be the portions of Exhibit 1141 that should be admitted into evidence.

MR. STRAUS: Your Honor, may I please approach the witness to retrieve the exhibits?

THE COURT: Yes.
MR. STRAUS: Thank you.
Thank you, Dr. Smedley.
THE WITNESS: You're welcome.

## BY MR. STRAUS:

Q. So I'm going to start with the first exhibit that we admitted, DTX-1141.001 and following. This was the TextView.java file. I'd like us to look together at Line 9649.

Dr. Smedley, are you able to see that line at the top? Would you like me to make it bigger that?
A. No, that's fine. I can see that.
Q. What code do you see starting at Line 9649 of TextView.java?
A. This is onTouchEvent. That's a method that gets called when the user taps the screen.
Q. And is this a method that you discussed during your
testimony yesterday?
A. Yes, it is.
Q. So what Google apps use this method?
A. All of them except for Chrome.
Q. And could you remind us what this method is used for?
A. So this was mentioned just a second ago. This is the method that gets called when you -- the user taps the screen, and that's what leads in to everything that we see happening next.
Q. Could you explain what you mean by "everything that we see happening next"?
A. Sure, yes.

So this is the method that gets called in response to the user tapping on the screen, and it will, after that, you see the text gets selected, gets classified, and a menu popped up with the option to do the appropriate thing with the type of information that they've tapped.
Q. And how does this onTouchEvent method that's on the screen now compare to the onTouchEvent method that you reviewed in the nonconfidential version of the code?
A. So there were no material differences.
Q. Let's turn now to our second exhibit, which was DTX-1141.0258 and following.

Dr. Smedley, this was that second file TextClassifierImpl.java; is that right?
A. Yes, that's right.
Q. Here, I'd like us to look together at Line 330 of the code.

Are you able to see that up there, 330?
A. Yes.
Q. What code begins at Line 330?
A. So this is the method called "create classification results." You see where it says, "private text classification," and then the name of this method comes after that, "create classification result"?
Q. And what Google apps utilize this method, create classification result?
A. I can't remember if it's all of them or all of them except Chrome. Sorry, sometimes it's -- but.
Q. In any case, what is this method, create classification result, used for?
A. So this is -- if you look a little further down, you see the -- on Line 343, that's where the intent is getting created. So this is preparing the input device, so the thing that comes up after you do the long press and has the button that you -- or the menu item that you tap on, and you can tell it. Because this is where it's creating the intent that will get sent to the second computer program, and that's with the input device.
Q. And the intent, was that the message you were talking
about yesterday that gets sent to the second computer program?
A. Yes. That's exactly what it is.
Q. And have we seen this method before, this create classification result method?
A. Yes, we have. We were looking at it yesterday.
Q. And how does this create classification result method in Google's confidential source code compare to the nonconfidential version that we looked at together?
A. There were no material differences.
Q. So let's turn to the third source code file, which is DTX-1141.0236 and following.

And, Dr. Smedley, this was the copy of the TextClassifierImpl.java that you identified as belonging to Version 9 of the Android framework; is that right?
A. Yes, that's correct.
Q. So here, I would like us to turn to Line 399.

What are we seeing at Line 399?
A. At Line 399, we're seeing the "create classification result method." This is from Android 9, so they may have made some changes, improvements to this method, but its purpose is the same.
Q. And did we look at a nonconfidential version of this method yesterday?
A. Yes. Yes, we did.
Q. And how does this confidential version of create classification result compare to the nonconfidential code you walked us through?
A. So there's a difference in that this includes flight numbers.
Q. The flight numbers, is that a difference of Android version number?
A. Yeah. Yes. If you recall, Android Version 8, the STS didn't support flight numbers, but Android Version 9, it does. I think some of that code is in here.
Q. And comparing, though, this code to the nonconfidential code that we looked at, are there any material differences that you identified?
A. I'm sorry. I didn't listen carefully to your previous question. No, there were no material differences.
Q. Let's turn to our final bit of source code. And this is the exhibit that begins DTX-1141.0254 which you identified as the smart selection client.java file for Chrome.
A. Yes.
Q. Could you remember what this file is used for in Chrome?
A. Yes, but I don't really have to because this is the one where the programmer put in the comments describing
what it's used for. So there on Line 23 , it says it's a class that controls Smart Text Selection. We looked at those comments yesterday, if you recall.
Q. And having reviewed both this confidential code and the nonconfidential code that we discussed yesterday, have you identified any material differences between them?
A. No. No, there were no material differences.
Q. Is this all of the confidential code that you reviewed?
A. Not by any means, no.
Q. And how did all of the confidential code that you reviewed on the source code computer affect your opinions in this case?
A. Well, I mean, it confirmed them in that there were no material differences.

MR. STRAUS: I pass the witness.
THE COURT: Thank you very much.
MR. KAMBER: Thank you, Your Honor.
Cross-examination.

CROSS EXAMINATION

## BY MR. KAMBER:

Q. Good morning, Dr. Smedley.
A. Good morning.
Q. My name is Matthias Kamber. I don't think we've had the pleasure of meeting before.
A. Not that I recall, no.
Q. Nice to meet you.
A. You too.
Q. So Claim 23 of the ' 843 patent is what your infringement opinion relates to, correct?
A. Twenty-three and 30, yes.
Q. Twenty-three and 30, but 23 is the independent claim that you analyzed, right?
A. Yes.
Q. And that relates to a first computer program running on a computer, correct?
A. Yes.

MR. KAMBER: So let's just show the claim
language, if we could, please, Mr. Spence.

## BY MR. KAMBER:

Q. We have the claim language here. It's a little squished on the screen, you might say.

It requires the first computer program to do three specific things, correct?
A. Yes, that's right.
Q. It must display the document electronically. That's that first claim element that we see, correct?
A. Yes.
Q. Let me just go back. The first computer program is introduced in the preamble of the claim, correct?

It's in the fourth line, "A document using a first computer program"?
A. Yes. Yep.
Q. All right. And that first computer program has to display the document electronically?
A. Yes.
Q. The computer program must also configure the input device, correct?
A. Yes, that's right.
Q. Providing an input device configured by the first computer program is where that is, correct?
A. Yes.
Q. I believe that's the fourth limitation of the claim there, Dr. Smedley.
A. Yes.
Q. And third, the first computer program must receive the user command causing a search, right? In consequence of receipt -- well, let me let you answer that question before I ask my next one.
A. So I think I might have worded it slightly differently myself, but that reflects what's in that claim, yes.
Q. Well, let me just read the claim language.
A. Sure.
Q. The first -- the claim requires, in consequence of
receipt by the first computer program the user command from the input device causing a search, correct?
A. Yes.
Q. So in your opinion, the 12 Google apps that you accused of infringement are the first computer program, right?
A. Yes, that's right.
Q. Those are -- I think you mentioned them -- Google Docs, Calendar, Contacts -- you went through the list yesterday, right?
A. Yes, yes.
Q. And for any one of those 12 applications, 12 Google apps to infringe, they have to meet all of the limitations of Claim 23 correct?
A. Yes. That's correct.
Q. If the jury were to find that even a single one of these limitations was missing, then there could be no infringement, right?
A. It has to practice all of the limitations in order to infringe.
Q. That's the legal test that you applied?
A. Exactly.
Q. So Claim 23 also requires two kinds of information to be used in some way, right?
A. What do you mean by "two kinds of information"?
Q. Claim 23 refers to first information and second information, correct?
A. Yes.
Q. So going back to the claim language, using a first information alone is not enough to infringe?
A. Right. There are several places where second information comes into play. That has to be there.
Q. Right. So then, in one of the places is that Romanette 2 "performing an action using at least part of the second information," right?
A. Yes. That's one of the places where the second information is used, yes.
Q. Right. Claim 23 requires that the first computer program also has to perform an action using at least part of the second information, right? Actually, let me withdraw that question and ask a cleaner one.

In your infringement analysis, you looked for whether or not there were actions performed within these -- part of the second information, right?
A. Well, I looked for this being practiced, so that an action was performed using at least part of the second information.
Q. Right.

MR. KAMBER: Mr. Spence, if we could put up PDX-3-83 for just a moment please.

BY MR. KAMBER:
Q. This was one of the slides that you walked the jury through yesterday, right?
A. Yes.
Q. You were talking about this input device step that we just saw on the screen beforehand, right?
A. Yes.
Q. And you noted that it had this requirement of performing an action using at least part of the second information, right?
A. So this limitation includes performing an action using at least part of the second information, yes.

MR. STRAUS: Your Honor, I don't mean to interrupt, but $I$ just wanted to apprise the Court that I believe the courtroom is still sealed.

THE COURT: I don't think we did seal the courtroom.

MR. STRAUS: My apologies.
MR. KAMBER: No problem.

## BY MR. KAMBER:

Q. So you also walked through at least one slide related to where you were trying to identify where second information was being used to perform an action for purposes of your infringement analysis, right?
A. Yes.
Q. That was PDX-3-102, right?
A. I am afraid I don't have the exhibit numbers memorized.
Q. We have it up on the screen for you, Dr. Smedley.
A. So what was the question again? Sorry.
Q. So the question is, the reason you walked through this slide was to try to identify an action that was being performed with at least part of the second information.
A. I think that's at least part of why I was using this slide, yes.
Q. That's the rightmost column of this demonstrative slide where you have to put what the action is, right?
A. Yes. The action is provided in the rightmost column.
Q. So -- and a user, if their phone -- if you could just perform the step of placing a telephone call to a telephone number, that would not meet the claim element "performing an action using at least part of the second information standing alone," correct?
A. I don't -- I'm not clear on what you're asking.
Q. So performing only the step of placing a telephone call to the telephone number that's selected would not meet the claim element "performing an action using at least part of the second information," correct?
A. So placing a telephone call without using any of the second information would not practice that element of
performing the action using at least some of the second information.
Q. So as an example -- we saw a variety of your videos yesterday. If a user was navigating the web and they found a phone number and did a long press on it, the whole number would be selected, and then that menu bar for Smart Text Selection would come up if it was working correctly, right?
A. So you are navigating the web and what -- sorry. Because if you're looking at a document that's not editable -- I'm not sure of the context that you are describing. Sorry.
Q. Let me give you a different example. If you were -well, Smart Text Selection works on both editable and noneditable text, correct?
A. The Court has clarified a construction that the document has to be editable -- let me make sure I get it right -- while it's being analyzed.
Q. Right. My question is slightly different,

Dr. Smedley. Smart Text Selection works on both editable and noneditable text, correct?
A. You are asking me to recall something that -- so I think you're probably correct, but I would need to go and check and reconfirm.
Q. Let me ask you about an example that I think you did
show, which is a user is composing an e-mail. So they are editing that, right?
A. Yes.
Q. So they're composing an em mail and they say: Her number is, and then do ten digits for a phone number, right?

## A. Okay.

Q. And in that particular scenario, if they then long press on those ten digits, if Smart Text Selection is working correctly, it will expand the selection and present a menu bar, correct?
A. That's what $I$ observed in my testing, yes.
Q. Right. And at that point, you can select "call" on that number, among other options, right?
A. Yes.
Q. And it would go, maybe launch the dialer, $I$ think is the example that you gave yesterday?
A. Yes, I think so.
Q. And if that phone number wasn't in -- pardon me -wasn't in the Contacts, there would be no action performed with -- with that number. There would be no display of a name or a photo, like the sloth photo I think that you had, showed up on the screen yesterday, right?
A. So if that number isn't in the Contacts database, it won't find any second information.
Q. Right. It wouldn't perform an action with any second information in that instance, right?
A. No, but it doesn't matter.
Q. Well, it's part of the claim requirement that there be -- that it perform an action with at least part of the second information, right?
A. If the second information is found when it performed the action if any second information is found.

MR. KAMBER: If we could just have PDX-3-3 up on the screen. Actually, excuse me, PDX-3-83 up on the screen again.

## BY MR. KAMBER:

Q. One of the requirements is "performing an action using at least part of the second information, correct?
A. Yes.
Q. So let's turn to Smart Text Selection. Smart Text Selection is a tool, right?
A. It's reasonable to describe it that way, sure.
Q. It's a functionality?
A. It's more like a group of functionalities, I suppose, but don't mean to quibble about the words.
Q. Sure. So the functionality gives users a variety of different options, including cut, copy, sometimes share, among other things, right?
A. I haven't analyzed those particular functionalities
with Smart Text Selection, but $I$ have seen them there in my testing, yes.
Q. Okay.

MR. KAMBER: If we can display PDX-3-64 for just a moment.

## BY MR. KAMBER:

Q. This was one of your slides yesterday, right,

Dr. Smedley?
A. Yes. Yep.
Q. And you point out different examples here in -- of an e-mail address, physical address, street address, phone number, flight number here, right?
A. Yes.
Q. And for each of these different examples, the menu bar that's set up by the Smart Text Selection is -- has options like cut and copy, correct?
A. Yes. Probably all of them do, I think.
Q. So as part of your analysis for a Smart Text Selection, you downloaded and reviewed code for several versions of Android, right?
A. Yes, I did. Yep.
Q. And you downloaded that from the Internet?
A. Yep. That's where I got it.
Q. Publicly available?
A. It is publicly available, yes.
Q. And you downloaded specifically, I think, Versions 8 and 9 of the Android operating system, right?
A. Yes. There's multiple versions within each of those.

I downloaded a specific one.
Q. Okay. You also -- and actually, some of those -those are in evidence at this point, right?
A. I believe so, yes.
Q. PDX 125 and 123.

MR. KAMBER: Let's pull up 125.

## BY MR. KAMBER:

Q. That's the source code for Android/platform/framework 8.0.0_r1, right?
A. Yes.
Q. And the next one is $P X-0123$. And that's the framework code for Version 9 of the Android operating system, right?
A. Yes.
Q. In addition to the framework code, you downloaded some code for different applications, correct?
A. Yes. That's right.
Q. Some of the 12 Google apps that you accuse have source code that's made publicly available as open source code, correct?
A. Yes. That's also right.
Q. And among the code that you reviewed in the framework
code is the code for Smart Text Selection functionality, right?
A. Yes.
Q. That is, the computer code for Smart Text Selection is in the Android operating system code?
A. So the source code for Smart Text Selection is within this framework code that I downloaded. I disagree with the characterization of that as operating system code.
Q. You called it operating system code in your report, right?
A. Not that I recall. Well, operating system, the term
"operating system" is used very imprecisely within
computer science. So I may have said that that might be that it could be considered part of that, but it's not very meaningful.
Q. Did you use it imprecisely in your report,

Dr. Smedley?
A. Not intentionally, no.
Q. Let me show you, if we could, please, Page 6 of your report just to remind you of this.

At the top, this is a page from your report, correct?
A. Yes.
Q. You're talking about different computer programs here that you have listed on the left?
A. Yes.
Q. And then you're talking about the operating system on the right, correct?
A. Yes.
Q. And for certain apps, you're only accusing Android Version 8 and higher, correct?
A. Yes, that's correct.
Q. And that's the framework code that we were just looking at that you're referring to as being the operating system?
A. That's not what this slide says, no.
Q. You're using the term "operating system" in your report, correct?
A. Yes.
Q. You're referring to Versions 8 and 9 of Android, correct?
A. In the right-hand column there, yes.
Q. So your opinion related to whether the accused apps infringe is -- when they are used in connection with certain code in Android 8, depends on that code being in the framework, correct, in the operating system?
A. Sorry. What's your question?
Q. Sure. Your opinion regarding whether the 12 Google apps infringe depends on certain code being in the Android operating system, either Version 8 or Version 9, right?
A. Well, it depends on certain code being there in
that -- I mean, the operating system has to be there to work. Are you asking me about specific code or certain specific code or just that there has to be something there?
Q. Well, let's start with there has to be something there, right?
A. Yes.
Q. Okay. So the source code file that contains the instructions for TextClassifierImpl is in that code for Android Versions 8 and 9, correct?
A. It is in the code for -- it's in the Android framework code for Android Versions 8 or 9.
Q. We looked at some of that code this morning, correct?
A. Yes, we did.
Q. You identified TextClassifierImpl in your code trace yesterday as you walked through the slides, right?
A. Yes, I did.

MR. KAMBER: Let's display PDX-3-108 please.

## BY MR. KAMBER:

Q. You're pointing here to code for Android 8, correct?
A. Yes.
Q. Right? That's the title that you have at the top.
A. Yes.
Q. And we just saw -- and at the bottom left, it's referring to $\mathrm{PX}-125$, right?
A. Yes.
Q. That was the code we just saw. That's the code base for Android 8 that you downloaded.
A. It's -- I'm trying to remember.
Q. I'm happy to have it redisplayed so you can confirm, Dr. Smedley.
A. Yeah. Yeah.
Q. Sure.

MR. KAMBER: If we could just show again PX-125 on the screen.

THE WITNESS: Yes. So in the path there, it specifically says "platform/frameworks/base." So it's the framework code, yes.

BY MR. KAMBER:
Q. Fair enough. It's in the framework code.
A. Yes.

MR. KAMBER: So let's go back to PDX-3-108 for a moment.

## BY MR. KAMBER:

Q. Your opinion regarding infringement depends on this code being in the Android 8 framework, right?
A. Well, the -- so is your question that if that code were somewhere else, would my opinion be the same?
Q. My question is, if the code TextClassifierImpl wasn't in Android -- in the Android framework, then under your
theory, if $I$ understand it, the input device step at least would not be satisfied.
A. So what I'm trying to get straight is if you're asking me -- there are two questions that I'm not sure which one, or if you're asking something different. One is that if this code just didn't exist or if this code was somewhere else other than in the Android framework.
Q. The first one, Dr. Smedley. If this code didn't exist in Android 8, then the 12 apps would not infringe?
A. If this code didn't exist, then STS wouldn't work, so no.
Q. Right.
A. They wouldn't infringe.
Q. Right. So you showed a diagram yesterday, PDX-3-183.

I will have that pulled up for you and the jury.
Remember discussing this, Dr. Smedley?
A. Yes.
Q. Where did you get this figure?
A. This is from the Google -- documentation for Google developers describing the architecture of the Android system as a whole.
Q. Right. You accused 12 Google apps of infringement, correct?
A. Yes, that's right.
Q. Apps are depicted on the screen in, looks like
orange, right?
A. Yes. Yeah. I call that -- there are various shades of orange there, but $I$ think we can all...
Q. At the very top, the orange at the very top, perhaps, so the record is clear. Right, Dr. Smedley?
A. Yes.
Q. So and then there's Android framework code there that's shown in a green, perhaps turquoise, depending on your field of vision -- field of view, right?
A. Yes. It's identifying that Android framework as that.
Q. And as we just saw, the Android -- excuse me.

Things like TextClassifierImpl -- or let me be specific TextClassifierImpl that is required for Smart Text Selection to work is in that Android framework in the green, correct?
A. Yes. Absolutely.
Q. And that TextClassifierImpl code that's in the Android framework, that's shared by all 12 of the apps that you accused of infringement.
A. I'm just trying to remember that particular -- Chrome uses STS but uses it in a slightly different way. I think that its different way still includes that, yes.
Q. Right.

You also analyzed TextClassifierImpl for Android 9,
right?
A. Yes, I did.
Q. That was, I think, on --

MR. KAMBER: Let's pull up PDX-3-110, please.

## BY MR. KAMBER:

Q. And here you were looking at the TextClassifierImpl for Version 9, correct?
A. Yes, that's correct.
Q. And these instructions are also in the framework, right?
A. Yes.
Q. And again, these instructions are in that -- they would be in that green area of the Android framework on the diagram that we just saw?
A. Yes. That's what they are describing with that document.
Q. And your opinion regarding infringement of the 12 apps on an Android 9 device depends on TextClassifierImpl being in the framework?
A. It depends on the existence of TextClassifierImpl and it is in the framework. So...
Q. For your analysis of the Chrome app, specifically --

MR. KAMBER: If we could pull up PDX-3-104.

## BY MR. KAMBER:

Q. So the title of this slide, Dr. Smedley, is "Google's

Public Source Code for Chromium," right?
A. Yes.
Q. Chromium is an open source version of a Chrome browser, correct?
A. That's one way to describe it, yes.
Q. And on this particular slide, the code you are showing, the public source code, this is not Chromium code, right?
A. I'm not sure what you mean.
Q. Well, this code that you're displaying here is from PX-125, correct?
A. Yes. No, I'm --
Q. You point to TextClassifierImpl.java, right?
A. Yes, I haven't yet found where the file name was.

This is TextClassifierImpl.java, which is in the framework.
Q. This is not source code for Chromium?
A. This is source code that Chromium uses, yes.
Q. The code that you are displaying here is code that is in the Android 8 framework, right?
A. I assume it's 8. Yeah, this source code is located in the Android 8 framework.
Q. This is also the code that creates the intents that you referred to in your testimony yesterday. And I believe you referenced it this morning as well, right?
A. Yes. The lower box there has part of the code to create the intents that I talked about.
Q. Right. And it says "public static intent" and then "create," that line there, is that what you're referring to?
A. Yes.
Q. That is code that's in TextClassifierImpl.java in the Android 8 framework, right?
A. Yes.
Q. So let me just show you a few others. For the retrieving step that you discussed yesterday, you also identified code in the Android framework, right?
A. I think that's right, yes.
Q. If we could show you PDX-3-76, please.

Here, again, in order to meet the retrieving step, you are analyzing code in the Android 8 framework, right?
A. Well, I'm analyzing a lot of code, including this which is in the Android 8 framework source code.
Q. Right. And the same is true for your analysis of the retrieving step for Android 9, which is, I think, displayed on the next slide of your demonstratives.
A. Yes.
Q. Right. This is talking about instructions that are in the Android 9 framework that you point to in order to -- as your code trace for the retrieving step, right?
A. It's code that's in the Android 9 framework source code, yes.
Q. What's the difference between putting instructions for the functionality of setting up an input device in the code for an app as opposed to putting it in the framework or the operating system?
A. So I want to make sure we are really clear on what you mean by "putting it in code for an app."
Q. Well, what $I$ mean is writing the code into -- let me back up.

A computer programmer writes instructions in different computer programming languages, I think you explained yesterday, correct?
A. Yes.
Q. And an app developer will write computer instructions for a particular app, correct?
A. They'll write code for a particular app, yes.
Q. They can write code for an app, and when those apps are downloaded onto a device, the code will be in a compiled version of that -- the code will be a compiled version of what was written by that source code programmer, correct?
A. Generally speaking yes.
Q. Right. So what I'm asking is, what's the difference between putting instructions for particular functionality
as a programmer into an individual program versus writing instructions into an operating system?
A. So what exactly do you mean by "operating system" here, because it's -- that term is not used. It's often used in different ways.
Q. Dr. Smedley, did you give a deposition in this case?
A. Yes, I did.
Q. Okay. And at the time that you gave your deposition, were you testifying -- you were testifying under oath, correct?
A. I was, yes.
Q. And -- thank you.

MR. KAMBER: Let me show something to counsel,
Your Honor?
THE COURT: Yes.
(Video plays.)
Q. Well, what's the difference between putting instructions -- setting up an input device in the code for a program as opposed to putting it into the operating system.
A. One -- one difference would be that code, let's say I decided -- I don't know, that it was me doing this and I decided I was going to put some code in the operating system. I would expect it to be a fairly general use across a wide range of applications. At the same time, I
might put some code in my application, also keeping in mind that $I$ might want to use it in other applications as well. So it's not -- it's certainly not a clear distinction, but, it's -- I don't know, it's one of the factors.
(Video ends.)

## BY MR. KAMBER:

Q. Your answer to that question, Dr. Smedley, you were distinguishing between two different approaches, right?
A. Yes.
Q. So we talked about the intents handling, and that is part of the Android framework, correct?
A. Yes, yes.
Q. So as you noted in your direct testimony, I think, the two asserted claims are directed to something called a "computer readable medium"?
A. Right, yes.
Q. Let's pull up PDX-3-3.

That requirement is at the very top of Claim 23, correct?
A. Yes, that's right.
Q. And I think you had a slide that maybe makes this easier to read. It was PDX-3-159.

This is the preamble to Claim 23 blown up on one of your demonstrative slides, right?
A. Yes.
Q. And I just kind of want to explain this to the jury for their benefit, what's required here. The computer readable medium is, I think, you described it yesterday as "memory," correct?
A. That's one thing that could be computer readable medium, yes.
Q. Right. In this particular case, it's nonvolatile memory on a phone that has the 12 accused apps that you think -- that you say satisfies this part of the claim, correct?
A. That's one CRM that satisfies this claim.
Q. What is the other, Dr. Smedley?
A. When the apps are on the Google Play servers, they are also on the non-transitory -- stored on non-transitory computer readable medium.
Q. Right. When the apps are on the Google Play Store, they can't be run in connection with Android 8 or Android 9, right?
A. I don't know of any way to do -- I don't know how the back end of the Google Play Store works. Maybe you can, maybe you can't. But as far as $I$ know, you can't.
Q. That app code on the Google store, when it's downloaded onto a device, let's say it's an Android 7 device. That doesn't infringe, right?
A. Well, I haven't presented any analysis with respect to Android 7 so.
Q. Android 7 doesn't have the code for Smart Text Selection built into the framework, right?
A. No, that was introduced with Android 8.
Q. So the same app downloaded onto a phone with Android 7, wouldn't be able to use Smart Text Selection?
A. I'm not sure that it would even be possible, because I believe the Google Play Store ensures that the device is capable. But that -- I mean, if you are telling me that that can happen, then I'll take your word for it.
Q. You didn't do analysis of that question, though, in your evaluating infringement in this case, right?
A. No, I didn't look at -- I'm not presenting here anything in relation to Android Version 7 or earlier.
Q. So yesterday -- if we could pull up PDX-3-6 for a moment, please.

So you were talking about Google apps and then Google phones, right?
A. Yes.
Q. Two different categories that you accuse of infringement?
A. Well, I believe it's Arendi that accuses them of infringement; I'm supplying my opinion.
Q. Fair enough.

So you supplied an opinion that Google apps infringe and that certain Google phones infringe?
A. Yes, that's right.
Q. Okay. You -- and you say that the Google Pixel 2 and the Google Pixel 3 devices come with certain applications preinstalled, right?
A. Yes.
Q. And you -- and the first computer program that you accused is each of those preinstalled applications, right?
A. Yes. In that specific scenario, yes.
Q. So in the second category, you are accusing apps that you say are downloaded from the Google Play Store, right?
A. I would prefer you didn't use the word "accuse" because that's not my role here.
Q. Sure.

The 12 Google apps that you opine infringe come from the Google Play Store, correct?
A. If they're not preinstalled, then they would be downloaded from the Google Play Store, yes.
Q. You accuse the instructions for those 12 apps of being the code that is the first computer program that's in the computer readable medium, correct?
A. I've given my opinion, in that; I haven't accused that.
Q. For those 12 apps to use Smart Text Selection,
though, they have to be loaded onto phones with Android 8 and 9, right?
A. In order to run those apps, you have to load them onto a device with Android 8 or 9.
Q. Before -- well, you haven't analyzed how many of the accused applications were actually installed on phones with Android 8 or 9, correct?
A. That's not part of may role here, no.
Q. You haven't analyzed that question at all, right?
A. No.
Q. So you also haven't analyzed how many of the 12 Google apps were installed on Samsung devices, correct?
A. No, definitely not.
Q. You understand from Dr. Hedloy that Samsung devices are licensed, correct?

MR. STRAUS: Objection, Your Honor.
THE COURT: Sustained.
BY MR. KAMBER:
Q. Dr. Smedley, you didn't try to make any determination as to the extent to which the 12 apps that you accused of infringing were downloaded and installed onto Samsung devices running Android 8 or 9, correct?
A. As I said, that wasn't my role here -- isn't my role here so, no, I did not.

MR. KAMBER: Pass the witness, Your Honor.

THE COURT: Thank you.
Redirect.
MR. STRAUS: Your Honor, I have no further questions.

THE COURT: All right. You may step down.
THE WITNESS: Thank you very much.
MR. STRAUS: Your Honor, two questions for Your Honor, first, may Dr. Smedley be excused?

THE COURT: He may be excused.
MR. STRAUS: And, second, would Your Honor like these exhibits now, or should we hold onto them for the duration of trial? These were the source code exhibits.

THE COURT: Why don't we hold onto them and we will deal with them on the next break.

Let's have the plaintiff call its next witness.
MS. SRINIVASAN: Arendi calls Mr. Weinstein. The examination will be conducted by my partner, Seth Ard.

THE CLERK: Please state and spell your name for the record.

THE WITNESS: My name is Roy Weinstein, W-E-I-N-S-T-E-I-N.

ROY WEINSTEIN, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:

DIRECT EXAMINATION
THE COURT: Please proceed.
MR. ARD: Thank you, Your Honor.
BY MR. ARD:
Q. Good morning, Mr. Weinstein.

Could you please state your full name for the jury.
A. My name Roy Weinstein.
Q. Can you please tell the jury a little bit about yourself?
A. I'm an economist. I live and work in Los Angeles, California. I'm a managing director at an economic research and consulting firm known as Micronomics. I'm married with two grown children and two grandchildren. Q. And why are you here today, Mr. Weinstein?
A. I'm here today to provide my opinion as to a fair amount that should be paid by Google to Arendi for use of the '843 patent.
Q. And have you prepared a presentation for us today, Mr. Weinstein?
A. Yes, sir, I have.
Q. Is that the one that's on the screen right now?
A. It is.
Q. It may be easier to look up here.
A. Okay.
Q. We'll go over your analysis with the jury today, but
before we do that, can you first provide the jury with the conclusion you reached?
A. Yes. I have calculated that fair compensation from Google to Arendi for use of the ' 843 patent is $\$ 45,504,836$.
Q. What training do you have that enables to you to reach that conclusion?
A. Well, I'm an economist, so I had academic training in economics, finance, statistics, and econometrics, things of that sort. One of the things that we do as economists is we try to become knowledgeable as to valuation issues and how prices in the market are determined. Sometimes we use benchmarks; sometimes we use complex economic models. Q. And, Mr. Weinstein, is your firm being compensated for your work in this case?
A. It is. Micronomics is compensated for time that $I$ spend in this case at a rate at $\$ 750$ per hour.
Q. And will outcome of this trial have any impact on your compensation?
A. The outcome of this trial will not impact my compensation; however, it will impact the compensation that Micronomics receives.
Q. Is it fair to sale that all of the expert witnesses in this case will be compensated for their time?
A. I believe so, yes.
Q. Please tell the jury about your educational background.
A. I attended City College of New York and graduated with honors in economics with a Bachelor of Business Administration degree. And from there I went to the University of Chicago and received a master of science degree. Excuse me, a master of arts degree, also in economics.
Q. And did you receive any honors and awards in connection with your education?
A. I did. At City College I received some awards for economic performance, and at University of Chicago I received fellowships from the United States Public Health Service and the Walgreen Foundation.
Q. And have you been honored since leaving school for your work as a professional economist?
A. I have. In 2005, the Business and Economics Society at City College awarded me what was called the Career Achievement Award, and that was for work I did since leaving school during the course of my career. I was the first recipient of that award, and since then, there's been one other as far as I know.
Q. And can you please identify some of the consulting clients you've had over your career?
A. Sure. Over the course of my career, I've been
engaged by Dish Network, Dunkin Donuts, Farmers Insurance, back in the Oakland Raiders. Back in California, you know, we've had the Oscars, the Emmys, awards like that, and I've been engaged by each of those entities to conduct economic impact study because they were interested in knowing the impact of those events on the community.

So I've had a number of fairly interesting engagements. I've also been engaged by State Attorneys General for the states of California, Oregon, Washington, Texas, New York, Illinois, a number of other states as well.
Q. And have you calculated damages in patent infringement cases before?
A. Yes, sir, I have.
Q. On behalf of which clients?
A. In patent cases, I've been engaged by Ericsson, eBay, Intel, Halliburton, Southern California Edison, a number of others as well.
Q. And have you written about some of the work you've done on patent infringement damages?
A. I have. The first article that I published with respect to the calculation of patent damages was in 1988, and it was published in the Journal of the Patent and Trademark Office Society, which is the U.S. Patent Office. It dealt with some work I had done on patent damage
calculation. And I've since done a couple of other publications, Journal of Law and Technology, Federal Circuit Bar Journal. They all deal with the calculation of patent damages.
Q. Have you ever given any lectures about your work on the amount that should be paid for patent infringement? A. Yes, sir, I have. There's an annual conference in Plano, Texas every year that deals with intellectual property issues, and I've been invited speakers to speak there several years and talk about patent damage calculations.

I also gave a talk in Washington, D.C. before a group of technologists on patent damages, and City College invited me back once to speak about patent damages to a group of students and faculty.

MR. ARD: Your Honor, I move to qualify Mr. Weinstein as an expert on the valuation of intellectual property and the calculation of patent damages.

MR. PETERMAN: No objection, Your Honor.
THE COURT: All right. He is so qualified.
BY MR. ARD:
Q. What materials did you consider in reaching your conclusions in this case, Mr. Weinstein?
A. I considered three sets of materials. I had access
to information that was made available by Arendi. License agreements, the patent. I also had conversations with Mr. Hedloy and Dr. Smedley. Google provided me with financial information, its license agreements, and a fair number of marketing materials as well.

And then at Micronomics, whenever we're engaged in this kind of matter, or really any matter, we have a research librarian. And so we collect some information on our own. That's the other column on the right-hand side, industry reports, and, of course, from time to time, we review academic literature as well.
Q. And so with that information in hand, where do you start in determining the proper compensation for patent infringement?
A. Well, I start with what I call the Patent Damages Statute. That's a law that says the patent holder is entitled to compensation for an infringement that is in no event less than a reasonable royalty for use made of the invention by the infringer. So that's where I start. I start with that statute.
Q. And how does that statute relate to the role of patent rights in the United States?
A. Well, patent rights are essentially a right to exclude others from using an invention without permission. And so as the statute contemplates, if an invention is
used without permission, the inventor, the patent holder is entitled to compensation that is not to be less than a reasonable royalty.
Q. And what's your understanding of why patent rights are important in the United States?
A. They are tremendously important because the way this works is so as to encourage innovation by making it impossible to use an invention without permission. It encourages inventions. It encourages innovation so that the innovator can receive compensation for whatever that invention is. And the patent laws, thereby, benefit not just the inventor, but they benefit all of us as consumers because, ultimately, those inventions make their way to the marketplace, at least those that are good.

If you look around the courtroom here, there's patent protection associated with much of what we see, all of this technology. And the inventors were compensated for those inventions. But as consumers, we all benefit from having access now to those inventions. That's the idea behind patent rights. That's the reason. It's to encourage innovation that benefits both the inventor and the rest of us.
Q. Is there a name for agreements that are reached between patent holders and entities that wish to use their patents?
A. Yes, sir, there is.
Q. And what are they called?
A. They are called license agreements.
Q. Do license agreements typically include payment terms?
A. They do. Some license agreements are called lump sum agreements, and that's where there's one payment term that reflects permission to use the invention. Typically, that payment is made at the beginning, or several payments. And sometimes they are what are called running royalty agreements, and those are agreements where payment is made over time. But they are payments from the licensee, the entity that wishes to use the invention, to the licensor, the inventor, the patent holder.
Q. And how do license agreements come into existence?
A. They're negotiated. They're a negotiated deal in the real world. If someone becomes aware of an invention that they would like to use, they approach the inventor, and they try and negotiate payment for use of that invention.
Q. In a specific lawsuit like this one, how does someone figure out the proper amount of damages that are adequate to compensate someone for patent infringement?
A. Well, there's a negotiation that covers the answer to that question as well. But it's different from a real-world negotiation, and for that reason, it's called a
"hypothetical negotiation."
Q. So how does a hypothetical negotiation work?
A. A hypothetical negotiation puts the two parties across from one another. That's why they're depicted here across a negotiating table; Google on one side, Arendi on the other. The date that's shown on this slide is August 17, which, in my understanding, is the date associated with when infringement occurred here.

And what you see is the parties negotiating. Google would like permission to use the ' 843 patent, and that's why the patent is shown going to Google. And in exchange, it's going to compensate Arendi for use of that patent. And that's the hypothetical negotiation framework that governs how one gets an answer as to what should fair compensation be for use of the patent in this context. Q. Are any assumptions made about the hypothetical negotiation?
A. Yes. There are three assumptions that are part and parcel to this process. And they're different from what kinds of assumptions typically are associated with real-world negotiations, but these are the assumptions. They're up on the board. There are three of them there. Q. Okay. Well, let's walk through each of these assumptions.

Can you explain the first one?
A. Yes. The first one is that at the hypothetical negotiation, the parties are aware of information that would not exist in a real-world negotiation. That is, they have information about future use of the patent. When you're in a real-world negotiation, you use your best judgment based on the facts you have at the time. That's a real-world negotiation.

In a hypothetical negotiation, you have that information, but you also have information about the future. The future value, the future use of the patent. And that's an assumption that's part of the hypothetical negotiation framework. So as Google and Arendi sit across the table from one another, they both have that information at hand.
Q. And what's the second assumption. Can you explain that?
A. The second assumption is that Google and Arendi, at the hypothetical negotiation, understand the patents to be valid and infringed. And once again, that's very different from what typically characterizes the real-world negotiation for intellectual property. In the real world, typically, the potential licensor takes issue with the question of whether the patent is valid or infringed. There's disagreement about that in a real-world negotiation. In the hypothetical negotiation, there's no
disagreement about that. There is agreement that the patent is valid and infringed.
Q. And what's the third for hypothetical negotiation?
A. So the third assumption also is different from real-world negotiations. In a real-world negotiation, sometimes there are other terms that people talk about. If you are renting an apartment, for instance, sometimes the deal might be $\$ 1,500$ a month, but you get the first six months free or the first three months free if you take a three-year lease or something like that.

That could be a real world term where the $\$ 1,500$ a month, that is the rent payment, doesn't cover everything that's part of the deal. There could be other terms in a real-world deal.

But in a hypothetical negotiation, there are no other terms other than how much should be paid. That's all they talk about.

And the other thing that's true of that hypothetical negotiation, is that they have to reach agreement. They can't walk away. They have to sit at that table until they reach a deal. And that's also different from a real world. Real world, sometimes if you are negotiating for something, part of the strategy is to walk away for a while in order to get a better offer. But the hypothetical negotiation, you can't do that. You sit
there until you get to the finish line and you have fair payment and the parties agree.
Q. So you mentioned some differences between real-world negotiations and hypothetical negotiations.

Did you prepare a slide summarizing those differences?
A. I did.
Q. And can you just walk through, again, for the jury what you think the key differences are that's worth highlighting?
A. Yeah. And I sort of previewed what those differences are in my last answer.
Q. But with the real-world negotiation, you don't know the future. If you're buying a house, you can look at the house. You can make sure that everything works. You can test the windows, the electricity, the water. You can walk around the neighborhood, et cetera, talk to the seller. That's all you know.

In a hypothetical negotiation, if you're buying a house, you know everything I just talked about, but you also know everything that happened since you lived in that house. You know about the future. You know whether it turned out to be a great house or not so good. You know if everything worked or everything broke down.

That's the difference between a real-world
negotiations where you know what's available at the time in terms of information, and a hypothetical negotiation where you know what's available at the time, but you have access to additional information about the future, you have much more information.
Q. And with the second assumption?
A. Yeah. The second is fundamental to the hypothetical negotiation concept. In the real world, the parties typically disagree about whether a patent is valid or infringed. That's fairly standard if there is a negotiation of value. At the hypothetical, that's off the table. They agree the patent is valid and it's infringed. Q. Okay. And what impact do these three differences have on licensing fees in the real world versus the hypothetical world?
A. Well, if you think about the differences that I've just described in those three areas, the outcome of real-world negotiations will tend to produce a discount in the answer relative to a hypothetical negotiation. That's in part because there can be other terms of compensation included in a real-world outcome that aren't part of the hypothetical negotiation. It's in part because of disagreement about validity and infringement. And as a consequence, real-world negotiations will produce lower outcomes than the hypothetical negotiation as you think
through each of those differences.
Q. And with respect to the hypothetical negotiation in this case, is the payment going from Google to Arendi the only benefit that Arendi gets?
A. Yes. There are no other payments that go back such as what $I$ described in the rent example where you might get free rent or something else at the beginning. Here, you only get payment for use of the patent.
Q. Beyond the hypothetical negotiation, is there anything else you considered in forming your opinions about patent damages in this case?
A. Yes. I relied on my experience in this area, but there's one other concept here that's tied into the hypothetical negotiation that I considered. And that concept is referred to as the "Georgia-Pacific factors." Q. Is that what we are looking at on the screen here?
A. Yes, sir, it is.
Q. What are the Georgia-Pacific factors? And I won't ask you to read all 15 to the jury.
A. The Georgia-Pacific factors can be thought of as a checklist of things that the two negotiators in this case, Google and Arendi, would think about as they sit at that negotiating table. And the concept of this Georgia-Pacific factor checklist dates back to a prior patent infringement case where the Court in that case
included this list of factors as a checklist for getting to the answer. Georgia-Pacific was one of the entities that was involved in that case, and so since then, this checklist has become known as the Georgia-Pacific factors. And because it was a Court case, that's why Georgia-Pacific is in italics up there.

It's a checklist of 15 things that are to be considered by the parties at the hypothetical negotiation. Q. Is this Georgia-Pacific framework used by other patent damages experts?
A. It is. As I testified, I've been working in this area at least since the late 1980 s when $I$ first wrote about it. And in my experience, we use a Georgia-Pacific checklist, basically, one hundred percent of the time.
Q. And I think you were here during opening when Google mentioned it has retained a damages expert.

Does he use the same Georgia-Pacific framework that you're using?
A. Yes. I mean, he'll be here to speak for himself, but he does, in fact, use the same starting points that $I$ do. Namely, the patent statute as a starting point, the hypothetical negotiation as a starting point, and a Georgia-Pacific analysis for purposes of thinking through how the negotiation would work.

I mean, he gets a different answer from me, but we
have the same framework.
Q. Did you consider all 15 of these factors in conducting your analysis?
A. Yes, sir, I did.
Q. Where did you begin.
A. Actually, I began with what turns out to be Georgia-Pacific Factor Number 1. And that factor on the checklist says, "Consider rates received by the patentee for licensing the patent-in-suit."

In other words, if, in this case Arendi, has been able to license the ' 843 patent in the past, consider that information. Consider that information. It's a benchmark, just as we consider comparable properties if we're buying a house or we consider comparable cars if we're buying a car. Georgia-Pacific Factor 1 says, Consider agreements that may be comparable that involve the patent-in-suit." And so that happens to be a good starting point here.
Q. And did you find any actual licenses that were for the ' 843 patent?
A. I did. I found four such licenses.

MR. ARD: And, Your Honor, at this point we'd like to go through those licenses, and I believe we will need to seal the courtroom.

THE COURT: Okay.





A. Yes, it is.
Q. Please summarize for the jury your analysis of Georgia-Pacific Factor --

MR. ARD: Oh, Your Honor, actually, I think we can unseal the courtroom now.

THE COURT: Okay. Let's unseal the courtroom. * * *
(Whereupon, the sealed discussion concludes.)

THE COURT: The courtroom has been unsealed.
MR. ARD: Thank you, Your Honor.

## BY MR. ARD:

Q. Mr. Weinstein, can you please summarize your analysis of Georgia-Pacific Factor 1.
A. Georgia-Pacific Factor 1 asks that we look for agreements that included the patent-in-suit. In this case I believe there are four such agreements, prior licenses by Arendi that did just that. And I've gone through payment terms and some other aspects of those agreements. Q. What's the next Georgia-Pacific Factor that you considered?
A. Well, coincidentally, it happens to be Number 2 on the list. This would be rates paid by the licensee, in this case Google, for use of any patents that are comparable to the patents-in-suit. So it's another kind
of benchmark test, but in this case it deals with past licenses that involve Google rather than licenses that involve Arendi.
Q. And did you find any past licenses that you found to be relevant under Georgia-Pacific Factor 2 ?
A. I did not.
Q. What's the next factor that you looked at?
A. So the next factors that $I$ looked at are 9 and 10, which I believe are relevant here, and I combined them because they are similar. And they relate to the advantages of the patented property over other means of doing it. They relate to the contribution that the patented property makes, and other things equal, the greater the advantages, the more that an entity would be willing to pay to take a license.
Q. And I know we've heard a lot of testimony about the technology, but can you summarize at a high level what some of those advantages are?
A. Well, at the highest level, and this is a quote from a Google deposition that $I$ referenced in my report which was done prior to today. But at the highest level, the advantages involve quick access to additional information.

Dr. Smedley explained at some length what that really means in terms of an app allowing you by pressing on editable text, obtaining a button that can immediately
take you to more information. So we've heard about that from Dr. Smedley over the last day.

But, you know, the highest level, what that means is it saves -- for the user it saves time, and it is efficient. And in addition, I believe I heard Dr. Smedley testify about certain technological benefits that Google obtains as well. From the user standpoint, it is just quick and easy access to additional information.
Q. And are those user benefits and technological benefits both relevant under Georgia-Pacific Factors 9 and 10?
A. Yes, that is what Georgia-Pacific Factors 9 and 10 address, other benefits associated with the invention, and if so, consider those benefits.
Q. Which Georgia-Pacific factor did you consider next? THE COURT: Counsel, might this be a good time to take our morning break.

MR. ARD: It would be a great time, Your Honor.
THE COURT: All right. Ms. Garfinkel, can you take the jury out for our morning break, please.
(The jury exits the courtroom at 10:59 a.m.)
THE COURT: We will be in recess.
MR. ARD: Thank you, Your Honor.
(Whereupon, a recess was taken.)
THE COURT: Please be seated. Before we bring
the jury back in, $I$ was just doing a little back-of-the-envelope calculations, and it looks like we are going to be a little bit crunched to get everything in on Monday because we lost -- it looks like we've lost a couple of hours so far. So does anyone have an issue if we just take half an hour for lunch today?

MS. SRINIVASAN: Not here, Your Honor.
MR. UNIKEL: That's fine, Your Honor.
THE COURT: All right. That's fine. All
right. Let's bring the jury back in, Ms. Garfinkel. (The jury enters the courtroom at 11:18 a.m.)

THE CLERK: Your Honor, the jury.
THE COURT: Please be seated. We will continue with the direct examination. Proceed.

BY MR. ARD:
Q. Thank you, Your Honor.

Mr. Weinstein, which Georgia-Pacific factors did you consider next?
A. So next I grouped two factors together again because they are similar. These are Georgia-Pacific Factors 8 and 11, and essentially they relate to the popularity or the success of the products that are covered.
Q. And why are Factors 8 and 11 important?
A. Well, they are important because the more successful the products are, the more the licensee will be willing to
pay.
MR. ARD: Your Honor, we are about to discuss some Google-accused product installations. I don't know if Google wants to make an application?

THE COURT: Can I see counsel at sidebar briefly.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: Just want to make sure I understand what the issue is here with Google's confidential information.

MR. ARD: They have our slides. The next slide we are going through is the list numbers of app installations for each of the 12 apps.

MR. PETERMAN: Google doesn't have a problem with the metrics. The number of app installations is fine.

THE COURT: Seal the courtroom if you are going to go into any financial information.

MR. ARD: Just what's on the slides.
MR. PETERMAN: We don't need to seal the courtroom.

THE COURT: See, if we could resolve disputes. Do we have later slides that might need to be under seal?

MR. PETERMAN: I don't believe there's anything. You're not putting anything on lost profits?

MR. ARD: Correct.
THE COURT: All right.
MR. PETERMAN: That will be the case. (Whereupon, the discussion at sidebar concludes.)

THE COURT: Let's proceed.
BY MR. ARD:
Q. Thank you, Your Honor.

Were the Google-accused products successful?
A. Yes, sir, they were.
Q. Did you prepare a slide showing that?
A. Yes. This next slide depicts the number of accused Google app installations for the damage period, which is August 2017 through November 2018. And the tabulation is set forth by app, the total number of accused app installations. These are -- consumers downloads are approximately 443.4 million during that period.
Q. And beyond these app installations, are there other Google-accused products in this case?
A. Yes, sir, there are. There are also Google smartphones, Pixel phones. And on the screen now is a summary of the number of accused device sales during that same period. Approximately 2.4 million.
Q. And why did you only analyze sales between August 2017 and November 2018?
A. Arendi is only entitled to payment during the period of alleged infringement, and so that begins, in my view, in August of 2017 and ends with the expiration of the '843 patent in November 2018. So just that period.
Q. Did you consider any other Georgia-Pacific factors?
A. I did. I considered all of them, all 15, but the ones that I've testified about are the most important in terms of the details of how I get to the ultimate answer.
Q. Mr. Weinstein, the final Georgia-Pacific Factor is Number 15?
A. Correct.
Q. How did you consider Georgia-Pacific Factor 15 in your analysis?
A. Well, you can see that Georgia-Pacific Factor 15 is a summary factor. It says the amount that they would wind up agreeing upon. And so when you get to Georgia-Pacific Factor 15, you've thought about the other factors, and now you are ready to decide on what the answer is. That is where Arendi and Google would have wound up at the outcome of the hypothetical negotiation. That's Factor 15.
Q. And what information did you rely on in making your calculation under Georgia-Pacific Factor 15?
A. I relied on the Georgia-Pacific analysis in the
context of the hypothetical negotiation. But specifically, in order to get to the details of how much I believe fair payment would be, I relied on those four license agreements as a starting point because they reflect amounts that other entities were willing to pay for access to the '843 and other patents.
Q. And on a broad level, how did you go about using those four licensing agreements to make your calculation? A. On a broad level, I looked at the amounts that were paid under those licenses, and I described what those amounts were when we looked at each of those licenses. And then $I$ divided those amounts by the units that $I$ believe were covered by those agreements in order to calculate what's called an effective royalty rate. And the effective royalty rate is the amount paid per covered unit, like a price per unit. And that's how I went about this next phase of the analysis.
Q. Okay. Can you show us how you calculated the effective royalty rate? Well, strike that. Can you move back? Take that slide off.

MR. ARD: I apologize, Your Honor. I neglected to recall that we are going to show licensing information again here. So I do think we need to seal the courtroom again to walk through the effective royalty rate calculation because it uses the monetary value of the four



Q. And do we know whether these real-world effective royalty rates reflect the minimum value of the Arendi technology?
A. I believe they do because they reflect actual amounts that were paid by various entities for access to the patent portfolio.
Q. Okay. And what was the next step of your analysis?
A. The next step involved considering the fact that a real-world negotiation, as I testified earlier today, is different from a hypothetical negotiation given the different assumptions about validity and infringement and given the possibility that real-world agreements include terms that cannot be part of the hypothetical negotiation agreement.

And so the final step in this set of calculations involved finding a way to translate the real-world effective royalty rates into the royalty rate that $I$ believe would govern the hypothetical negotiation outcome. Q. Okay. Well, let's talk about it in the context first of the Microsoft agreement.

Did you make an adjustment for these discounts with respect to the discounts in the real-world negotiation with respect to the Microsoft agreement?
A. I did. I had, I believe, four or five conversations
with Mr. Hedloy in connection with my work on this case. And in deciding how to translate the real-world effective royalty rate to the rate that would govern a hypothetical negotiation, $I$ was interested in his perception of various risks associated with litigation with Microsoft. And he had had a fair amount of experience. That might be an understatement. He has had a lot of experience with Microsoft in terms of prior litigation.

And one of the things that he explained to me is that with respect to litigation generally and Microsoft specifically, he saw at least three types of risk. One is what he characterizes as risk before the trial associated with claim construction. All right. And that was one area of risk.

The second area of risk was risk associated with the trial itself. You can win or you can lose if you are a plaintiff or if you are a defendant.

And the third area that he addressed is risks associated with an outcome on appeal where once again you can win or lose.

So he characterized three levels of risk associated with litigation that ultimately produced these real-world agreements because there was litigation in each case. And he assessed those risks as, basically, 50/50 each step of the way. That is a 50 percent chance of surviving
pretrial, 50 percent chance of prevailing at trial, and 50 percent chance of prevailing on appeal. All right.

So with each of those three sets of risk, what it means is that the hypothetical negotiation has to be adjusted for them in order to get from the real world to the hypothetical negotiation.

So what I did, and it's shown in Column 4, and 5, is I took the real-world effective royalty rates that are depicted in Column 4, and those were calculated, as I described, on a per unit basis. And I multiplied those times four to capture the risks that Mr. Hedloy described to me.

Actually since he described three kinds of 50/50 risks, I could have multiplied it times eight. But to be conservative I said, no, I'm only going to multiply these real-world outcomes times four.

And so by doing that, what $I$ did is I translated the real-world hypothetical -- real-world negotiation outcomes, all right, to a hypothetical negotiation outcome by adjusting for differences in the real-world environment and assumptions to do so.
Q. Did you make similar adjustments with respect to the Samsung MMI and Apple agreements?
A. I did. I made the same adjustments for each of those since I understood that Mr. Hedloy believed he faced those
kinds of risks at a minimum in each of those cases. And so again, I could have multiplied times eight, but I multiplied times four in order to be conservative.
Q. And in your experience, is it common to make these kinds of adjustments from real-world effective royalty rates to royalty rates of a hypothetical negotiation? A. It is. It's very common to provide discounts in real-world agreements that are not available with a hypothetical negotiation.
Q. So what did you do after you made these adjustments?
A. So the hypothetical negotiation outcomes are shown in Column 5 on the slide, and I took the average of those. So 48 cents is the average of those four effective royalty rates after having been adjusted for the hypothetical negotiation. That's 48 cents is the average of those four.
Q. And did you make any other adjustments to the royalty rate?
A. I didn't. And if you recall my testimony was that Georgia-Pacific Factors 8, 9, 10, and 11 pointed upward, and so I could have adjusted the 48 cents upward to reflect that aspect or those aspects of the Georgia-Pacific analysis. But again to be conservative, I didn't make any further adjustments. I stuck with the 48 cents.
Q. Now, you said that you calculated a 48-cent average.

Does that apply -- does that rate apply to all the accused products in this case?
A. That rate applies to the smartphones, to those devices, but that rate doesn't yet apply to the apps which are accused. We saw that list of apps that are also accused. And so I have to do something with 48 cents to come up with an app rate.
Q. And can you explain what you did to make that calculation?
A. Yeah, 48 cents is the rate that $I$ just described. For the Pixel 2 and Pixel 3 phones that are accused in this case, what $I$ found is that there are five Google apps that are preinstalled on those devices.

And so I divided 48 cents by five, and that reduced the reasonable royalty per app installation of 10 cents. And that's the rate based on the entire analysis thus far on a per-app basis.
Q. And do the accused apps include apps on non-Google devices?
A. They do. They include downloads on non-Google devices that use the Android operating system, the Android 8.0.0 or 9.0 .0 operating system.
Q. Did you calculate damages adequate to compensate Arendi for patent infringement in this case?
A. Yes, sir, I did.
Q. And what was your calculation?
A. So on the screen now is the calculation of reasonable royalty damages with respect to the accused apps. The figures in Columns 1 and 2 are the same figures that we saw before --

THE COURT: Counsel, apologies. Can we unseal the courtroom at this point?

MR. ARD: Yes, Your Honor. Yes.
MR. PETERMAN: No objection.
THE COURT: All right. Let's unseal the courtroom.
(Whereupon, the sealed discussion concludes.)

THE COURT: I apologize for interrupting you, Mr. Weinstein. I thought you were finished. Please proceed.

MR. ARD: Thank you, Your Honor.
BY MR. ARD:
Q. So I think you were explaining the calculation you did for damages relating to the apps?
A. Yes, sir. The figures that are shown in Column 2 of the figures that we looked at before with respect to the number of accused apps during the period August 2017 to

November 2018, that's the 443.4 million.
I multiplied each of those accused apps by the royalty rate $I$ just described, 10 cents per app, and the total associated with that calculation equals what I've called reasonable royalty damages with respect to the accused app installations. And that number is approximately $\$ 44.3$ million.
Q. And did you also calculate damages adequate to compensate Arendi for infringement relating to the accused Google devices?
A. Yes, sir, I did. So on the screen now are the calculations with respect to the accused devices. Those are Pixel 2 and Pixel 3 devices sold between the period of August 2017 to November 2018. I took the 48 -cent royalty rate, the effective royalty rate that $I$ calculated that $I$ believe would reflect the outcome of the hypothetical negotiation and multiplied that times the number of accused devices. And so reasonable royalty damages on these devices, these phones, is approximately \$1.1 million.
Q. And putting those together, can you repeat for the jury your conclusion as to the damages owed by Google to Arendi in this case?
A. Yes. If you add the damages I calculated for apps and devices, total damages owed by Google for use of the
' 843 patent are $\$ 45,504,836$.
Q. Thank you. No further questions, Your Honor.

THE COURT: All right. Let's proceed with cross-examination.

CROSS EXAMINATION

## BY MR. PETERMAN:

Q. Good morning, Mr. Weinstein. My name is Chad Peterman.

How are you this morning?
A. I'm fine. Thank you, sir.
Q. Now, you were first hired by Arendi in 2019 to serve as a damages expert in this kind of case, correct?
A. I was hired as a consultant. Yes, that's correct.
Q. And you have a team that works to support you?
A. Excuse me?
Q. You have a team that works to support you, correct?
A. I do.
Q. And it's fair to say that over the course of the past several years, you spent hundreds of hours working alone and with your team in preparation for trial today ultimately, correct?
A. My team certainly spent hundreds of hours assisting. I'm not sure that I spent hundreds of hours, but I spent quite a fair amount of time, yes, sir.
Q. And you've worked as an expert on behalf of Arendi in
other patent litigations concerning these patents, correct?
A. I have, sir.
Q. And over the past couple of years, you submitted various expert reports outlining all of your opinions in this case?
A. I did.
Q. So I think we can agree that the measure of damages in this case is what the parties would have agreed to as a reasonable royalty for a license to the ' 843 patent only, correct?
A. I agree with that.
Q. And the hypothetical negotiation consists of the expectations of both Arendi and Google, correct?
A. I agree with that as well.
Q. It just doesn't look at what Arendi would like to get, correct?
A. That's true.
Q. And hypothetical negotiation would have occurred sometime around the time of first alleged infringement, correct?
A. Yes, sir.
Q. Okay. And you believe that's August 17, 2017, correct?
A. Correct.
Q. And you understand that Google disputes that and believes that the proper date would be around December 5, 2017, correct?
A. I do. I understand that, yes.
Q. For the purposes of the examination, the difference between those dates doesn't matter for the negotiation right?
A. That's fair.
Q. And I think as you testified, the result of hypothetical negotiation could be a one-time payment based on a effective royalty rate, right?
A. True.
Q. And effective royalty rate could be based on
different types of measurements, right?
A. Yes, sir, it could.
Q. Could be percentage of sales and revenue? That's one option?
A. It could be, certainly.
Q. And it could be on a number of units sold, that's right?
A. Yes, sir.
Q. And in this case, you chose an effective royalty based on the number of units sold?
A. I did.
Q. So what that means is that you calculate damages by
multiplying the number of units sold times the royalty rate to come up with a total?
A. That's correct. That's what I did.
Q. Okay. And if either of those variables are wrong because of math, then the total would be wrong, correct?
A. I agree.
Q. Mr. Weinstein, $\$ 44.3$ million of your $\$ 45.5$ million damages comes from apps, correct?
A. Yes, sir.
Q. And Arendi is accusing 12 Google apps of infringing?
A. Correct.
Q. And you understand that those apps are only being accused of infringing to the extent they are installed on devices using Android 8 or 9, right?
A. That is correct.
Q. So it's very important that you accurately count only those apps that are actually installed on devices with Android 8 or 9; is that correct?
A. That's fair.
Q. And if an app is installed on a device with an operating system that's earlier than Android 8 or 9, that would not be accused of infringement here, correct?
A. I agree with that.
Q. And it would be a mistake to include such installed applications in your damages analysis, right?
A. I agree with that.
Q. And, for example, if there are apps installed on versions of Android 6 or 7, those should not be included?
A. That's right.
Q. Now, as I understand it, the period of time that you are claiming damages from is August 17, 2017, through the expiration of the patent in November 10, 2018; is that correct?
A. That's fair.
Q. And you calculated that during that period, there's a total of 443.5 million apps, approximately?
A. Yes, sir.
Q. And you made this calculation by looking at data provided that includes a total number of downloads to all Android devices, correct?
A. Right. Data provided by Google; that's correct.
Q. And you are aware that data does not identify what version of Android those devices were running?
A. I'm aware of that.
Q. And you did nothing to ensure that you were only counting installations on devices that were running Android 8 or 9; is that right?
A. That's not right.
Q. What steps did you take in order to ensure that you were only counting applications that were on Android 8 or

Android 9?
A. I compared the numbers that $I$ was $u s i n g$ in connection with apps with the numbers that Google's expert, Mr. Kidder, was using, and we were using the same numbers. Q. But, sir, you are the damages expert on behalf of Arendi, correct?
A. I am.
Q. And you were the person who put an expert report first saying how many apps were being accused, correct?
A. That's true.
Q. And Mr. Kidder just used your numbers in response to your damages analysis; is that correct?
A. Actually, that's not correct, no, sir.
Q. So you're saying that, other than just seeing that Mr. Kidder used the same numbers, you did nothing on your own behalf or with Arendi to ensure that the applications that you're counting were for Android 8 or 9 and not for any other products?
A. Well, I did consider the numbers that Mr. Kidder used for his depiction of the volume of accused apps, and his numbers agreed with mine.
Q. But if his numbers were wrong, then your numbers would be wrong too?
A. That's fair.
Q. So did you look at the underlying data that Google
provided with respect to the downloads?
A. I did.
Q. And your initial calculation for the downloads that are accused, you took from the numbers that Google provided?
A. I did.
Q. And you assumed that all of the applications that you used to calculate were for Android 8 or 9, correct?
A. I did.
Q. Was there any indication in the data that you reviewed that those downloads were for Android 8 or 9 ?
A. It was a response to an Interrogatory, and so I used the information provided by Google.
Q. So did you use the response to an Interrogatory or did you use actual data that was provided by Google?
A. Well, it's actually -- it's -- it's both.
Q. I have some documents that $I$ will give you. I will bring them up.

MR. PETERMAN: May I approach, Your Honor?
THE COURT: Yes.

## BY MR. PETERMAN:

Q. Mr. Weinstein, towards the back of the book I gave you, there is a tab that says, "Weinstein Sup Reply Exhibits."

Do you see that?
A. What does it say?
Q. It's second-to-last tab.
A. I see it.
Q. And in the second to last tab, there's a exhibit that you included in expert reports, correct?
A. Correct.
Q. And this is a calculation of the number of apps that you were accusing of infringement, correct?

On the second page of the document.
A. Well, it's a -- I mean, it's an earlier version.

It's not my final verge. It's not what I talked about today to the jury. But it is an earlier version from one of my reports of accused apps, yes, sir.
Q. And the final version you presented to the jury was actually calculations that you did this past Friday; is that right?
A. I think I did the calculation perhaps a little bit before then, but it's a recent calculation, that's true.
Q. All right. But the calculation you presented to the jury was found within the calculations that you have in this exhibit that's in front of you, correct?
A. Well, it's a subset because there's a shorter time period, but with that understanding yes.
Q. And the calculations that you presented are based on the same sources that you used to present the calculations
that are in the exhibit in front of you, right?
A. That's true, yes, sir.
Q. And at the bottom of the exhibit in front of you, there's two source that are referenced.

Do you see that?
A. I do.
Q. It's in very small text. And they are both Google documents?
A. Yes, sir, they are.
Q. So in coming up with exhibit that's in front of you, you used Google documents, Google data, in order to come up with the numbers here, correct?
A. That is correct.
Q. And that's the only sources that are referenced here on this page?
A. That's correct.
Q. Now, I'd like to have you take a look earlier in the binder, there's a tab DTX-0581.
A. I have it.
Q. Take a second to look at it, please.
A. Yes, sir. I'm familiar with it.
Q. And this is the raw data that you used to calculate the number of apps, correct?
A. That's accurate.

MR. PETERMAN: Your Honor, we would move for

DTX-0581 to be admitted into evidence.

MR. ARD: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit DTX-581 is admitted into evidence.)

## BY MR. PETERMAN:

Q. So, Mr. Weinstein, if you look at the third and fourth page of DTX-0581, it reflects downloads per year per app, correct?
A. It does.
Q. And on this page, the downloads per year per app is not broken down via the version of Android that was running, correct?
A. That is true.
Q. So the source that you used to calculate the number of apps that were downloaded did not identify which apps went to Android 6, Android 7, Android 8, or Android 9, correct?
A. That's correct. This source does not do that.
Q. And this is the only source that you identify on the page that we looked at where it talked about the number of apps that you were accusing at one point, correct?
A. It's not important, but actually, I think there are two sources that are identified there. But in any event, this is the source for that -- for that exhibit.
Q. So how did you ensure that all the apps that are
listed on this page that you then accuse of infringement were for Android 8 or 9?
A. Well, for all the apps except Google Chrome, only Version 8 or 9 were accused. And so there's nothing about the numbers that I used for all of the apps, other than Google Chrome, that was impacted in any way by changes in the time period that -- that's now been used for purposes of calculating damages, that is moving from an earlier period to the period that we're now using.

And so that's true for all of the apps except Google Chrome. For Google Chrome, I used the information that was provided on the documents you've been showing me to reflect the number of accused apps. And as I testified previously, that number agrees with the same numbers for accused apps that Google's expert, Mr. Kidder, used, not only for all of the apps other than Google Chrome, but for Google Chrome as well.
Q. So, Mr. Weinstein, just to be very specific, if we look at the last row, here.

MR. PETERMAN: Mr. Spence, if you wouldn't mind going down to the last row.

BY MR. PETERMAN:
Q. If you look at 2018, let's look at the line third from the bottom, 2018/com.Google.Android.GM.

Do you see that?
A. I do.
Q. And do you understand that that's a Google Gmail?
A. I do.
Q. And do you understand that this -- the calculations, the numbers here represent all downloads to any platform with respect to Google Gmail, correct?
A. Yes, sir, I do.
Q. And you understand that this includes versions of Android earlier than Android 8, correct?
A. I don't understand that, no, sir.
Q. Okay. So, if, in fact, this includes downloads to all versions of Android, including versions earlier than Android 8, then your calculations of the number of accused products is incorrect, correct?
A. It would be too high; that's true.
Q. And you did nothing to try to understand the conversion curve of how users were upgrading their products from Android 7 to Android 8 to other versions of Android, correct?
A. I didn't do that; that's true.
Q. And let's take another example. If you look another couple lines up, there's Google Calendar --
A. Correct.
Q. -- for 2018 .

Do you see that?
A. I do.
Q. And as I'm learning now, it was your understanding that this number of downloads only represented downloads to Android 8 or Android 9, correct?
A. Agreed.
Q. But if the number of downloads here was not to Android 8 or Android 9, but included Android 6, 7, and earlier versions, your calculation of the number of accused apps would be incorrect?
A. It would be too high. I agree.
Q. And sitting here today, you don't know how overinflated your calculations of any of the apps would be if your understanding of the underlying data was incorrect?
A. Well, that's not true. I don't agree with that.
Q. Well, then what app do you say would not be overinflated or you don't understand?
A. My calculations are not overinflated, to use your term, with respect to any of the apps with the possibility of Google Chrome, possible exception of Google Chrome.
Q. But we just established that, for example, Calendar, if the numbers here are not for just 8 or 9 , and included 6, 7, and other versions, you would be counting too much, correct?
A. I agree.
Q. And did you do anything to try to ascertain whether the numbers that we are viewing here in DTX-0581 were just for Android 8 or 9 ?
A. I understood them to be specifically for Android 8 or 9, because they were produced in response to a request by counsel for Arendi for that information. And this is what Google responded to that request, and so they had to be for Android 8.0 or 9.0 .
Q. But do you understand that at the time the request was made, there were other products that did not rely on the distinction between Android 8 or 9 and earlier Android versions that are at play in this litigation?
A. I do. But those other products are not Google Calendar or Gmail.
Q. Now, Mr. Weinstein, you don't know what percentage of the Android-based phones in the U.S. were using Android 8 or 9 as of August 17, 2017, correct?
A. That's true.
Q. And you don't know what percentage of U.S.-based Android phones were using Android 8 or 9 as of November 10, 2018, correct?
A. Also true.
Q. You didn't look at any third party sources looking at conversion rates between early versions of Android and Android 8 or $9 ?$
A. That's true.
Q. You didn't conduct any surveys or some type of other statistical sampling to find out how many phones had been converted to Android 8 or 9 by November 10, 2018?
A. Also correct.
Q. And you understand that Google contends that it released Android 8 with the accused functionality on December 5th, 2017, correct?
A. I do sir, yes.
Q. And if Google is correct, any downloads that happened before that date couldn't possibly be infringing, right?
A. I agree. If Google is correct the date is later than August, which is the date I used, then the period between August and December would not include infringing devices or apps.
Q. And even with downloads from December 5, 2017, to November 10, 2018, you would have no way of knowing if the person downloading that app had Android 8 or 9, correct?
A. Could you just repeat it? I have to think about that one.
Q. Sure.

With respect to the downloads that occur from the period of December 5th, 2017, to November 10, 2018, you have no way of knowing if the person downloading that app was using Android 8 or 9?
A. No, that's not true. Again, for all of the apps except Google Chrome, Google has represented that those downloads are for Android 8.0 or 9.0 .
Q. And what is this representation that you are referring to?
A. The representation is that information that Google provided on downloads was in connection with a request that contemplated that that information be provided with respect to accused products, and the accused products with respect to all of the apps other than Google Chrome are the -- are associated with Android version 8.0. or 9.0. Q. Is there a specific document you are referring to that supposedly includes this representation?
A. As I sit here, I can't identify a specific document, but the information that I'm relying on was produced by Google in response to discovery requests.
Q. Is there a document that's referenced in your expert reports that specifically talks about the representation that you're testifying about today?
A. I can't say.
Q. Now, you're seeking another $\$ 1.5$ million in damages from the sales of 2.4 million Pixel devices, right?
A. Yes, sir.
Q. And what percentage of those devices had Android 8 or 9 on them by November 10, 2018?
A. My understanding is that they are all accused.
Q. That wasn't my question. My question was, what percentage of those devices had Android 8 or Android 9 on them by November 10, 2018?
A. As far as I know, hundred percent.
Q. Did you do anything to confirm that?
A. Nothing other than review the materials that were produced by Google in this case.
Q. So if those phones all didn't have Android 8 or 9, your count for those phones would be overinflated, correct?
A. That's fair.
Q. Now, the other part of your damage calculation is the royalty rate. You opined that Google and Arendi would have entered into a hypothetical negotiation and would have agreed on a license, correct?
A. Yes, sir.
Q. And that license would be for the ' 843 patent only, correct?
A. True.
Q. And per unit royalty would be 48 cents per Pixel device?
A. Yes, sir.
Q. And 10 cents per app?
A. Yes, sir.
Q. And this would result in the $\$ 45$ million payment that you are requesting, correct?
A. That's the payment that I've concluded would reflect the outcome of that hypothetical negotiation.
Q. Mr. Weinstein, you're aware that Google actually loses money on the accused products?
A. I'm not aware of that.
Q. You understand profitability is something that should be considered in commercial with a hypothetical negotiation?
A. Sure.
Q. And if Google was losing money with respect to those products, is that something that would be considered in a hypothetical negotiation?
A. I would think so, yes, sir.
Q. So the hypothetical negotiation would be for the '843 patent only?
A. I agree.
Q. Would be for the term of about one year, ending November 10, 2018?
A. Also agree.
Q. It would not include rights to foreign patents?
A. True.
Q. It would not include the settlement of any
litigation?
A. No, that -- that's right. It doesn't include anything else other than the license to the ' 843 patent.

MR. PETERMAN: Your Honor, at this point, I am going to go into some of the other licenses and request we seal the courtroom.

THE COURT: Okay. Let's seal the courtroom.

*     *         * 

(The following discussion is held under seal:
THE COURT: Courtroom has been sealed.
MR. PETERMAN: Okay. Mr. Spence would you put up PDX-4.29.

BY MR. PETERMAN:
Q. Mr. Weinstein, this is from your direct testimony, correct?
A. It is.
Q. So I think, as you explained, you took the royalties paid. You did a calculation or estimate of unit sales, and then what you did is you divided the unit sales by the royalties paid, correct?
A. I think it's the other way around. You divide the royalties paid by unit sales to get a rate per unit.
Q. That's right. My mistake.
A. We're together.
Q. Okay. And that came up with a -- what do you call it -- a the real-world effective royalty rate?



 process of determining the royalty rate？

MR．PETERMAN：And，Mr．Spence，if you could put that slide back up，please．

BY MR．PETERMAN：
Q．Now，as you and Mr．Hedloy both testified，each of these settlement agreements covers multiple patents， correct，not just the＇843？

A．I agree，yes，sir．
25

 agreements and calculated a per unit royalty; is that right?
A. Yes, sir.
Q. So that means you determined that each agreement covered a certain amount of units as we discussed?
A. That's true.
Q. Right?

And then you took the settlement amount and you used that in connection with the units to find the royalty rate?
A. Yes, sir.
Q. Did you use the full settlement amount for each of the agreements in order to find the royalty rate?
A. I believe so.
Q. You didn't try to adjust the settlement amount downward at all to account for the fact that those agreements related to a whole patent portfolio, and the agreement with Google would only be a single patent?
A. I did not.
Q. If you had done -- done that, just mathematically speaking, the damages amount would have gone down,
correct?
A. As a matter of math, yes, for sure.
Q. Now, in your calculation you multiplied the effective royalty rate by four to adjust for a risk factor or discounts as you said, correct?
A. I think the way $I$ said it is to adjust for differences between real-world outcomes and hypothetical negotiation.
Q. And mathematically speaking, if you had used a lower multiplier, the royalty rate calculated for Google would go down as well, correct?
A. I agree.
Q. And then you took the average of the adjusted royalties and that gave you the royalty rates you are using?
A. Yes, sir.



Q. And those devices that cost hundreds, if not thousands, of dollars?
A. Yes.
Q. And you believe that Apple generates significant revenue and profit from those products, correct?
A. I do.
 case for each of its apps that exceeds the damages that Apple paid for each of its thousand-dollar or several-hundred dollar devices, correct?
A. Yes, sir.
Q. Mr. Weinstein, you were the expert in connection with the Apple litigation versus Google, right?
A. I was.
Q. And you submitted an expert report outlining what you believe the appropriate measure of damages in that case was?
A. I submitted a report in which I set forth what I believed to be the outcome of a hypothetical negotiation



A. I believe it was 2019, actually. I think it was 2019 .
Q. So it was about eight years after he entered into the Microsoft agreement, right?
A. Yes, sir.
Q. Did you do anything to verify how reasonable his estimate was?
A. I didn't. So the answer to your question is, no. I was interested in his perception at the time he entered into the license. And so there was nothing that I could do to go beyond that.
Q. Did you ask him for any documents from that time?
A. I did not.
Q. If Mr. Hedloy had a moment where he didn't remember what happened eight years earlier, your underlying assumptions would be incorrect, right?
A. If the numbers were incorrect, then my use of them would be incorrect. That much is true. But again, they reflect his perception at the time.
Q. But if he understated the units, that would mean that the actual true royalty rate should be lower than what you calculated, right?
A. Yes. With the understanding we're not talking about actual units between 2011 and 2018. We are talking about his perception of the units.
Q. Understood.
A. Okay.
Q. Now, the units that he told you were Microsoft Office, correct?
A. Yes, sir.
Q. And Microsoft Office is made of several different applications, correct?
A. It is.
Q. Word, Excel, PowerPoint; is that right?
A. Agreed.
Q. In the calculation that you did for this case, you used Microsoft Office as a single unit, right?
A. I did.
Q. If you had calculated Microsoft Office as three units for Word, Excel, PowerPoint, your royalty number would have come out lower than what it did, right?
A. I agree.
Q. And the ultimate damage number for Google would be lower?
A. True.

MR. PETERMAN: We can unseal the courtroom?
THE COURT: All right. Let's unseal the
courtroom. Thank you.
(Whereupon, the sealed discussion concludes.)

## BY MR. PETERMAN:

Q. Now I would like to address the $4 X$ multiplier that you used. You stated you multiplied each royalty rate by four.
A. Yes, sir.
Q. And on direct, you said you could have multiplied it by eight, but you took a conservative approach; is that correct?
A. Yes, sir.
Q. And when you say that you could multiply it by eight, what that means is that Mr. Hedloy believed he only had a one in eight chance of winning the underlying litigations; is that right?
A. That's another way of looking at the same information, so $I$ agree with that.
Q. So those are pretty slim odds to actually prevail on the litigations that Mr. Hedloy had with the different companies, correct?
A. Well, one in eight is slim odds, and that's part of the reason why companies reach agreement in advance. That's true.
Q. So I just want to understand the practical effect of
your multiplier here.
MR. PETERMAN: Mr. Spence, if you would bring up Slide 4.

## BY MR. PETERMAN:

Q. Now, you're asking for $\$ 45.5$ million. You're saying that's the appropriate measure of damages. You would agree that the bulk of it is based on the 4 X multiplier?
A. That's fair.
Q. Without the 4 X multiplier, the damages you would be asking for would be 11.37 million?
A. If you divide 45 million by four, that's correct.
Q. So in this case, the multiplier increased damages by over $\$ 34$ million, right?
A. Well, that's the math.
Q. And you were here for Mr. Hedloy's testimony yesterday?
A. I was.
Q. You are aware that he gave those parties a discount?
A. I am.
Q. Are you aware that he never testified that the undiscounted value of those agreements was actually four times more?
A. That's true.
Q. Now, Mr. Weinstein, one of the Georgia-Pacific factors is duration of the patent, correct?
A. Also true.
Q. And factor -- this is Factor 7; is that right?
A. Yes, sir.
Q. And Factor 7 is relevant because the length of the license might impact the parties' negotiating positions, correct?
A. That's true.
Q. The parties might have a different set of expectations if the length of the license was one year versus seven years, right?
A. I agree.
Q. There might be different options available to the party taking the license at one-year point versus, you know, seven years?
A. I agree.
Q. So for example, Google might have been less willing to pay $\$ 45.5$ million and would have just kept on using other technology that it had for the next year, correct?
A. That's a possibility, if it had alternatives that were equally valuable.
Q. So you never analyzed whether Google would have paid Arendi $\$ 45.5$ million for a one-year license or just used another technology, such as Smart Linkify or Linkify?
A. Well, my understanding is that, according to

Dr. Smedley, there were no viable non-infringing
alternatives to the accused functionality.
Q. Did you do any analysis on your own with respect to Smart Linkify or Linkify in particular?
A. Well, I thought about both, but ultimately I relied on Dr. Smedley.
Q. Just a couple of more questions, Mr. Weinstein. You didn't look at Google's revenue as a starting point for your royalty analysis, correct?
A. That's true.
Q. Did you look at actual usage statistics of the downloaded apps to determine if the users were actually using the downloaded apps?
A. I did not.
Q. Did you look at any statistics for the downloaded apps to determine if the users were actually using the accused functionality in this case of -- on those apps?
A. I'm not sure $I$ understand your question, but the answer is, $I$ think I did not.
Q. And I can re-ask it. Did you look at any data to understand if, at all, users used STS on any of those downloaded apps?
A. Well, I looked at the volume of downloaded apps as we've seen, but I didn't look at usage data, if that's your question.
Q. That's my question. Thank you.

THE COURT: Any redirect?
MR. ARD: Yes, Your Honor. Thank you.
REDIRECT EXAMINATION

## BY MR. ARD :

Q. Mr. Weinstein, let's start with the -- with the accused units issue.

You were asked about whether the units you used were for Android 8 and Android 9 apps. Do you recall that?
A. I do.
Q. Why did you conclude these units were for Android 8 and Android 9 apps?
A. Basically, two reasons, maybe even three. First, that was the information provided by Google, and so I relied on Google's information.

Second, it turns out that the numbers that I used for accused apps are the same numbers that Google's expert used for the number of accused apps. We both used the same numbers.

And third, with respect to all of the apps with the exception of -- possible exception of Chrome, only Versions 8 and 9 were ever accused. And so the numbers that Google produced with respect to those apps would have to be the right numbers to use.
Q. Did you prepare a slide to explain this to the jury?
A. I did prepare that slide. Yes, sir.
Q. All right. Let's walk through the slide. Who is Douglas Kidder?
A. Douglas Kidder is Google's damages expert in this case.
Q. Okay. And did he prepare an expert report in this case or several expert reports in this case?
A. Yes. He prepared two reports in this case.
Q. And if you look at the header up there, "Accused App Downloads," is that his -- the language from his report?
A. It is.
Q. And if you look at all the apps on this page, is it your understanding that at the time he wrote this report, all of these apps were only being accused for Android versions, running on Android Versions 8 and 9?
A. Yes. That's my understanding. That's what I tried to explain in my testimony.
Q. Okay. And did he agree with you on what the number of accused units were?
A. Yes. I compared the numbers that he used as accused app downloads for each of these apps with mine, and each one is identical to mine. And if you look at the bottom source, he used the same source that I used. Those are both Google spreadsheets that contain this information that Google made available to us in this case.

So he and I used the same source from Google, and we
have the same answer for 2018.
Q. So let's look at a few of these.

Well, first, when you say "the same source," you're at that long set of numbers at the bottom, GOOG00157, 158, for example?
A. Yes.
Q. And do you believe that one of those is one of the documents, maybe, that counsel just showed you?
A. Yes. Actually, the source for this particular year is the second document there that ends 349 , because that covers the 2018 period.

But we both looked at both of those documents. It's just the first source that ends 158 covers an earlier time period. Both of these spreadsheet were produced by Google, made available to Mr. Kidder and to me. We both used them. It's the same source that ends 359 that contains the figures that we took for accused app downloads for 2018.
Q. Okay. And so you were both looking at the same document, correct?
A. Yes.
Q. And was that -- who produced that document?
A. Google.
Q. Google. And did his interpretation of that document agree with yours?
A. It did. He treated the entries on that document as accused app downloads for 2018, just as I did.
Q. Okay. And was it your understanding that when he's talking about accused downloads, that for these apps the only thing that was accused were apps running on Android 8 and 9?
A. Well, that's my understanding. Since he has the same answer, I assume that was his understanding as well.
Q. I see that Chrome is on the chart. Did he also have the same units as you for Chrome?
A. He did. It's not on this chart for 2018 , but he and I had the exact same units for Google Chrome for 2018 as the number of accused apps for that year as well. Q. So is it fair to say that Dr. Kidder here is interpreting the data produced for 2018 as reflecting the apps that Arendi is accusing Google of infringing in this case?
A. It is.
Q. So it's fair to say that Dr. Kidder here is interpreting the document the same way as you in the sense that he is concluding that the data that Google produced is showing which -- say the top line, Docs, what the number of units of Docs are that are running on Android 8 and 9; is that fair?
A. Correct.
Q. Okay. So he's interpreting the same document the same way you are; is that your testimony?
A. I agree.
Q. Okay. Now, you mentioned that there's also

Interrogatory that --
MR. ARD: Can you put that on the screen, please.

BY MR. ARD:
Q. What do you mean by "Interrogatory"?
A. Well, in cases such as this one, the parties request information from one another and they provide information to one another during the pretrial phase so that each side has the information it needs to prepare its case. And interrogatories, in my view, is a fancy word for questions. They ask questions of one another and provide answers to the questions.
Q. And that's something that Google provided a response to here?
A. Yes, sir.
Q. And Google also produced these documents, I think you mentioned; is that right?
A. It did. It made these documents that are cited at the bottom of the slide available both to Mr. Kidder and to me.
Q. Did you feel you were entitled to rely on Google's data and documents?
A. I did.
Q. Who has the best information about how many users are installing Google applications on which version of Android?
A. As far as I know, Google does.
Q. Did Google ever give you an updated number and say
"use this instead" for which apps are being run on
Android 8 and 9?
A. No.
Q. So based on the documents that were provided to you in this case, what is the best way to determine the number of accused units for the various apps?
A. Well, $I$ believe it's to do what $I$ did, which is to rely on the information that Google provided.
Q. And by the way, is there any difference between the way Google produces data for Chrome and non-Chrome devices -- or sorry, Chrome and non-Chrome apps?
A. I don't really understand the question.
Q. Was there any difference between how you determined the Chrome apps that are running on Android 8 versus non-Chrome apps that are running on Android 8?
A. I relied on the data provided by Google.
Q. And was there a difference in the way Google produced it?
A. No.
Q. You were asked some questions about the fact you didn't adjust the rate --

MR. ARD: You can take that down.
BY MR. ARD:
Q. -- why you didn't adjust the effective royalty rate downward to account for the fact that the licenses included other patents.

Do you recall that?
A. I do.
Q. So why? Why didn't you account for or adjust the rate to account for that, the licenses on the Google patents?
A. Mr. Hedloy indicated that it was the ' 843 patent, which is the patent-in-suit in this case, drove those license negotiations, so $I$ rely on that fact.

My understanding also from Mr . Hedloy is that the rate would not change if there were fewer patents in some of those prior licenses. And in fact, those prior licenses had different numbers of patents in them. basically, I rely on Mr. Hedloy with respect to that question.
Q. Is it common for licenses to include a portfolio of patents?
A. It is very common, yes.
Q. And is it common when one of the licenses -- sorry -one of the patents is in litigation like in the Apple case, for you to attribute the value of the license to that patent that's in litigation?
A. It's very common, yes, sir.
Q. All right. And that's what happened here, correct?
A. It is.
Q. You were asked several questions about the difference between the actual license rates that were agreed to with Samsung and Apple and hypothetical rates you are opining on.

Do you recall that?
A. I do.
Q. Do the differences between the real-world rates that were agreed to and the hypothetical rates impact your assessment of whether your multiplier was conservative?

Q. And after the Apple license was reached, did you take that license into account in your analysis?
A. I did. The Apple license was taken into account in the sense that I used it to calculate the effective royalty rate associated with real-world agreements, and I included it in that calculation. And then it made its way to the calculation of an effective royalty rate for the hypothetical negotiation. So $I$ took it fully into account.




Q. And as parties approach trial, is it common in your experience for the damages numbers to be reduced in the reports as they streamline the case?
A. Yes. That's happened in this case, and it could have happened in the Apple case had the Apple case continued to
proceed. But it's happened in this case as well.
MR. PETERMAN: Your Honor, could we have a sidebar?

THE COURT: Yes.
(Whereupon, the following occurred at sidebar:
MR. PETERMAN: There was testimony where the questions were blaming Google for I think created the impression Google was not -- Google complying with orders of the Court or discovery leaving the jury with the misimpression somehow Google was deceptive in the way it was conducting discovery in this case. And we'd just appreciate an instruction with respect to -- with respect to that, so the jury is not left with misimpression here.

THE COURT: Counsel.

MS. SRINIVASAN: No, Your Honor, they very expressly raised on cross-examination the notion that Mr. Weinstein should have done something differently or gave the impression that there might have been unit missing. They said: You understand or if there could have been other apps that weren't included here, you didn't take that into account.

That gives the impression that he wasn't entitled to rely on what was produced to him. The question did Google say to you, you shouldn't use certain units that were in the list that Google provided to you
and given what was done on cross-examination, that's a fair question. There was no suggests about their discovery conduct at all.

THE COURT: I tend to agree with plaintiff on this issue. I don't think there's been an inference or suggestion that Google hasn't complied with discovery. There is a factual dispute about what was produced in the litigation and the parties are free to explore that with their fact witnesses how they like.

MR. PETERMAN: There is also a reference to supposed Interrogatory answer that has not been -- doesn't exist, frankly, has been referred to, and I know I asked him about it. He said, you know, he couldn't identify that Interrogatory, but he has repeated a couple times.

THE COURT: I agree that happened.
MR. PETERMAN: Okay.
THE COURT: Is there anything you propose we do about it?

MR. PETERMAN: I would ask for a curative instruction with respect to any suggestion that there's a Interrogatory response that is somehow misleading.

MS. SRINIVASAN: There is an Interrogatory response that identifies the data produced by Google. We can walk the witness through it. I don't understand the objection. Google produced data. It was asked to produce
data relevant to the accused products. It did so. It referenced Bates number for what it produced in an Interrogatory response. That's what he's talking about.

I'm not really sure what the instruction would be, but Google -- everything that he's relying on came from Google. But there's an Interrogatory response that lists the Bates numbers for the files that he used, were shown by counsel. So I'm not sure what we are curing.

THE COURT: We had testimony from the witness about an Interrogatory response, but it wasn't shown. My understanding that testimony happened during the redirect.

MS. SRINIVASAN: It was on cross-examination. For the benefit of the jury, we asked what is an Interrogatory response because the question was: What did you rely on? He said: I looked at the numbers, and I looked at an Interrogatory response, wasn't sure if the jury would know what an Interrogatory response was.

THE COURT: We could show it to them if that would help.

Do we have a proposal on the table to show the Interrogatory response?

MR. UNIKEL: We would have to find out which Interrogatory response it is. It is not listed in the report that exhibit. We don't know which Interrogatory response it is. That's part of the difficulty.

THE COURT：Let＇s do this，I was hoping we could finish the redirect before the lunch hour．Let＇s send the jury out．We can consult the transcript about what was said．We can figure out how to clean this up if it needs to be cleaned up．I＇m not sure that it does．

MR．BELGAM：My issue now，consistent with the local rule of depositions，once he＇s on the redirect，we can＇t consult with him．

THE COURT：Counsel，do you have an agreement on this？

MR．UNIKEL：Since $I$ was part of the agreement on this，and since I thought the agreement was they were supposed to be doing the talking for this，by the way．

We did not have an agreement．The agreement was once the witness is passed，the bubble applies．We did not have anything except redirect from that．

THE COURT：I agree on this issue with defendant．We are not going to pass．We are not going to allow the witness to consult while he＇s remaining up on redirect．

MR．BELGAM：If I may，Your Honor，the local rule，which regards depositions，which I know that judges in Delaware have applied to trial testimony，says from the commencement until the conclusion of the deposition questioning by the opposing party，including any recesses
or continuance, counsel for the deponent is not to consult or confer.

My practice in this court has generally been once the witness is passed on cross-examination if you get a break, you prep your witness.

THE COURT: Are you referring to local
Rule 43.1?
MR. BELGAM: No, 30.6.
THE COURT: Can we consult local -- let's stop for a second. Can you pull up local Rule 43.1?

MR. BELGAM: I had a screen shot.
THE COURT: What we are going to do is send the jury to their lunch. We will sort the rest of this out.

MR. BELGAM: Okay.
(Whereupon, the discussion at sidebar concludes.)

THE COURT: Ladies and gentlemen of the jury, I happen to know that your lunches have arrived. So what we're going to do is we're going to let you take your lunch break at this time, so we are going to recess for lunch.

We have lost a little bit of time with some discussions I've had with the attorneys in the prior two days, so we'd like to see if we can get lunch done in half an hour. I know your lunches are already here. If that's
an issue, you can raise it with Ms. Garfinkel. Okay? (The jury exits the courtroom at 12:43 pm.)

THE COURT: All right. Counsel, I'm going to take a brief recess myself. Hopefully, you-all can get some of this worked out. In the meantime, I'm going to ask that counsel not consult with the witness about the subject of his testimony.

MR. ARD: Thank you, Your Honor.
(Whereupon, a recess was taken.)
THE COURT: All right. Please have a seat, everyone.

I had a busy lunch hour, and I'm sure you did too. So we had a request on the table from Google for a curative instruction regarding discovery. That request is going to be denied. I would need the relevant portions of the transcript, and I didn't think there was any implication that Google hadn't been fulfilling its discovery obligations.

There was also a question about procedure and whether or not counsel was permitted to consult with the witness after they had been turned over for redirect, and I ordered before I left the bench that there shouldn't be any consultation. That was for a number of reasons, including that I thought we were going to be finished with the witness before the lunch hour anyway. So it was just
because of happenstance that we weren't.
And there was a dispute as to what the agreement of the parties had been. We got halfway there yesterday when we talked about consulting with the witness before cross-examination, but $I$ guess we didn't finish it off, and then we ended up in this situation today.

So the rule going forward is going to be the rule that $I$ set forth before we left for lunch, which is, after the witness is turned over for cross, there's no consultation with the witness about the subject matter of their testimony until the witness leaves the stand.

Anything else that we need to address before we bring the jury out?

MR. PETERMAN: Your Honor, may I be heard briefly on the issue, please?

THE COURT: Yes.
MR. PETERMAN: Your Honor, during cross --
THE COURT: I thought you wanted a sidebar.
MR. PETERMAN: Would you prefer a sidebar?
THE COURT: Let's do that.
(Whereupon, the following occurred at sidebar:
THE COURT: Okay. And we are imposing the rule that we have attorneys for each side who are handling this witness if the objection has to do with the witness' testimony, Counsel.

MR. PETERMAN: Your Honor, on cross, Mr. Weinstein said he relied on an Interrogatory. I asked him what the Interrogatory was. He couldn't identify it. On redirect, counsel asked him about the Interrogatory again. Mr. Weinstein explained what an Interrogatory was, then counsel said -- and that's something that Google provided a response to here. And then Mr. Weinstein responded, yes, sir.

So counsel on redirect posed, you know, mysterious Interrogatory that Google provided a response to. As far as we can tell, this Interrogatory doesn't exist. We looked through all the Interrogatories in this case. There is not an Interrogatory that asks for downloads by version of the Android system.

Over lunch, we expected counsel for Arendi would actually look for the Interrogatory. They have not identified an Interrogatory to us. So what's occurring now, there's a phantom Interrogatory that's hanging out there that supposedly Google responded to, gave Mr. Weinstein information relying on that data. Now, Google is trying to disavow itself from that Interrogatory that is just demonstrably untrue, you know, speculation or implication.

So we feel that without a curative instruction that specifically says that there's no evidence of an

Interrogatory, there's no evidence that Arendi actually asked for downloads by versions of Android, Arendi could have asked for such data and Mr. Weinstein's testimony should be stricken from the record.

THE COURT: Counsel.
MR. ARD: This was already explored on cross.
He asked the questions about it. He asked questions about this issue. Nothing new came up on redirect. The only question asked on the redirect was the what's. That's something that Google provided a response to here then the question was: And Google also produced these documents, I think you mentioned; is that right?

It did. It made these documents that are cited in the bottom of the slide available to Mr. Kidder.

The question was: Did you feel you were entitled to rely on Google's data and documents?

I did.
You know, the questions went from there there's no question asking him to say on redirect, there was nothing new about asking: Did you rely on the Interrogatory in any way? The only thing asked: Did you rely on the data and the documents produced. That's --

THE COURT: All right. Counsel.
MR. PETERMAN: He skips over very quickly the question he asked: That's something that Google provided
a response to here?
The answer was: Yes, sir.
That's the Interrogatory. So that's hanging.
There was a response to an Interrogatory that asks specifically for the data that he's relying upon. You might want to go over the question, but the question --

MR. ARD: I read the question.
THE COURT: I will ask you direct your comments to the Court.

Is there an Interrogatory?
MR. ARD: We weren't able to come --
THE COURT: You know in the case what
Interrogatories. You asked, was there an Interrogatory that has to do with this issue?

MR. ARD: We don't know, Your Honor. We haven't consulted with the witness about what Interrogatory he's referring to, but my point is that on the redirect he was not asked anything about whether he relied on the Interrogatory response. All he was asked: Google also produced these documents, I think you mentioned; is that right?

I did. It made these documents that are cited at the bottom of the slide available both to Mr . Kidder and to me.

Did you feel you were entitled to rely on

Google's data and document?
I did.
The only time he said anything about the sound of it was the cross. It's been crossed.

THE COURT: Here's my ruling on this. A request for a curative is going to be denied, but Google has the ability to bring up the effect there's a phantom Interrogatory that nobody has seen. If it gets to be later in the case and that evidence hasn't come in or some objection from their side about the fact there is no Interrogatory response, you can renew your request at that time.

MR. PETERMAN: May I have a three or four-question recross on this issue?

THE COURT: Yes. Then you get to have the final word.

MR. ARD: Okay. You want him to go first?
THE COURT: You get to go. He gets to go then you get to go.

MS. SRINIVASAN: Just since the Court said the rule that was going to be going forward as to witnesses when they are tendered, just for the Court's education as I explained to counsel before the break, I had been proceeding under the assumption that was the rule as well.

Our witnesses, once they have been tendered, we
have not been communicating for purposes of redirect. I wanted that to be clear for the record. We have been following that rule.

THE COURT: Very good.
MS. SRINIVASAN: The Delaware rule may be different. That was my perception as well. That is what we have done in our case in chief. It will be an evenly applied rule.

THE COURT: Very good. I appreciate you putting that on the record. Thank you.
(Whereupon, the discussion at sidebar concludes.)

THE COURT: All right. Ms. Garfinkel, bring the jury back in.

MS. KANNOM: Excuse me, Your Honor. Before we bring the jury back in --

THE COURT: Please approach.
MS. KANNOM: Thank you. Apologies, Your Honor. My name is Hannah Kannom. I'm here on behalf of Apple, Inc.

During the last examination, there was some disclosure of Apple's confidential information in both the agreement between Apple and Arendi, as well as information produced in the previous litigation. So we will be filing something, this evening, to seal that portion of the
transcript.

But if we could make sure that we're protecting that information and sealing the courtroom when it's presented, so that that doesn't happen again.

THE COURT: Any objection from the plaintiff?
MR. ARD: No objection.
THE COURT: Any objection from the defendant?
MR. PETERMAN: No, Your Honor.
THE COURT: All right. That portion is conditionally sealed. We'll have you file your motion, and then you'll have an opportunity to make your application for redacting the transcript.

MS. KANNOM: Thank you.
THE COURT: All right. Let's bring the jury in.
(The jury enters the courtroom at 2:00 p.m.)
THE COURT: Please be seated, ladies and gentlemen of the jury. I apologize for the delay. The lawyers and I had more issues to discuss.

We will continue with the redirect examination of Mr. Weinstein.

Mr. Weinstein, you are still under oath.
THE WITNESS: Yes, Your Honor. Thank you.
BY MR. ARD:
Q. Good afternoon, Mr. Weinstein.
A. Good afternoon.
Q. Google also made a big deal about the fact that Apple had a much higher damages number in your report from 2019. Do you recall that?
A. I do.
Q. And I think you testified that parties commonly streamline the case before bringing it to a jury; is that correct?
A. That happens often, yes.
Q. Do you think that the much higher number that was in the damages report from 2019 would have been a number you presented to a jury at trial against Apple four years later?
A. You know, it's hard for me to answer beyond repeating something we just agreed about, which is often, as the case proceeds toward trial, the parties streamline things, and when that happens, the damages number goes down. Q. And given that, do you think it's appropriate to compare a damages number from four years ago in another case that was not brought to trial to the damages number presented here at trial four years later?
A. Well, I've described sort of how I feel about that. Typically, my experience over the years is that damage numbers do decline as one gets closer to trial, and inevitably, things are streamlined a little bit. And the
impact of that is to typically reduce the size of the damage claim. So here, instead, we've actually gone all the way to trial.
Q. And has your number in this case changed since 2019? A. Actually, it has. It's changed significantly. It's gone down significantly since the first time I did a report in this case. And that reflects this same effect, which is that, over time for one reason or another, the parties in this case have streamlined things to some extent. And as a consequence, the damage number that I calculated early on in my work here and in my first report has since been significantly reduced.
Q. And we don't know what number Apple would have brought to the jury, because Apple, unlike Google, didn't force Arendi to go to trial; is that right?
A. Correct. Apple and Arendi settled.
Q. I'm showing you the slide that you showed earlier. This is the reasonable royalty damages for the apps, correct?
A. Yes, sir.
Q. Do you recall if Google asked you questions about whether Google benefited from these downloads? Do you recall that?
A. Actually, $I$ don't recall that specifically, but it wouldn't surprise me if $I$ was so asked.
Q. Okay. And there are hundreds of millions of apps installations here, correct?
A. There are.
Q. In your opinion as an economist, does it make any economic sense to suggest that Google wouldn't benefit from hundreds of millions of downloads of an app?

MR. PETERMAN: Objection. Leading.
THE COURT: Can you rephrase the question.
MR. ARD: Sure.
BY MR. ARD:
Q. As an economist, do you think that Google would benefit from hundreds of millions of app installations and downloads?

MR. PETERMAN: Objection. Leading.
THE COURT: Overruled.
THE WITNESS: Yes, my expectation is that Google, with its products, endeavors to provide consumers with functionality that consumers like, and that, ultimately, by so doing, benefits were down to Google. I mean, that's how the system works.

BY MR. ARD:
Q. And what type of revenue does Google make from these downloads?
A. Well, there are two types.

MR. PETERMAN: Your Honor, objection. There's
a MIL that's -- can we have a sidebar on this?

THE COURT: Yes.
(Whereupon, the following occurred at sidebar:
THE COURT: I think $I$ know what the basis for your objection is. Why don't you put it on the record.

MR. PETERMAN: There are two bases. There is a MIL that's been ruled on by the Court that doesn't allow Arendi to go into questions regarding monetization or advertising. So we don't know exactly where counsel is planning to go here.

Number 2, it is also beyond the scope of my cross. I actually didn't ask him about benefits that Google was receiving. In fact, Mr. Weinstein didn't recall me asking that question because I didn't. So counsel sort of set that up as a strawman to go into the line of questioning he is going into now.

MR. ARD: First, on the MIL. The MIL, all it said there's two parts to it. One, you can't -- he can't testify that Google is making money from the monetization of user data. He's not going to say that. We are allowed to ask questions about the making advertising revenue. We are now allowed to do is put a dollar number on it. He is not going to be doing that.

THE COURT: Okay. So he started to answer that there were two types. Do you happen to know what the two
types are that he's going to say?
MR. ARD: We rehearsed this. I am sure he is going to subscriptions services that you pay money to subscribe to, you know, Gmail corporate Gmail versions. The second advertise revenue. He knows not to talk about monetization of user data.

Second point is he has opened the door. The question that was asked during cross is whether he was aware that Google is losing money from these apps.

THE COURT: So I agree that he has opened the door to the question about, generally, that Google does make money as a business, and if counsel is reasonably confident he is not going to say monetization of user data, we can move forward.

I take it Google wouldn't want him to lead a little more and say "you mentioned there were two types." was one of them advertising? Is the other one subscription service.

Is that something you would be okay with? Would you rather see what happens?

MR. PETERMAN: I think if those are literally the questions, that is the safest course to proceed on.

MR. ARD: That's fine. I would also be fine with it if the Court wants to truncate mentioning monetization of consumer data.

THE COURT: Let's proceed how we discussed. You can make a slight modification in your outline. We can go from there.

MR. ARD: I know advertising revenue is what he's going to say. Second one, I am 90 percent sure he will talk about subscription.

THE COURT: Is there another way Google makes money besides monetization of user data?

MR. ARD: I think the door has been opened. We don't need to make that argument now.

THE COURT: Okay. Fine. Let's proceed. (Whereupon, the discussion at sidebar concludes.)

THE COURT: Can you re-ask the question, Counsel.

MR. ARD: Yes, Your Honor.
BY MR. ARD:
Q. Does Google generate advertising revenue from hundreds of millions of downloaded apps?
A. Yes, sir.
Q. And do you expect that that advertising revenue would be significant?
A. Is what? Significant?
Q. Significant.
A. Yes, I would think so.
Q. Mr. Weinstein, you are an expert in license agreements, correct?
A. I've certainly have been able to see dozens, probably hundreds of license agreements over the course of my career, so if that makes me an expert, I am.
Q. In your experience, would you expect a licensee to release claims asserted against a different company in separate litigation without mentioning that separate company in the agreement?
A. No. If that was the case, I would expect it to be specifically incorporated in the agreement itself.



BY MR. ARD:
Q. Mr. Weinstein, you were asked some questions about the MMI license.

Do you recall that?
A. The which license?
Q. The MMI license?
A. Yes, sir, I was.

Q. And so why did you take a straight average of the four royalty rates in your analysis?
A. Well, there were four agreements, and each reflects a real-world outcome associated with a licensing effort that ultimately was successful, and as a consequence, it's necessary to consider all four rather than some smaller set of the four agreements.

Q. And does it make your 4 X multiplier conservative?

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MR. ARD: No further question.
THE COURT: Thank you. We'll have a short recross.

## RECROSS EXAMINATION

BY MR. PETERMAN:
Q. Mr. Weinstein, during my cross-examination of you, you mentioned an Interrogatory that you couldn't identify, correct?
A. I mentioned the Interrogatories in discovery, yes, sir.
Q. You don't know if there are any Interrogatory questions that were posed by Arendi in this case that asked for downloads based on specific operating systems, correct?
A. That's true.
Q. You don't know if Arendi ever asked Google in any other manner for downloads based on specific operating systems, correct?
A. That's correct.
Q. But you're aware that Arendi could have asked Google for such information if it was important to it, correct?

MR. ARD: Objection, Your Honor.
THE COURT: Overruled.
THE WITNESS: That's true.

## BY MR. PETERMAN:

Q. And you never saw any information that actually indicated on the document which downloads went to which operating system, correct?
A. That's true with the one caveat that $I$ did understand that the downloads with respect to those apps that we've had up on the screen several times during my testimony pertain to Android versions eight 8.0. or 9.0. And I understood that throughout.
Q. And that understanding you had is actually not reflected on the document that you reviewed, correct?
A. It's not reflected specifically on the document from which I created that exhibit, that's true.
Q. And your expert report, you don't cite any specific document that confirms your understanding that you just told the jury about?
A. Well, I'd have to go back and look at that. But certainly, the intent, especially with respect to those apps that we've seen listed, was to be consistent with the discovery in this case with respect to products that were
accused because of Google Versions 8.0 and 9.0 in Android. Q. But you're not aware, sir, of any discovery requests in this case which ask specifically for downloads based on the specific version of the operating system, correct? A. That's fair.

MR. PETERMAN: Nothing further, Your Honor.
MR. ARD: No further questions, Your Honor.
THE COURT: Mr. Weinstein, you may step down.
THE WITNESS: Thank you, Your Honor.
THE COURT: Plaintiff may call its next witness.

MS. SRINIVASAN: Your Honor, the plaintiff will not be resting its case until the examination. We agreed -- the parties agreed that there would be an unbridled cross-examination of their corporate representative in lieu of calling him adverse in our case in chief. So we are not resting, subject to that. He's not going to be their first witness, but Google will be calling the next witness.

THE COURT: Okay.
Counsel.
MS. ROBERTS: Google calls Brahim Elbouchikhi.
THE CLERK: Please state and spell your name for the record.

THE WITNESS: Brahim Elbouchikhi.

THE CLERK: Can you spell it for the record.
THE WITNESS: Sure. It is $B-R-A-H-I-M$, last name is $\mathrm{E}-\mathrm{L}-\mathrm{B}-\mathrm{O}-\mathrm{U}-\mathrm{C}-\mathrm{H}-\mathrm{I}-\mathrm{K}-\mathrm{H}-\mathrm{I}$.

BRAHIM ELBOUCHIKHI, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:

## DIRECT EXAMINATION

## BY MS. ROBERTS:

Q. Would you please introduce yourself to the jury.
A. Hi. Yes, I'm Brahim Elbouchikhi. I am the director of product management at Google.
Q. Where do you live?
A. I live in small town in California called Belmont with my two kids, who are four and seven, and our dog, who is ten.
Q. And where are you from originally?
A. So I grew up in Morocco. And I came out here for college, ultimately went to UCLA and graduated with a degree in computer science and engineering.
Q. And did you continue your studies after graduating from UCLA?
A. Not right away. I worked for five years in technology consulting, and then ultimately went back to school after those five years to get my business degree.
Q. And you said that you are currently a director of product management at Google?
A. That's correct.
Q. How long have you worked at Google?
A. I have been there for eleven and a half years.
Q. How long have you had your current position?
A. About four years.
Q. Can you explain to the jury what is product management?
A. Yes, it is a thankless job. Effectively, we work with engineers, designers, marketers, public relations to define the right product, work to build that product until well-defined, and ultimately make sure it's successful in the market, and then continue to improve it over time as needed.
Q. In your current position, is there a particular product at Google you are responsible for?
A. Yes, I work on the Google Store today.
Q. What is the Google Store?
A. The Google Store is the e-commerce and retail
platform that Google uses to sell our hardware. So if you think of Pixel phones; Nest cameras, thermostats; or Fitbit products, we can distribute all of these. We also have two actual physical stores in New York.
Q. When you started at Google, what was your first role?
A. Yes. So I was a product manager on Android for commerce. So this meant that, you know, my job was making sure that developers could earn a living on Android.
Q. And how long did you have that role?
A. About four years in total. During that time, I took on some additional responsibilities. I was working on personal integration and search for Google Play, which ultimately is, you know, if you are an iPhone user, it's the App Store. The equivalent for Android is Google Play. So I led our first integration and search products.
Q. After your role in Google Commerce, what was your next role at Google?
A. I went to a small team. In 2015, I went to a small team called Cardboard. I don't know if you've seen it. We had these cute little headsets that you can put your phone in on Google and get virtual reality. And so you can look around. And it was a very fun, small team. And I spent two years on that team.
Q. After working on that virtual reality team, what was your next role at Google?
A. From there, I went back to Android to start working on machine learning for Android. This was 2017. And as part of that, I also started working on our camera products for Android as well and did that for about four years.

MS. ROBERTS: Your Honor, may I approach with some binders?

THE COURT: Yes.

## BY MS. ROBERTS:

Q. All right. Mr. Elbouchikhi, you've mentioned Android.

Can you explain to the jury what is Android?
A. Yeah. Android is initially an operating system.

It's the software that runs on your phone and makes sure that your phone can do all the things it can do.

So it can, like, take photos by talking to the camera on the device and manage that. It can make phone calls. It can obviously install apps and let you use those apps. So Android is at the core of your smartphone.
Q. Can you turn, please, to DTX-1068 in your binder?
A. Sure.
Q. What is that document?
A. This is a document from the Android developer website that describes the architecture of Android. Think of it as the blueprint. Much like a building, you have a blueprint.
Q. What is the Android developer web page?
A. It's developers.android.com.
Q. And what is the purpose of the Android developer web page?
A. Yea. So we have hundreds of thousands of people who build apps for Android. This is a website where we try to put information that helps them do their job. So we describe how Android works. We describe different capabilities that the operating system has. And we also give them effectively hints and tips for how to use the product as best as they can.

MS. ROBERTS: Your Honor, we move admit to DTX-1068.

MR. LAHAD: No objection, Your Honor.
THE COURT: It's admitted. (Exhibit DTX-1068 is admitted into evidence.)

## BY MS. ROBERTS:

Q. Can you please turn to Page 2 of DTX-1068.

MS. ROBERTS: And, Mr. Spence, can you put that on the screen.

## BY MS. ROBERTS:

Q. Can you please explain to the jury what this figure is?
A. Yes. So this is commonly referred to as a layered-cake description of the operating system. These are the various layers that ultimately are part of the operating system.

Again, it's the architecture, but think of it as just a layer cake. And if you look at the very top layer, that
is the app layer, so where there is the system app or any average app that you install, you know, Bank of America, Yelp app. That is the very top layer.

The next layer is a green layer, which is the Android Framework. And developers mostly interface with that particular layer. That's how they get all the services they need. That's how they get all the capabilities they need to build the apps.

And then it goes on from there to many more layers below. They are much more technical and deep in detail, all the way to the kernel, the red layer at the bottom, which is composed of very low-level software that is called drivers and firmware that run literally inside of the hardware.
Q. Thank you. Could you turn now, please, to PX-0169 in your binder?
A. Sure.
Q. What is that document?
A. So this is another document from the same website, from, developers.android.com. And this one is effectively doing the same thing but for the application. So it describes what is the composition of an application, what it's made of all the way from what we call a manifest, which kind of shows what's -- what are the various compositions of the app. And it gives us more details
about what's inside of an app in Android.
MS. ROBERTS: Your Honor, we move to admit
PX-0169?
MR. LAHAD: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit PX-0169 is admitted into evidence.)

## BY MS. ROBERTS:

Q. Mr. Elbouchikhi, what does it mean to say that something is open sourced?
A. Yeah. So Android is an open-source operating system. And what that means is that anybody really can go on the web. You can go to a repository and read the source code of Android. You can also download it, and, you know, modify it in your computer system or in any way you want. And then there are others who contribute to it.

So you can see it. You can play around with it. You can modify it. You can even contribute to it. So those are roughly the various parts of open source.
Q. Do you have an understanding of the Google products and services that Arendi is accusing of infringement in this lawsuit?
A. I do.
Q. Can you please explain what that understanding is?
A. Yes. So my understanding is the Pixel 2 and 3 devices, the Google phones. In addition to that, there's
about 12 apps ranging from Gmail, Chrome, Docs, Sheets, Keep, and a few others that are accused.
Q. Do you have an understanding of whether there are specific features that are accused of infringement?
A. Yes, I do.
Q. And what is that understanding?
A. It's a feature we call Smart Text Selection.
Q. And are you familiar with Smart Text Selection?
A. Absolutely.
Q. Can you give the jury a high-level description of how it works?
A. Yes. So Smart Text Selection solves a really kind of pain point for users where, you know, if you are in -looking at some text on your smartphone and you want to select it, you will long press on a text, and then usually you have to kind of play around with those things on the edge until you get exactly what you are looking to select.

And what Smart Text Selection did is that we would automatically expand to include the entirety of whatever it is that we think you were meant to select.

So, for example, if it is an address, and you select the street number, it would automatically expand to select the entire address so you don't have to play around with it in any way.

And on top of that, we also add some default actions
to that selection. The more common ones are to copy, cut, and share obviously. And we also have what's called smart actions. And smart actions were, basically, things that were relevant to the specific text you selected.

So let's say it's an address. We are going to have a shortcut like a little button to take you to Maps directly so you can start navigating to that address. If it is a phone number, we are going to have a dialer button so you can start a phone call with that particular phone number right away. So those are the various aspects.
Q. In your experience, which actions are most commonly taken by users that are using Smart Text Selection?
A. You know, most text is just text. So the most common one is effectively copy, cut, and share. But the smart actions are also helpful at times.
Q. How was Smart Text Selection developed?
A. Like most things at Google, it was a collaboration with a few divisions in the company. The first was a research team, a Google Research team in Zurich that developed the machine learning model that would automatically figure out how to expand and select the entire selection.

Then, there was a team in London that we call the Android Framework team. And they turned that into a product. And what they do is they look at it, and they
say, Okay, you know, how slow is this technology? Is it fast enough for it to work for user to long press and have it work. Does it consume too many resources? What is the API? What is the way that the developer would access this feature in practice? And so they spent a lot of time thinking about that and turning it into a product, ultimately.
Q. Were you involved in the development of STS?
A. Yes. So during my kind of like timeline at Google, we talked about how I joined in 2017. I joined Android to lead Android Machine Learning from a product perspective. So that's when STS had been in development.

But one of my first tasks was to figure out whether we should launch it or not, whether it was ready to launch or not. And then from then on until it became actually available to users in December of 2017, I had been really heavily involved with the feature.
Q. Now, you discussed earlier the distinction between the Android Framework and hardware and apps.

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Where is the source code for STS located?
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A. The source code is in the Android Framework.
Q. Is there any STS source code in the apps?
A. No, there is not.
Q. Why did Google place the code for $\operatorname{STS}$ in the Android Framework and not in individual apps?
A. Yeah, so this is a really important point. There are two reasons roughly why we do it this way. One is the user experience. Now, imagine if whenever you wanted to select text, in one app it would work one way, and in a different app, it would work a different way.

You know, so some app would make you long press. Another one would say, swipe left, swipe right. The inconsistency will literally drive users kind of bananas. So we don't do that.

The other reasons is maintainability of the software. Imagine this was built into apps. And now we've got $100,000,200,000$ apps that each have this software. Well, let's say you find an issue. It is broken in some way. And you want to fix that issue. How would you do it? You would have to literally get 100,000 apps to go on and each fix the issue and then push that issue to their users. And so it just -- this is not how it works in practice. This is not how software works.

And so because of that, whenever we have something that we wanted to be common behavior across all apps where user experience is really important, we build it this way into the Framework. So every user has the same experience. Every app has an easy way to access that feature.
Q. What are Intents handling instructions?
A. So Intent handling instructions are, you know, we talked about the smart actions, which is a Maps action or phone number. You press that button, and it kind of calls. It calls a dialer, and it starts calling a phone number.

The way that works in practice is that button has we call it a URL, just like a website URL, but it's specific to Android. And that URL, it goes to the Framework. It goes to the Android Framework.

And the Framework says, "Okay, so you're trying to initiate a phone call. Okay. Let me look for an app that can do that."

So every app can raise its hand and say, "I can handle phone calls. I can handle phone calls." And because Android is an open-ended system, you can actually do that. So you can have multiple dialers, for example. And every app will say, I can handle phone calls. And then the Framework will then route that URL to the right app.

So it starts from the initiating app, whichever it is. It goes through the Framework where the Framework then looks for somebody who can handle this particular action. And then from then on, that request is forwarded to that app.
Q. And where are the Intents handling instructions
located?
A. They are in the Framework. They are in the Android Framework.
Q. Why did Google put the Intents handling instructions in the Android framework?
A. Similar to the action earlier, if there wasn't a pattern for how to make these requests through the Framework, then every app who wants to initiate a phone call will now have to have a slightly different way to do it.

And so the best way to do this is to have a -- you have a pattern. You have a specific way of doing things. And then every app just has to just do the same thing over and over and over, which means there has to be a common place where this information resides. And in Android, that's in the Android Framework.
Q. Do you users need to install STS or the Intents handling code to be able to use STS?
A. No. That's one of the beauties of this is that you don't have to install it. It's just there.
Q. When did Google launch STS?
A. So here we have to talk about a couple of time lines. Like I said, when I joined in July of 2017, one of my first tasks was to figure out whether we can launch this feature or not.

So we decided it was not ready. It was not ready to launch from a quality perspective. However, the software was in Android O, which is the one that launched in August of 2017. So the software was in, but it was not accessible to any user. So if you had an Android phone that was running Android $O$ at the time, and you long pressed, you are not going to get the experience that I described to you. You are not going to get that. You are going to get the Legacy older experience.

In December of 2017 is the first time when we actually activated this feature for users who had O MR1. And sorry. It is a little bit of lingo. But MR1 is called a maintenance release. So it means there's a few bug fixes in that release.
Q. How could it be that the source code was in Android O, but users couldn't use it yet?
A. Yeah, it is confusing but, basically, what happened, think of it as you had a cable box. You had a cable box at home. The box is there. You can plug into the wall. You can connect the cable to it. But it's not going to actually show you any programming unless the cable company turns it on and turns on service.

So effectively think of it as in December of 2017 is when Google turned on that service and made it available to end users. So you had the box with you in August, you
know, September, October, November, but the box was not transmitting anything. It was just white noise.
Q. Now, once Google enabled STS, could all users of Android O with MR1 use it right away?
A. Well, I wish they could, but they couldn't. And I think to talk about this, we should kind of step back and understand how Android works in a way.

And so when Android -- when Google makes a release available, let's say in this case 8 Android $O$ with a maintenance release. A phone manufacturer, for example, Samsung or Motorola, will have to take that release. They then have to modify it in the way that they want it to be.

Because if you pick up a Samsung phone and a Motorola phone, they look very different because each phone manufacturer, you know, adds their own little secret sauce and, like, things on it. And so they have to modify that release again to make it theirs, quote-unquote.

Then you have to test it really, really well. Because imagine, they are going to push it to millions of phones. And if there's an issue, it is an absolute disaster for them.

Then, they have to take it to carrier certification because the carrier also has a requirement. So, like, it can't drain the battery. You got to be able to make phone calls. Quality of the network has to be good. So then
the carriers do their own testing.
Only after those three steps can they start rolling it out to users to actually use. In my experience, I've worked on, I think, nine or ten releases of Android, and this process takes three to six months.
Q. And what about users with Google devices, do they need to go through that process?
A. So just, you know, the Google Store does various things, and we market it and say that, "Hey, if you have the Google Pixel phone, you will get these updates faster." So for Google users, Google phone users, they would get it much faster.
Q. So practically, given the process that you just described, when would users of non-Google Android phones have been able to use STS?

MR. LAHAD: Objection. Calls for speculation. I'm sorry, Your Honor. Calls for speculation. Lacks foundation. THE COURT: Overruled. THE WITNESS: Could you repeat the question.

## BY MS. ROBERTS:

Q. Yes. So given the process you just described for these non-Google devices, practically when would users of non-Google Android phones have been able to use STS?
A. So my experience would have been somewhere three to
six months after December. So we're thinking, you know, sometime around April, May, maybe as late as June is when we rolled it out.

Now, and I think this brings in to one other important point, and it's this is a lot of work. It is very resource intensive for a phone manufacturer to do all this testing and the rollout. And so a lot of them just don't. And maintenance release is effectively just a few bug fixes usually, a few issue fixes. And so lot of them just skip and just launch the main releases, and that was the case for this release as well.
Q. And just to clarify jury, when we have been saying Android O, is that interchangeable with Android version 8? A. Yes. I'm sorry. But it is interchangeable; 8 is technically Android O. It's the same. They have moved to numbers now. So we are good.
Q. What was the first Android release with wide adoption that included STS?
A. So that would have been Android 9 or P. So it would have been Android 9 is the first one that launched in August of 2018. So that's the first one that came out right out the door with STS built into it.

And just to make another point, we talked about the rollout of the maintenance release going all the way to May, let's just say April even. That's only four months
before we have to start releasing the next Android release. So this is, again, why most phone manufacturers who just finished a marathon, they have to start a new one. So they -- most of them decide to skip these maintenance releases. And that was definitely the case for $0-M R 1$.
Q. How do you know that was definitely the case for O-MR1?
A. It was my job. I mean, I was monitoring the release of this feature and looking for adoption as a good product manager would. And it was very, very challenging at the time to convince phone manufacturers to take up this release.
Q. When STS was launched, did Google market that feature at all?
A. Yes, we did.
Q. How did Google do that?
A. We included it in the developer conference that we have every year.
Q. What is the name of that conference?
A. Google I/O.
Q. Was STS the only feature announced at that conference that year?
A. No. You know, we launched hundreds of things at the time. Even only Android launches hundreds of features in any one I/O release.
Q. Was STS a particularly important feature to Google?
A. You know, as a product manager, everything we do is helpful, and we want it to be successful. But at the end of the day, like I said, it's one of hundreds of features that we launched that year.
Q. In your role as a product manager, do you personally have responsibility for patent issues?
A. No, I don't.
Q. Do you review patents as part of your job at Google?
A. No, I don't.
Q. Why don't you review patents as part of your job at Google?
A. As a product manager, like I wake up every day, and I go and try to build something. That's my job. That's what I know how to do. We have a legal team that knows how to deal with legal issues.
Q. Why didn't Google change how STS worked given that Arendi had sued Google in 2013 for allegedly infringing the ' 843 patent?
A. Yeah. So going back to that timeline, you know, in 2017 when I was working on this feature, I had no idea about Arendi. I was not aware of any of this. I've only come to know of this when $I$ was deposed for this trial in 2019. And that's when I learned that Google had been
defending themselves in court.
MS. ROBERTS: I'll pass the witness.
THE COURT: Thank you, Counsel.
MR. LAHAD: May I, Your Honor?
THE COURT: Please proceed.
CROSS EXAMINATION

## BY MR. LAHAD:

Q. Thank you. Good afternoon, sir. My name is John

Lahad. I recall we met at your deposition.
A. Yes. Good to see you again.
Q. Likewise. I have got a few questions for you.

You've said you have been at Google for about 11 and
a half years, correct?
A. Yes, sir.
Q. So you have been at Google for the entirety of this lawsuit, correct?
A. Yes.
Q. Yes. And you said you had familiarity with STS, but to be clear, you did not write the source code for STS, correct?
A. As a product manager, I work with engineers very closely but --

MR. LAHAD: Your Honor, objection.
Nonresponsive.
THE COURT: Overruled.

BY MR. LAHAD :
Q. You did not write the source code for STS, correct?
A. No. As a product manager, I don't write source code, but I do work closely with engineers.
Q. And writing source code has never been part of your responsibility with respect to STS, correct?
A. Not with respect to STS.
Q. So with respect to STS, which is what we're here for at this trial, you are not the source code guy, correct?
A. I will not call myself the source code guy, no.
Q. You would say you are more of the commerce guy, right?
A. If you could define that better, maybe $I$ can comment on it.
Q. Well, you have an MBA; is that right?
A. That's right.
Q. Okay. And day to day, your responsibilities at Google are more directed towards e-commerce and the commerce side of things than they are working with, for example, the products and the apps at the source code level; is that fair?
A. No, it's not, actually. I mean, in 2017, I was deeply involved in the technical development of this feature. I have taken different roles. My current role is much more commerce-centric, but I've done very
technical work and at the time in 2017.
Q. And a lot of Google's attempt at making money involves the user experience, correct?
A. Could you clarify that question, please.
Q. Well, you are familiar with the user experience, right?
A. Of any particular feature or...
Q. Well, you would say, and you have said, haven't you, Focus on the user experience, and the money will follow?
A. I said that?
Q. Yeah. You would say that right?
A. Did I say it? Is there a record of me saying that?
Q. Well, you don't remember saying that?
A. I don't remember.
Q. You don't remember saying that, you know, on a stage in front of a bunch of people, gray jacket, blue T-shirt, jeans?
A. Blue T-shirt...
Q. Let me show you a video, if I can, Mr. Elbouchikhi.

MR. LAHAD: Mr. Boles, can we play that video.
THE WITNESS: Let's do it.
(Video plays as follows:)
THE WITNESS: And that is about getting the user to enjoy the application, to really get immersed into it before getting to monetization. We've heard this a lot
in all sorts of settings where, you know, focus on the user experience and the money will follow. And that's exactly what an app represents.)

## BY MR. LAHAD :

Q. That's you, right?
A. That was 2012, I think.
Q. Yeah, maybe a younger version of you, but that's you, right?
A. Definitely a younger version, yes.
Q. I hear that. And Google's parent, Alphabet, is a publicly traded company, correct?
A. Absolutely.
Q. And, listen, I'm not saying there's anything wrong with trying to turn a profit, but Google is a for-profit entity, correct?
A. Yeah, Google is a for-profit entity.
Q. Yeah, it's not like Google is giving away these apps as some kind of public service like, you know, the library or, you know, fire station or something like that?
A. I mean, again, as a product manager my job is to focus on building the experience. I don't spend a lot of time thinking about that.
Q. Well, you build the user experience, and according to you, focus on the user experience and the money will follow, correct?
A. I mean, I think the context of that talk was I was talking to developers who were building apps for users. And the idea was, hey, build high quality apps, focus on the user, and don't try to, you know, sometimes some apps will try to put a pay wall, like, right away onto an app when you start it. And it just doesn't work very well. So the idea is, try to build a great experience, and then if you do something great, you should be paid for it. Q. And google does generate revenue from advertising based on downloads of these apps, correct?
A. Yeah. I'm not the advertising guy. So I think I would love to focus on -- I'm happy to describe how STS works and how we think about it, but I'm not the advertising guy.
Q. But you've worked at Google for 11 and a half years, right?
A. Yes, but never in ads.
Q. But you understand that Google makes money from advertising, correct?
A. Of course.
Q. Yeah. Okay. So I'm not surprising you with anything right now, am I?
A. No.
Q. Okay, good. And so one of the things that Google, because it's for-profit entity, because it is interested,
at least in part, on making money, one of the things that Google looks at when making decisions about what features to include in phones, in operating systems, in whatever, is the value proposition, the business case for it, correct?
A. So in this case for STS, the success metric that I've defined is literally how often does the user have to override the automatic expansion. That was the literal success metric that $I$ defined for a team when $I$ started working with them in July of 2017. When we said, look --

MR. LAHAD: Your Honor.
THE WITNESS: -- if the user has to go in and automatically expand or adjust, that means the feature did not work as intended. So that was the metric in that case.

MR. LAHAD: I would object as nonresponsive, Your Honor.

THE COURT: Overruled.

## BY MR. LAHAD:

Q. Well, Google has kept the functionality of STS in the applications that use it -- in the applications and devices that use it since its launch, correct?
A. Could you repeat that question?
Q. Sure.

Google has kept the functionality, the STS
functionality, in the applications and devices that use it since its launch, right?
A. STS is not in the applications; it is in the framework.
Q. Well, STS has been a feature of a Google product or program since 2017. It's not like Google has turned it off or taken it out, right?
A. I think that's a different question. I think your first question implied that STS is in the app, but it's not. It's in the framework.

So then the second question is maybe different, if you don't mind repeating it.
Q. Well, listen, STS has been around since 2017, correct?
A. "Around." I want you to define that. STS has been in the Android framework as part of Android 8 and onward.
Q. Yeah. I know you want to say that $\operatorname{STS}$ is in the framework because that's good for your case, but my question to you is, STS has been around -MS. ROBERTS: Objection. Argumentative. THE COURT: Overruled.

## BY MR. LAHAD :

Q. STS has been around -- you know what "around" means -- it's been around since 2017, correct?
A. The word "around," I mean, it's been around where? I
mean, it's in the framework, sure, but it's too vague.
Q. The STS functionality has been a part of the Google code at some level since 2017, correct?
A. I think the point to be specific here, right. STS has been part of the Android framework as of Android 8 and onward. That is a correct statement.
Q. Okay.
A. What I just said.
Q. So it's not like Google ever fired STS or got rid of STS or said, hey, you know what, it's not part of the framework anymore, right? It's been there since 2017?
A. I actually stopped working on it at some point, so I don't know if it's still there today. But $I$ know that as of 2017 all the way to its launch, that it was actually available in the framework.
Q. So when did you stop working on STS?
A. I left the team to go to the Google store in 2021.
Q. So you can answer your counsel's questions about STS, but you can't answer my questions about STS because you don't work on it anymore?
A. No. I really want to. I'm trying to be helpful. Just ask me a question; I'm happy to answer.
Q. Well, I asked you a question that STS has been there since 2017, and you said, well, I don't know, I don't work on it anymore.
A. Well --
Q. That happened a minute ago, right?
A. Like they may have removed it from Android since I left. It's hard for me to say, "until now," but I can tell you, yes, it was. It was there when I was around, for sure.
Q. You were asked to come into this courtroom and testify about STS, right?
A. Yeah.
Q. And you didn't ask them, like, hey, is this thing still around?
A. I didn't have any reason to do that.
Q. Other than you were coming to this courtroom to testify about STS, right?
A. And the time frame of the fact that when we launched in 2017, and, yes. I don't think it's relevant whether it's still there or not. I mean, this is -- I'm not aware of that.
Q. But what is relevant is the extent of your knowledge about STS, correct?
A. Yeah, which is very extensive --
Q. Up until you stopped working on it.
A. -- until I stopped --
Q. Up until you stopped working on it two years ago?
A. Yeah.
Q. You walked through a little bit this representation with your counsel.

Do you recall that?
A. Yes.
Q. And this is the -- labeled as the Android software stack, right?
A. That's right.
Q. I'm going to show you another diagram we've seen in this trial.

Seen that before, sir?
A. I can't attest hundred percent; I don't know.
Q. Well, this is a diagram that I pulled off the Google website called "Architecture Overview."

MS. ROBERTS: Can we get exhibit number.
THE COURT: Could you, for the record, let us know what exhibit number that is?

MR. LAHAD: It's not labeled. I pulled it off Google's website. It's not on a list.

THE COURT: I will see counsel at sidebar please.
(Whereupon, the following occurred at sidebar:
THE COURT: We have an objection on the record.
MS. ROBERTS: So Your Honor gave instructions documents should not be published to the jury, they must be admitted into evidence through a witness. This one has
not been admitted into evidence and not in the trial exhibit list either.

MR. LAHAD: This is cross. I understood that the requirement was for exhibits during direct. That's what the pretrial order speaks in terms of. If I need to admit it, I'm happy to, Your Honor.

THE COURT: You wouldn't be admitting anything that's not on the exhibit list. You free to cross-examine him with it. You shouldn't be publishing it to the jury without getting it admitted or at least laying a foundation for it, which you haven't done yet.

MR. LAHAD: Understood.
THE COURT: Okay. Do you have an objection to him publishing it for purposes of cross-examination if he lays a foundation?

MR. UNIKEL: It won't be an exhibit. Your Honor, how can it be published?

THE COURT: Well, we admit demonstratives publish demonstratives without admitting them.

Does the pretrial order speak to this?
MR. LAHAD: We publish cross-examination materials all the time as well.

MR. UNIKEL: The demonstrative is clearly a demonstrative. It is not meant as purporting to evidence that's used as a demonstrative this is an actual document
that purporting to use as an exhibit even though it's.
THE COURT: I'm once he lays a foundation, I will let him publish to the jury. It won't be admitted into evidence.
(Whereupon, the discussion at sidebar concludes.)

MR. LAHAD: May I approach, Your Honor?
THE COURT: Sure. Yes.
MR. LAHAD: Judge, just for recordkeeping purposes, I have mark this is PX-795.

## BY MR. LAHAD:

Q. Mr. Elbouchikhi, there's a little URL at the bottom of this document.

You see that, sir?
A. Yes, I do.
Q. And that URL is similar to the URL at the bottom of DTX-1068, correct?
A. Yes, they are both on the Android domain.
Q. They're both on the Android domain, and the one from DTX-1068 is developer.Android.com/guide/platform, correct?
A. That's correct.
Q. The one on Plaintiff's 795, is source.Android.com|docs|pour|architecture, correct?
A. That's correct.
Q. And this document is from the domain or website,
correct?
A. Yes.
Q. And this document describes the Android Open System Platform architecture, correct?
A. It's the first time $I$ am seeing it, but based on the title, it seems like that's what it does. But I've never read this document.
Q. All right. But you agree that it's from the Google domain, from the Android domain, and describes the AOSP architecture overview, correct?
A. Yeah, that's what --

MS. ROBERTS: He said he's not familiar with the document.

MR. LAHAD: Well, the witness --
THE COURT: The objection is sustained.
Please ask another question.

## BY MR. LAHAD :

Q. Well, you would agree it is from the Android domain, correct?
A. It appears to be, yes.
Q. Yes. And this Android domain provides information on Android, correct?
A. Typically, yes.
Q. And the intended audience, among others, are developers of Android, correct?
A. That's correct.
Q. And if you would like, take a minute to review this document. Let me know if there's anything inaccurate that jumps out at you?

MS. ROBERTS: Objection. Lacks foundation.
THE COURT: That objection is also sustained.
Please ask another question.
MR. LAHAD: Your Honor, I think I laid the appropriate foundation for at least publishing this document to the jury.

THE COURT: You can publish it to the jury.
MR. LAHAD: Thank you.

## BY MR. LAHAD :

Q. So this is the stack -- well, this is a figure in this document, and this is another way of representing the Android software stack architecture, correct?
A. Like I said, it's the first time I am seeing this document. So I'd consider --
Q. I'll make it easy for you. I'll make it easy.

Figure 1 is labeled "AOSP Software Stack
Architecture," correct?
A. I can read it, yes.
Q. And in this representation of the Android software stack architecture, it's shown as layers with Linux kernel and the Native Daemons and libraries, and the Hardware

Abstraction Layer, much the same way the figure at DTX-1068 shows, correct?
A. For those layers, yes.
Q. It has Android apps here, too, doesn't it?
A. It does it appears to, yes.
Q. Yeah, those are apps like Gmail, Docs, Keep, right?
A. Bank of America, like any app, yes.
Q. Yeah, but we're not here on the Bank of America app; we're here on Gmail, right?
A. Yes.
Q. Apps like Gmail, Docs, Keeps, Sheets, those types of things, right?
A. Yeah. It appears to show that.
Q. Yeah. And what we see in this slide or this
representation created by Google, it shows the apps on top of this Android API, right? See that here? I'm going to switch colors if $I$ can. See that?
A. So I think it's important we should look at the CAD file or the three dimensional file for this document.

MR. LAHAD: Your Honor --
THE WITNESS: I believe it will show the true, like, layering, but it is -- it's showing it on top of it. But I don't think it's what you think it is.

BY MR. LAHAD:
Q. Well, Google didn't draw it like that. Google didn't
draw the apps, the Android API separate from the other layers, did it?
A. No, it did, actually. I think you're marking kind of covers up the three dimensional aspects of that layer. If the jury can look closer, it actually is a step above the other ones. So I think it's --
Q. Let's look at the --
A. Yeah. So you see there's a three dimensional edge around that layer.
Q. Around this layer right here?
A. That's right. That is a three dimensional -yes.The.
Q. The layer called "Android API"?
A. That's right.
Q. Right? But those Android apps are within this layer, right? There's no three dimensional layer around the Android apps and the other apps, right?
A. Without looking at source file and the CAD file behind this document, it really is hard to argue that that is the case, but...
Q. Well, you would agree with me, for purposes of this diagram, that Google did not draw the APIs here in this same manner as it drew the kernel and Daemons and hardware abstraction layer here, correct?
A. No. I don't think I agree with you.
Q. You're saying that this part of the drawing looks like this part of the drawing?
A. In its three dimensionality, yes. It really is three dimensional. It's the first time I'm seeing it, but it is three dimensional.
Q. In the text of this document, there's a description of the Android framework.

Do you see that?
A. Which page is that, if you don't mind?
Q. It's on 3 out of 4 .
A. Okay. The Android framework. That's right.
Q. Right? And it says that "The Android framework is a group of Java classes, interfaces, and other precompiled code upon which apps are built."

Google's words, correct?
A. That's right.
Q. It also says, "Portions of framework are publicly accessible through the use of the Android API."

Google's words, correct?
A. It appears to be, yeah.
Q. "Other portions of the framework are available only to OEMs through the use of the system APIs."

Google's words, correct?
A. That is correct.
Q. The last sentence is, "Android framework code runs
inside an app's process."
Do you see that?
A. I do see that sentence, that's right.
Q. All right. Google's words, correct?
A. It appears to be, yes.
Q. You recall seeing this slide -- actually, have you seen this slide before?
A. No.
Q. This slide says, "Place instructions entirely inside the program," correct?
A. I have no idea what this -- I can't just say words after you tell me to say them.
Q. I'm just saying this slide says what it says, right?
A. We can all read it, yes.
Q. Yeah. And it says, "Place instructions entirely inside a program," right?
A. Yes.
Q. Yeah. This slide uses the word "inside." And Google used the word "inside" as well, correct?
A. So I think there is an important thing to consider here. This is referring to the apps process. And this is going to get technical, and so I think a future witness will testify --

MR. LAHAD: Your Honor, if he doesn't have the foundation to talk about this --

THE WITNESS: The process --
THE COURT: Stop.
Counsel, let him answer.
THE WITNESS: The process of an app is effectively how it runs on the system. It is different from its source code. The fact that it runs inside another app's process, it just means that when it's literally running in your smartphone, they cannot join together. But it doesn't mean the source code is inside of the app's source code. It doesn't mean that at all.

It's purely a temporary state when the app is running, it's in a temporary state. The processes are running together. There's a lot of reasons why we do this on Android. We don't have to get into that. But it is a temporary state. It does not mean that the source code is in the same place in any way.

BY MR. LAHAD :
Q. You used the turn of phrase, they are joined together; is that right?
A. Temporarily.

MR. LAHAD: Your Honor, I would like to admit PX-795 into evidence. I think it's also -- the joint pretrial order permits such introduction. It would be at -- or subject to Paragraph 53.

MS. ROBERTS: Your Honor, Google objects. This
document is not on the exhibit list.
THE COURT: The objection is sustained. This document won't be admitted.

MR. LAHAD: No further questions, Your Honor.
MS. ROBERTS: No questions, Your Honor.
THE COURT: You may step down, sir.
THE WITNESS: Thank you.
MS. ROBERTS: Your Honor, may the witness be excused?

THE COURT: Yes.
Is Arendi ready to call its next witness?
MS. SRINIVASAN: Your Honor, we're not calling further witnesses at this time until our rebuttal case. We're not resting subject to being able to examine Google's corporate representative, who I understand will be the witness after this one. And at that point, we will rest, but we are not calling any other witnesses until our rebuttal case.

THE COURT: Thank you, counsel.
Google, call your next witness.
MR. KAMBER: Thank you, Your Honor. Google calls Mr. Abodunrinwa Toki.

THE CLERK: Please state and spell your name for the record.

THE WITNESS: My name is Abodunrinwa Toki,

A-B-O-D-U-N-R-I-N-W-A, T-O-K-I.
ABODUNRINWA TOKI, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:

## DIRECT EXAMINATION

## BY MR. KAMBER:

Q. Good afternoon, Mr. Toki.
A. Good afternoon.
Q. Could you please introduce yourself to the jury.
A. Hi, my name is Abodunrinwa Toki.
Q. And where do you work, Mr. Toki?
A. I work at Google in the UK.
Q. How long have you been worked at Google?
A. About 11 years now.
Q. What did you do before joining Google?
A. Before Google, I worked at Yahoo.
Q. Yahoo, the search engine company?
A. Yes.
Q. And what did you do before joining Yahoo?
A. I was at university in London, University College London.
Q. What did you study at University College London?
A. Software systems engineering.
Q. Can you describe, please, for the jury the roles that
you have had at Google since you started there?
A. Yes. My initial project at Google was a project called Google Offers, and after that, I worked on the Android team on Google Docs. It's the document app that Google had on the Android phone. And then after that, I started working on the Android framework, which is, basically, the code for the operating system. And worked on user interface features, particularly TextView text rendering.
Q. Text rendering, did you say, Mr. Toki?
A. Yes, text in general. Basically interactions with text on your phone.
Q. What is your role at Google today?
A. I'm a software engineer. I also manage a team of engineers.
Q. How big is the team that you manage, Mr. Toki?
A. I have six reports.
Q. What kinds of things is your team working on?
A. We basically work on artificial intelligence features, on, particularly, mobile phones.
Q. So, Mr. Toki, in your time at Google, did you ever work on any shortcut tools for the user interface?
A. Yes, I did.
Q. What types of tools did you work on, or which tools did you work on, I should ask?
A. I worked on Linkify, smart Linkify, and a feature called Smart Text Selection.
Q. What is Linkify?
A. So Linkify is a feature on your phone that, basically, when you -- if there's a type of thing, there will be a line, like a link that you could click. And when you click in it, then, depending on what it was, then it would do, it would open something else to do.

So if it was a URL, for example, and you clicked on it, then it would open a browser to that website. And if it was a phone number and you clicked on it, then you would go to the dialer on your app to dial that phone number.
Q. When was Linkify implemented in Android?
A. I believe Linkify was implemented before I joined Google. If I look at the source code, I think the initial version was implemented maybe about the first version of Android. It's been quite a while, yeah.
Q. You then mentioned something called Smart Text Selection, right?
A. Yes.
Q. What is that, described generally?
A. So Smart Text Selection was a feature that we built. Basically, it helped users select text on your phone. So when a user wanted to select something from the long press
on the phone, what we realized -- what we guessed was that sometimes people were trying to select things on the phone. So, for example, if you had an address on your phone that said something like 100 Fifth street, for example, and you long pressed on maybe Fifth, for example, then you realize you're trying to select the entire address, so we will make a full selection of the entire address 100 Fifth Street.
Q. In addition to that Smart Text Selection feature, was there something associated with it called Smart Text Share?
A. Yes.
Q. What is that?
A. So typically, whenever you select a text, you will get toolbars that allow you to either copy, cut, paste, what you've copied, right? But then if you think about the situation $I$ just described where we now know that the selection is an address, then we know that the user might also want to share that with, like, a map app, if it was an address. We then we will put a shortcut to a map app. And if it was a phone number, we would put a shortcut -include a shortcut or an action to a dialer, for example.
Q. What led you to working on Smart Text Selection?
A. Typically, the job was, basically, how to improve the user experience every time they are using a phone. So we
identified, like, if we could help people do whatever they were trying to do better on the phone, then that would be a better experience for them. The selection could be tricky sometimes. We can make that easier on them. And sharing could be a little more difficult sometimes. We could make that easier and faster.
Q. What's the difference, if any, between the way that Smart Text Selection and Smart Text Share work and the way that that prior Linkify functionality worked?
A. So Linkify, first off, was basically -- in terms of the features, I think the features -- Linkify would involve a link that you click. Smart Text Selection, you have to select the text first. Right? But in terms of, like, the technology, Linkify was based on something we call regular expressions. So you write these rules about what a phone number is, what an address is, what an URL is. That's basically how it worked.

But it might be easier to write an address and to write a phone number, a rule for what a phone number looks like. But it could be quite difficult to do the same thing for an address. Addresses are usually in different formats.

But at the time, we were now starting to have AI, artificial intelligence started to get to a state where you could train machine-learning models to be small and
run on a device and be able to recognize street addresses or phone numbers better than those rules that the original Linkify could do.
Q. There's been some discussion here, Mr. Toki, about machine learning. Can you briefly describe for the jury how machine learning works, generally?
A. I think the simple way that $I$ can quickly describe how that works is rather than write the rules for what makes -- if you wanted to identify, for example, pictures of a cat, for example, right? Rather than write the rules of what makes up a picture of a cat, you could just train a model by providing so many different examples of cat pictures and say, "Here are cat pictures."

And then on the other hand, you can also provide pictures of things that are not cats, maybe dogs, and say "These are not cats." Eventually, the model will be able to figure out that -- what the definition of a cat is so that when you show it a different -- when you show it a new picture that it has not seen before of a cat, it would be able to tell it's a high probability that this is a picture of a cat.
Q. So how did the Smart Text Selection project that you were working on start using machine learning models?
A. So we did something similar, too. You take a lot of text that were maybe phone numbers, a lot of numbers, and
say "Here are phone numbers," and then "These are not phone numbers, these are just regular numbers." And eventually you end up with a model that can figure out how to distinguish a phone number from something that's not a phone number.

And we did the same thing for addresses. We showed it text that were addresses said "these are addresses," and then you showed it, like, text that was just random text. And then we were able to successfully build models that would recognize street addresses.
Q. Coming back to the development, how did the Smart Text Selection project get underway?
A. I believe what happened -- at the time, I was focused on improving the user experience when delivering text. And one of the things that $I$ recognized was, like, selections were difficult, recognizing things like addresses were a little bit difficult. And also, we had a feature that was, like, a share, general share feature. But then the problem with that was, like, what -- to what app do you share that thing to.

The, like, thinking was if you could recognize better what that thing was, then you could make a better suggestion, you know. It's a phone number, you just need a dial on it, right. And so that was, basically, what I was trying to do. I started talking to different people,
you know, different people about the project.
Eventually I did come across a team, which is a team that I now manage, that we're working on these machine learning models to sort of recognize -- annotate things in text, basically recognize that this is a phone number, this is an address, this is an URL.

And so I tasked them to sort of build something that was small enough to run on the phone. And when we had a model, I started working on trying to integrate it on the framework, Android framework, and that's the Android preferred system code, to basically see if we can build that feature. And that's how the project started.
Q. What was the name of that team?
A. So the team is a team called Cerebra.
(Reporter requested clarification.)
THE WITNESS: Cerebra.

## BY MR. KAMBER:

Q. How do you spell that, Mr. Toki?
A. $C-E-R-E-B-R-A$.
Q. Where was that team based when you came across their work?
A. The team was based in Zurich. Zurich, Switzerland. Q. And to what extent, if at all, were there any machine learning models in the Android operating system before Smart Text Selection was developed?
A. There wasn't a lot of -- there wasn't a lot of machine learning models integrated into the operating system at this time, to the Android framework at the time.
Q. Were -- to what extent were people questioning whether this was a smart decision to put these machine learning models on the devices?
A. If I remember correctly, it was something that was sort of not like -- it wasn't very common. We wanted to do it. We hadn't done it. So there were a lot of doubts about whether it could work or not. We weren't sure, right, but we wanted to try.
Q. Did you build a prototype of Smart Text Selection?
A. Yes, I did.
Q. Can you explain to the jury how you did that, please?
A. So I had the model, and I was -- I will typically take a trip to the U.S. from London. And so -- and whenever I go to London, I try to pitch ideas to stakeholders they had. And so I took the model and I started writing the code while $I$ was on the flight to Mountain View, and just kept trying, you know, trying different things on how it would work. And eventually I was able to get something that worked.
Q. You mentioned Mountain View. That's where Google's headquarters are, right?
A. Correct.
Q. So when you presented the idea, what were people's reactions?
A. There was mix of excitement and skepticism, right? Like, we weren't sure if it would work, right? And it was not just like whether it would work. There were also questions like, you know, if it worked, then how did it mean for you to be running, you know, a statistic -- you know, it's a model, right? It's not always hundred percent correct. There was that.

There was also, yes, this could help. Let's try. Let's get the project going.
Q. Approximately how many people ultimately worked on -or how many people worked on the development of the first iteration of Smart Text Selection?
A. For the first iteration of Smart Text Selection, there was three of us.
Q. Did the team grow to be bigger later on?
A. Yes. And after the first version, then the team started to grow. And I would say maybe grew to about ten people or more. And some other teams were also helping out with some other things.
Q. How long did it take you and that team to develop Smart Text Selection?
A. What team?
Q. The initial team that you mentioned of, I think you
said, two or three people.
A. Yeah. The initial team, there was about -- it took us about three to six months to build the initial version of it.
Q. So you've given a bit of a description of how Smart Text Selection works. Can you just walk the users, please, through the steps, from a user perspective, of how you interact with the STS functionality?
A. Yes. I sort of hinted at it before, but if you were reading some text on your phone and you had -- you had an address, maybe 100 Fifth Street, right, and you wanted to select, you would press something around that text, right?

So when you press that text, what that did was, we took all of the text around it, ran it against the model to say, hey, is there anything interesting here. And then the result to come back would be, oh, yes there's an address here. And this is the selection for the address.

And we then selected not just Fifth -- so, for example, your finger was pressed on Fifth, 100 Fifth Street, we would expand the whole selection to 100 Fifth Street. You can do the same thing with just street, right? It would recognize that that's the whole address, so you get 100 Fifth Street.
Q. What types of things did STS recognize?
A. The initial version of Smart Text Selection
recognized e-mail addresses, phone numbers, website addresses, URLs, and street addresses.
Q. What if a user pressed on something that didn't fall into those four categories?
A. It would just do -- it would just select a word. So typically, whenever you selected just one thing, without Smart Text Selection, then you would just get -- so, for example, you have 100 Fifth Street. And you selected Fifth and only Fifth would have been selected, you wouldn't get the entire selection. But with Smart Text Selection running on the phone, then you will be able to get the entire selection of that.
Q. Are you familiar with a code that's called TextClassifier?
A. Yes.
Q. Can you explain what TextClassifier is, please?
A. So again, the core technology was this machine learning model we built. And so what I did was I built a component basically around that to be the core component that supported this sort of text recognition.
Q. Where is the source code for Smart Text Selection?
A. It's in the Android framework, basically, the code that makes up the Android operating system.
Q. Does that include the code for TextClassifier?
A. Yes, it does.
Q. To what extent, if at all, are the computer instructions for Smart Text Selection in the code for any particular applications running on an Android phone?
A. It's not in the app. It's in the Android framework.
Q. How then does an app even use the code for Smart Text Selection?
A. Yeah. I will explain. So an app, which is -- the idea is, basically, if an app was running on the phone, it was using just standard components. Then if there was a TextClassifier on the phone, like a text -- the Text Classifier component was on the phone in the framework, then those features would -- you will get those features.

If that app, the app developed, that same app was running a different environment that did not have that feature, then nothing would happen. So, essentially, developers just build the app. And if they built the app and say, hey, I want to run the text, I want TextView, then if they were running on a phone that had that feature, then it would do that.
Q. If the Gmail app, for example, were running on an Android 7 device, would a user get the Smart Text Selection functionality?
A. No, they wouldn't get it. But if that same app was running on maybe like a new Android phone today, then that would happen.
Q. And just so it's clear, the instructions that set up that menu bar that you see, that you mentioned with the action and the cut and copy and paste, where are the -where's the computer code that creates that menu bar?
A. It is Android framework.
Q. Again, the Android framework, that's the operating system, I believe you said?
A. Yes, correct.
Q. So let's talk about the Android framework for a moment.

MR. KAMBER: And if I could have, please, DTX-1068, Mr. Spence.

Let's get these out of your way so we done get confused.

## BY MR. KAMBER:

Q. So DTX-1068 -- I think it's about halfway through the binder. If you want to take a look at the document, we'll also be publishing it on the screen. It's already been admitted into evidence, Mr. Toki.
A. DTX -- what was it?
Q. 1068 .

MR. KAMBER: Mr. Spence, if we could pull up the second page, the Platform Architecture Diagram, please. Pull that up.

BY MR. KAMBER:
Q. Are you familiar with this illustration, Mr. Toki?
A. Yes, I am.
Q. Can you explain what it's illustrating for the jury's purposes?
A. This is sort of like a depiction of the Android operating system and all the different components that come together on the framework. And so the top section here is the system apps in blue. You have the Java API framework in green. The native libraries are in purple. And the runtime is in orange. And then further down, you get the hardware abstraction layer and the Linux Kernel.

MR. KAMBER: Let's focus in on the very top, the System Apps and the Java API framework, if we could. Thank you, Mr. Spence.

## BY MR. KAMBER:

Q. So where are -- in the Android framework, where are applications like Chrome or Docs or Sheets?
A. Yeah. I would imagine that they would be in the blue section, right, next to Dialer, E-mail, Calendar, and Camera.
Q. Where that dot, dot, dot is on the system apps layer?
A. Yeah. Yes.
Q. All right. And you mentioned -- and then the Java API framework, can you generally describe what types of functionality are here.
A. Yes. So the Android operating system would provide a set of components that kind of like run the operating system, part of the operating system. They do different things. And so, for example, you can see there's a few system, so developers would be building apps. They don't have to build all new widgets for the user interface to exist by themselves.

And then you have things like the managers, which is quite common, and they all do different things. So, for example, if you look in that section to the extreme right, you have the notification manager. And that's, basically, a thing that's responsible for showing notifications on your phone. Something was happening. It would basically -- that's the notification manager doing that.

You have things like the Package Manager that tells you about what apps are installed on the phone, and other things like the Location Manager that can tell about where the phone might be at the time or help you with, like, things, like, if you are using an app like Google Maps. Q. Thank you. And I want to come back to something you said before. I think you said the Smart Text Selection code is in the Android framework, correct?
A. Correct.
Q. And can you explain to the jury where the Smart Text

Selection code is at least in relation to this diagram?
A. Yes. So, in general, the Smart Text Selection code will be in the green part, in the Java API framework.
Q. Do any of the applications in the top layer, the blue layer, contain the code for Smart Text Selection?
A. No, they don't. Like I explained before, if you ran the same app on an Android phone that did not have this component, then nothing would happen.
Q. Why was the Smart Text functionality put into the framework for Android?
A. Because we didn't want apps to have to do anything, you know. We wanted it to be an operating system feature that the user could recognize when they were using the phone rather than something that apps needed to do.
Q. Is there any benefit with respect to updating the feature based on putting it into the framework?
A. I'm sorry. I don't understand the question.
Q. Sure. If you put something into the framework, is it easier to update than if you put it in the apps level of the framework?
A. I wouldn't necessarily say so. You can update a phone. You can update an app, right? You can also update the operating system also. So if something was in the app, and using an applicability app, then it would happen. If a new thing was hap- -- then it happened when you
updated the app. But if you were -- if you -- if it was in the operating system, you update the operating system, which people also do then you will get the new operating system features.
Q. Thank you, Mr. Toki.

If you could turn to the first tab in your binder.
THE COURT: Mr. Kamber, is this a good time to take our afternoon break?

MR. KAMBER: Yes, Your Honor.
THE COURT: All right. Let's take our afternoon break.

Ms. Garfinkel, will you take the jury out.
(The jury exits the courtroom at 3:37 p.m.)
THE COURT: Please be seated. I think we will try to take as quick of a break as we can, so we can try to make up some time to make sure that the case gets to the jury as I promised. So we will be in a short recess. Let's try to keep it under ten minutes.
(Whereupon, a recess was taken.)
THE COURT: Please be seated.
MR. KAMBER: Should we have Mr. Toki retake the stand?

THE COURT: Yes.
MR. UNIKEL: I apologize, Your Honor.
THE COURT: Do we have everybody?

MR. KAMBER: Yes, Your Honor.
THE COURT: All right. Are we ready to proceed?

All right. Ms. Garfinkel, let's bring the jury back in.

THE CLERK: Yes, Your Honor.
(The jury enters the courtroom at 3:50 p.m.)
THE COURT: Welcome back, ladies and gentlemen. Please be seated.

Counsel, please proceed when you are ready.
MR. KAMBER: Thank you, Your Honor.
BY MR. KAMBER:
Q. Mr. Toki, right before the break I was trying to turn to DTX-166C, which is the first tab of your binder. Please take a look at that document.

What is this document?
A. This is a presentation about the Android TextClassifier component we were working on.
Q. Who created this document?
A. I believe my manager at the time and I worked on this document.
Q. Why did you and your manager create this document?
A. Typically, whenever we are working on a project, sometimes you want to explain it to stakeholders, you know, people that might be interested in the project. So
you put together a document and you put together a presentation and then you show it to them and ask some questions. Yes.

MR. KAMBER: Your Honor, Google moves DTX-166C into evidence.

MR. DIEHL: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit DTX-166C is admitted into evidence.)
MR. KAMBER: Thank you.
May we publish that, please, Mr. Spence.

## BY MR. KAMBER:

Q. And let's go to the seventh page of this document. First of all, actually, let me start with the cover page. Android TextClassifier, can you again explain what TextClassifier is referring to here?
A. TextClassifier is the component that we built to support text understanding features like Smart Linkify, Smart Text Selection, and other things. It also included things like Macro Detection.

MR. KAMBER: So let's turn to the seventh page of this document, please Mr. Spence. And enlarge that. Thank you.

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BY MR. KAMBER:
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Q. Mr. Toki, can you -- this is titled "The many paths to TextClassifier." Right?
A. Yes.
Q. Can you explain to the jury what's being illustrated here on the screen.
A. So this is a different -- this is, like, the different ways that we thought that we could evolve the TextClassifier architecture.
Q. What's being displayed on the right-hand side under the area that says "Using Support Library API"?
A. Yes. So on the right-hand side, we were thinking about ways that maybe we could make the TextClassifier feature component available to all the devices. So those are kind of like the ideas of the ways that we could make that happen.
Q. Was that ever implemented?
A. No, we did not. We didn't end up doing that.
Q. Then on the left side, it says "Using Framework API." Was this implemented?
A. Yes. So this was basically the way that we implemented the first time.

MR. KAMBER: And, Mr. Spence, if we could, please, just blow up the leftmost column there at the bottom, the two boxes. Perfect. Thank you.

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BY MR. KAMBER:
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Q. Can you explain what's being illustrated here, Mr. Toki?
A. Essentially it's just, basically, a description of all the components involved in a feature like Smart Text Selection. And so you have the -- you have the framework, Android framework, and then in the next box is

AOSP TC impl. And AOSP stands for the Android Open Source Projet. TC here is TextClassifier. And impl here is implementation. So that's the Android open source TextClassifier implementation.

And then the box, the TC service there is the TextClassifier service and TextView is the standard component for entering text.
Q. So why are the TC impl and TC Service boxes here illustrated as being in the framework rather than in the application?
A. Because this framework code, it's part of the framework.
Q. Why is the TextView being illustrated as being in the app?
A. We're basically trying to say, like, basically try to refer to the framework component that the app might be interested for rendering text -- the technology is all around TextViews, right? For example, these features like Smart Text Selection and Smart Linkify. So we are sort of like showing the connection of, you know, what part of the framework is in the app at that time.
Q. Where is the code for TextView in the Android -- in Android?
A. TextView code is part of the framework. So if you remember the green section in that architecture, that is in the green section, something called the widget framework, the UI, user interface framework component.
Q. And because TextView is also in the framework, is that why it's also drawn here in blue, like the framework code?
A. Yes. So in the diagram, I'm trying to depict, you know, the TextView server app, for example. So I put that TextView there. But TextView is really part of the framework. And so it's kind of like in the same color of the framework for the rest of the framework code.
Q. Thank you, Mr. Toki.

Could you please turn to DTX-1054. I believe it's the second tab in your binder.
A. DTX-
Q. Yes. 1054. Do you recognize this document, Mr. Toki?
A. Yes, I do.
Q. What is this document?
A. This is a document that $I$ wrote to describe this -this new component that we built, the TextClassifier. And all the features that were associated with it initially.

And so those were features like the Smart Text Selection, changing the selection depending on if it was a thing.

Smart Text Share, after we know what it is, maybe it's a phone number we suggest a dialer, for example. Language detection, part of the technology that the TextClassifier had was to be able to recognize whether that text was in English, it was in Spanish, it was German, whatever it is.

And the last part here was talking about the Google TextClassifier, which was the idea of a component that could, basically, use more information for, like, Google technology to improve the capability of the stuff.
Q. When was this document created?
A. The document is dated 2017; I believe that that's when I wrote it.

MR. KAMBER: Your Honor, we would move to admit DTX-1054 into evidence.

MR. DIEHL: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit DTX-1054 is admitted into evidence.)
MR. KAMBER: Mr. Spence, can you please focus in on the title and the first paragraph, please. Thank you.

## BY MR. KAMBER:

Q. So Smart Selection, Smart Text Share, Linkify,

Language Detection, and the Google TextClassifier.
Those are the things you just kind of listed off, right?
A. Yes.
Q. And this is this your name here, Toki@?
A. Yes.
Q. What does that signify?
A. That $I$ am the author of the document.
Q. And it's dated February 2017, correct?
A. Yes.
Q. What were you trying to communicate with this document?
A. Like I explained, whenever we work on a project, you might have people interested in it. And so you write documents about it. And what $I$ was trying to explain to people was, here's this new technology that we have. And here are the features that it can power. That was essentially...
Q. And it says, starts with, "This group of projects use machine learning techniques to classify text and use that information," right? That's the machine learning models that you were describing to the jury before the break, right?
A. Yes, correct.

MR. KAMBER: Let's turn to very bottom of this
page, Mr. Spence, the section titled "Smart Selection."

## BY MR. KAMBER:

Q. Do you see that, Mr. Toki?
A. Yes, I do.
Q. And so can you, again, explain what is Smart

Selection as distinct from Smart Text Share?
A. So I gave a similar example earlier about this. So if you were -- if you had, like -- if you had text on your phone, for example, Barack Obama visits New York City, and you were trying to select, and you selected "York," right? Typically, that's the selection you'd make. However, if it was running on the phone with this technology, then we will know that New York City is a thing. And so then, we'll expand the selection to New York City, guessing that that's really the selection that is useful to the person.

So that would be what I would call Smart Text
Selection. We know New York City is an address, right? And the user would usually get a tool bar that would say something like "copy," you know, or "share." And so now that we know that it is an address, then we can then figure out if there are any apps on the phone that can support addresses. For example, a map app, right? Or maybe like a restaurant app or something. And then we can suggest those as also an action included with "copy" and "paste," and so that the user can easily shortcut to that
action.

So that would be what I would call the Smart Text Share. And they go together.
Q. On the next page, at the very top, Mr. Toki, there's a discussion of how it works. And it starts by saying, "We use the Smart Selection Library, written by the Cerebra team."

Do you see that?
A. Yes.
Q. What is the Smart Selection Library?
A. So the Cerebra team, that was the team that was working on the models, basically, had, you know, they built the models, and they lacked some native code around accessing the models. So that's what I would call the Smart Selection, Text Selection -- I mean, the Smart Selection Library. So basically, some code and models that, basically, can recognize different things.

MR. KAMBER: So let's go further down, Smart Text Share. This is about halfway down the page, Mr. Spence. And focus in on that.

## BY MR. KAMBER:

Q. So I think you were just explaining this, Mr. Toki. It says, "Given a text selection, recognize what kind of entity it represents and provide a shortcut to an app that the user may use to act on that selection."

Do you see that?
A. Yes, I do.
Q. And can you explain again for the jury what that means?
A. So, for example, we now know it's an address, so it would include an action for map share to the Maps. If it was a phone number, it would include an action like dial or message this address. And if it was a URL, you might get a browse button on your phone.
Q. Where is the code that implements Smart Text Share?
A. It's in the Android framework.
Q. Where is the code that implements that Smart Selection Library that you mentioned in the context of this Smart Text Selection feature?
A. It's in the Android framework.
Q. At the very bottom of this second page, there is a reference to Linkify.

Do you see that Mr. Toki?
A. Yes, I do.
Q. What is this referring to in the document?
A. So Android already had this implementation for Linkify that was based on regular expressions, basically like rules that you write and say this is what a phone number is. This is what a URL is, right?

You can see how that -- it might be easy to write a
rule for something like a phone number. That might just be, hey, maybe six numbers, seven numbers for the -- you know, with an iPhone brackets or something. But how do you describe stuff like a street address? There's different versions, you know. Is it a U.S. street address? Is it a UK street address? Is it a post code? Things like that.

So that didn't work very well. But like with the technology that was starting to emerge where we could train machine-learning models that could be small enough to fit on a phone, then we thought that we could use the same machine-learning models to improve the performance of that feature.
Q. Mr. Toki, I want to show you another document that's already been admitted into evidence. It's DTX-1057. If you would like to look at it in your binder, it's the -- I think it's the very next exhibit.

MR. KAMBER: Mr. Spence, if we could just highlight the background in the first two or three lines of the document, please.

## BY MR. KAMBER:

Q. Just a couple of questions related to this document, Mr. Toki. It says here, "In Android O, we introduced TextClassifier API."

```
    Do you see that?
```

A. Yes, I do.
Q. What's that referring to?
A. So the -- if you think about there's the component, the TextClassifier component, so we wrote that component, the TextClassifier. But we also made the API public also.
Q. And what does that mean, making the API public?
A. Basically, it just means that the API is available for developers to use.
Q. And then it says, "That backs the Smart Selection and Smart Share features, right?
A. Yes. So like, for example, you think about the TextView, for example. When you're looking at text. When you do that selection and everything, the TextView is not like doing it -- it's not doing it by itself, it's basically talking to the TextClassifier to help it know what are the boundaries of the selection or what is this thing. That's -- that's, basically, how the TextView also communicates with this TextClassifier component.
Q. And then it goes on to explain that, "These features are implemented in Android framework using two small neural network classifiers."

Do you see that?
A. Yes, I do.
Q. Is it accurate that the features of Smart Selection and Smart Sharing are implemented in the Android
framework?
A. Yes, they are implemented in the Android framework.
Q. What does that mean regarding where the code is located?
A. It's code for the Android framework, in the Android source code.
Q. Is that code in any applications?
A. No. The code is not in any application. Like I explained, if you ran that same app on a different device that did not have this feature, nothing would happen.
Q. Mr. Toki, please turn to Exhibit PX-94 in your binder.

Do you recognize PX-94?
A. Yes, I do.
Q. What is PX-94?
A. So this is a page from the TextClassifier website. So internally, we would have a website for the projects, based on the projects that we are working on. So I would say this is a page from that website.
Q. Why was a page like this created?
A. It's normal. Whenever you're working on a project, you have a set of projects or whatever, you create a website that people can go in to and see what technology is available for them to use or how it works.
Q. Were you involved in creating this web page?
A. Yes, I would have been involved in writing some of the pages here. Not all of it, but some of it.

MR. KAMBER: Your Honor, we move to admit PX-94.

MR. DIEHL: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit PX-94 is admitted into evidence.)
MR. KAMBER: Thank you.
BY MR. KAMBER:
Q. There's discussion here, the second full paragraph that starts, "Version 1."

MR. KAMBER: Mr. Spence?
Thank you.
BY MR. KAMBER:
Q. It says, "Version 1 of Smart Text Selection shipped with Android O."

Do you see that?
A. Yes, I do.
Q. And then it explains, "The automatic selection expansion is disabled and planned to be reenabled in O-MR1 time frame."

Do you see that?
A. Yes, I do.
Q. What does that -- what is this referring to?
A. So when we saw the project, because it was sort of
like a new idea to be running certain things with -- to be running this kind of device models for these features, we weren't really sure how well they would work. And so after we had intended to build it for Android O, at the time. Android $O$ at the time, but getting closer to the time, we were not a hundred percent sure if it was working as we needed. And we needed to, you know, gather more data and understand exactly how it works.

So what we then did was, we then decided to pull the models from the device -- you know, the code was already there -- so that when people got the phones, those features were not working until we could established that they were, that the feature was working properly. Q. At what point could users start using the features for Smart Text Selection and Smart Text Share?
A. Yeah. So the document refers to O-MR1. That would have been a release that happened after the, you know, after the Android O. And so in that version, we then -we were satisfied about how this stuff was working, and so we then enabled -- we then included the model in that build. And we enabled for all the devices that had the code for Smart Text Selection and TextClassifier.
Q. And when you say "you included the model," you are referring to that on-device machine learning model, correct?
A. Yes, correct.
Q. And approximately when was the Smart Text Selection and Smart Text Share functionality reenabled in $O$ Maintenance Release 1?
A. I believe that O Maintenance Release -- I think Android O-MR1 would be -- would have been released around -- the source code would be have been published around December 2017, and then phone manufacturers can start taking that build and include it in the next set of phones they were going to start building.
Q. Mr. Toki, I think we have the last exhibit to show you. And that is towards the end of your binder. It is PX-208.

Can you take a look at that in your binder.
Actually, before you look at that, let me ask you a few questions. How does an application that might be using -- well, how does an application go about launching an application in another application -- strike that. One more time.

How does an application go about launching another application in Android?
A. The standard way that Android -- the standard method for one application to request another application is started, is through something that Android called the "Intents Framework," right.
Q. What is that Intents Framework?
A. So, basically, I can give an example. If app A says, "I want to dial a number," for example, using these examples that we've been using. It will say, "Here is a phone number, and $I$ want to do an action of dial." And it's -- so then, the application then triggers that intent to the operating system, saying, "Here's what $I$ want to do."

Now, the operating system will look at it say, Okay, I've got a Dialer app. I'm going to start the Dialer app, and I'm going to pass that phone number to the Dialer app to dial."

So this is how, like, apps get sort of -- this is a way a user can be doing using two apps to do things, right? You might have an app that can dial, and another one that can chat or something like that. And you might want to be using the two apps to do things. And so this is sort of like the way Android -- this is the way Android sort of allows such to happen.
Q. So now I'd like you to turn that last tab of your binder, which is PX-208.

Do you recognize that document?
A. Yes. It's a page from the Android developer website.
Q. Who is the audience for this document?
A. The Android develop -- Android developer website, the
audience would be Android developers or anybody interested in how Android works. So by "Android developers," I mean people building Android apps, for example.
Q. Where is this document maintained?
A. It's on the Android developer website, I believe developer.android.com.

MR. KAMBER: Your Honor, we move for the admission of $\mathrm{PX}-208$.

MR. DIEHL: No objection, Your Honor.
THE COURT: It's admitted.
(Exhibit PX-208 is admitted into evidence.)

## BY MR. KAMBER:

Q. Mr. Toki, this is a document titled "Intents and Intent Filters."

Do you see that?
A. Yes, I do.
Q. And it describes an intent as being "a messaging object you can use to request an action from another app component," right?
A. Yes, it does.
Q. So that can be a little hard to understand. Let's go
to the picture, Figure 1, at the top of Page 3, please. And Figure 1 explains how an implicit intent is delivered, and it has an explanation.

But can you kind of walk the jury through an
explanation of this figure?
A. I can try with an example, if you don't mind.
Q. Please.
A. So imagine that activity A is something -- is creating from an app like WhatsApp, for example, or maybe Gmail or something. And then you have a phone number, and there was a link on that phone number, and the user goes, "Oh, actually $I$ want to dial this number." If the user clicked that, then what would happen is the intention, now, is -- the thought of the user is, "I want to dial this number." So what happens is an intent gets packaged.

You can think of an intent as like an envelope, says, "Here's the phone number. What I really want to do is to dial this phone number," right? So then startActivity, basically, is a command that says, "I want you to show the user screen from an app that can dial." Okay.

So that intent goes to the Android system. There's this intent framework that handles all these intents. It then uses some information like is this app, is Gmail allowed to dial? Is he allowed to request a dial? Or is there a dialer, is there a Phone app on the -- in this phone, right?

If there is one, then it will then start the Dialer app, and then pass that phone number, message to it that included the phone number the user wanted to dial. So
then Activity $B$ in this case, would be a phone can then dial the number.
Q. Where are the instructions for this Intents Handling System in Android?
A. So the Intent Handling Framework is part of the Android framework. It's in the Android system. What apps need to do to get involved with that is they will define the action they are interested in, and the -- maybe, for example, the phone number data they want to pass. And then that then goes to the intent framework that handles that and knows what applications might be able to handle that.

And if there were multiple apps that could dial -for example, if you had WhatsApp in your phone -- then the user -- the system would ask the user, what application would you use to dial -- do you want to use to dial this? And the user can select and say, oh, actually, I want to use WhatsApp, for example, to do that.
Q. For this Intents Handling System, how is it that Smart Text Selection uses it?
A. So in the TextView code, we didn't have that part where you had the menu that allowed you to, when you selected text, that you can copy or paste or share. And so if the user clicked a dial action, for example, then this is what would have happened. An intent would have

## Toki - Direct

been forwarded to the system. The system would have then started a phone app with that phone number.
Q. Does the -- so the menu bar -- just to go into it in some detail -- the menu bar showed a Dial action like you just gave in that example, a user pressed it, what would happen in terms of an intent being passed to the system?
A. So in that case, because we have the text now, right? Either the text is selected or it's a link. So we have the text. So we then package the intent. In the text code you have something, a package with the intents in the envelope, that say, "Here's the phone number, and we're interested in dialing it."

That then goes to another component in the Android framework that then handles that and says, "Oh, there are Phone apps on this device. I'm going to -- if the user has selected one, I'm going to pass that phone number to that app."
Q. Mr. Toki, why does Google separate the applications from Smart Text Selection?
A. Because we wanted to be an operating system feature. We didn't want apps to have -- app developers or apps to have to do anything to enable this feature. We didn't even want them to need to have to rebuild the app for this to work.

So we just -- we thought, if you had an operating
system, then it's a feature for the owner of the phone, user of the phone, rather than an app developer who is building an app.
Q. So in that explanation, does -- let me just ask.

When Android 8 was released, did developers have to write any additional code for their apps in order to implement Smart Text Selection functionality for users.
A. They didn't have to write anything. They didn't even have to rebuild the app. Right. They could just use the same app that they had before. And if the user was using a newer -- a newer Android operating system, then the user will get that feature.
Q. And, Mr. Toki, why does Google separate the intents handling process from applications?
A. I'm not the -- I didn't -- you know, I didn't design Android from the beginning. You know, I work in Android; I've done things. But it sounds logical to me that, you know, you don't need to have apps sort of invoking other apps, you know. You can have apps are going to run in the -- they're going to run in a sand box anyway, they're going to run in an operating system.

And if you really want to design something, a framework that allows one app to talk to the other, then you can build something general that allows apps, you know, to talk to each other or to get users to use two
apps at the same time in the same use case.
MR. KAMBER: Thank you, Your Honor. We pass the witness.

THE COURT: Thank you very much.
Let's have cross-examination.

CROSS EXAMINATION

## BY MR. DIEHL:

Q. Hi, Mr. Toki. I am Kemper Diehl. It's good to meet you.
A. Hi.
Q. I want to start by just seeing if there are some things we can agree on. And the first one is, you know, you testified a lot about code that you worked on. I want to clarify, you're not giving any expert testimony in this case, right?
A. I don't know what expert -- what do you mean by expert testimony?
Q. You're not testifying here as an expert on source code, right?
A. I'm here to testify about the project I worked on, which was Smart Text Selection and TextClassifier.
Q. And you're not telling the jury that you're qualified as an expert to testify about source code, are you?
A. I've wrote the component, so that's what I'm here to talk about. I'm not talking about source code. I'm
talking about the thing that $I$ built.
Q. And you're not an expert in patents, right? Can we agree on that?
A. I know next to nothing about patents.
Q. Very nice. Sounds like we agree.

And you're not offering any opinion about whether the Google apps at issue in this case infringed Arendi's '843 patent, right? You're not opining on that?
A. I'm here to talk what about what we built and how we built it.
Q. And you're not giving any opinion about whether Arendi's '843 patent is a valid patent, right?
A. I don't know much about the patent or, you know, what -- I'm just going to testify about what $I$ know about the technology and how we built it.
Q. Right. So if I think we can agree you're just here to testify about the facts that you were personally involved in, in your work at Google; is that right?
A. I'm here to testify about how we built the technology.
Q. Just the facts, right?
A. Yes.
Q. And you don't know the details of the code for specific Google apps, right?
A. No. I don't know the details for all of the Google
apps.
Q. And when it comes to what's happening in the code of a given Google app, you're not the right person to testify about that, right?
A. I don't know. If you're talking about the

TextClassifier and how it works. I wrote it. I understand how it works. I know how, you know, the feature would appear on other apps. But if you're asking me about the details of, like, specific apps on what the whole code and how they've written it, I wouldn't know everything about how they've done it.
Q. You're not the app developer, right?
A. I am not the app developer.
Q. And you're not the guy who knows exactly what's happening in the app's code and what it's doing, right?
A. What app?
Q. Any app?
A. Yes, in general. If it's not an app that $I$ built, then $I$ don't know all the details about everything in it.
Q. And you didn't build any of the apps at issue in this case, did you?
A. What apps?
Q. Do you know what apps are at issue in this case?
A. So for all the apps, I know about the Android framework, so I could talk about the Android framework and

## Toki - Cross

what it is. The other apps, I've worked in Google Docs before, so I know some of the code with Google Docs.

So if you'd more specific about some apps, I can tell you. But mainly I worked on this as an operating system component, the framework, that was it.
Q. You worked on the framework, right?
A. Yes.
Q. And you don't have insight into what apps are doing when they call a particular API, right?
A. I wouldn't necessarily know all the things the apps are doing, yes.
Q. And all Smart Text Selection code is publicly available; is that right?
A. Do you mean on the Android framework code?
Q. Yes.
A. Yes. So in the AOSP and you can see the code.
Q. The same thing is true for the TextClassifier code. That's all publicly available, right?
A. Oh, yes. The textClassifier code is publicly available.
Q. And smart Text Selection, that's an Android API, right?
A. Smart Text Selection is not an Android API. Smart Text Selection is an Android feature.
Q. Do you recall giving a deposition in this case a
couple years ago?
A. Yes.
Q. You were under oath to tell the truth, right?
A. That's correct.
Q. Did you?
A. Yes, I did.

MR. DIEHL: Your Honor, can we have a brief sidebar?

THE COURT: Yes.
(Whereupon, the following discussion is held at sidebar:

MR. DIEHL: I asked the question: Smart Text Selection is an API, right?

His depo he said, Smart Selection is also an API, so I was quoting him. I want to impeach him with this.

THE COURT: Okay. That's not the exact question that was asked. Can we hear back the question that was asked before the objection.
(The court reporter read back the record as requested.)

THE COURT: You asked if it was an Android API. That's not the question.

MR. DIEHL: I can rephrase.

MR. KAMBER: This line of questioning relates to Linkify functionality, which is not in the case.

MR. DIEHL: It says, "Smart Text Selection" right up there.

MR. KAMBER: Sorry. I was reading from -- I have 19 to 21. My apologies, Your Honor.

So is Smart Linkify not a standard platform
feature?
Yes, it is.
This is about Smart Linkify, which is yet another functionality that's no longer in the case.

THE COURT: Okay. So this is where you are talking about?

MR. DIEHL: Exactly. I'm asking about this.
THE COURT: "So is Smart Linkify not a standard platform feature?

Yes, it is. So just to clarify...
Please.

You -- the question is, you know: It is an API, right?

I said Smart Linkify is an API. Smart selection is also an API, but the way we've built it is basically just based on the user experience like it's turned on all the time.

And you are referring to Smart Text Selection

## Toki - Cross

is turned on all the time?

Yes."

THE COURT: Mr. Kamber.

MR. KAMBER: This line of questioning I don't think is proper impeachment. He hasn't asked the same question and gotten a different answer specifically, that this relates to different functionality that the witness was being asked about at his deposition in the context of this question and answer.

THE COURT: I think it is a reasonable interpretation. It is inconsistent.

I ask Mr. Diehl to rephrase the question to more closely align. If we get an inconsistent answer, I will allow the impeachment. We will have the opportunity to address it on redirect.

MR. UNIKEL: May I ask that the full answer be read, not just the one sentence?

THE COURT: Counsel?

MR. DIEHL: That's fine.

MR. UNIKEL: Thank you.
(Whereupon, the discussion at sidebar concludes.)

MR. DIEHL: Thank you, Your Honor.

## Toki - Cross

BY MR. DIEHL:
Q. Mr. Toki, I will just re-ask the question.

Is Smart Text Selection an API?
A. Smart Text Selection is an Android feature.
Q. Is it an API?
A. No. So the TextClassifier has an API. The Smart Text Selection isn't API.

MR. DIEHL: Your Honor, I would like to show...
BY MR. DIEHL:
Q. Sir, can you recall you were deposed a few years ago?
A. Yes, I do.
Q. And you told the truth at that deposition?
A. Yes, I did.

MR. DIEHL: Okay. Mr. Boles, can we put Page 21 from Mr. Toki's deposition on the screen, Lines 3 through 11.

BY MR. DIEHL:
Q. And here on Line 3, you -- the question is:
"You know, is it an $A P I$, right?
I said Smart Linkify is an API. Smart Selection is also an API. But the way we built it is basically just based on the user experience, like it's turned on all the time."
A. Yeah, I'm not sure what that refers to. But, like, if you ask me about Smart Text Selection, it's a feature.

Smart Text Selection is a feature. When you select a text, then you have it. The TextClassifier has an API called Suggest Selection, and, in fact --

MR. DIEHL: Objection. Nonresponsive.
THE COURT: Overruled.

You may continue.

THE WITNESS: Okay. Yes. So you have the smart -- the TextClassifier has an API called smart selection. And essentially what that API does, if you give it text, it can tell you: Here is what $I$ think the selection in Spanish should be.

So if you're talking about Smart Text Selection as a feature, Smart Text Selection, that is, I would call it, a feature. If you are talking about the smart selection, the suggest selection API of the TextClassifier, then, yes, you can call that an API.

BY MR. DIEHL:
Q. Fair enough. You called Smart Selection an API in your deposition, right?
A. I did not say -- you asked about Smart Text Selection.
Q. You called Smart Selection an API in your deposition, right?
A. You asked me about Smart Text Selection. Do you mean Smart Selection? So here, when I was referring to Smart

Linkify and Smart Selection, I was referring to the TextClassifier API for suggest selection in this.
Q. At your deposition, you said Smart Selection is also an API; is that right?
A. That's what it says. I believe that's what $I$ said, if that's what's written there.
Q. Okay. And you talked in your answer to questions from Google's counsel about standard components that Android apps can use, right?
A. Sorry. Can you repeat.
Q. Yes. You talked about, quote, "standard components that Android apps can use." Is that right?
A. Yes. Standard components they use, yeah.
Q. And you mentioned that if an Android app includes standard components, then Smart Text Selection would work on that app; is that right?
A. I'm not sure exactly what $I$ said. But, like, yes, if you were building an app, you wouldn't build everything by yourself. You would refer to some of the things in the framework so that when that app runs on the phone, then those components can work.

So an example is if you had -- it's like for

TextView. For example, if you had text -- something to render text, you can build an app and say, "Hey, I would like the TextView to render the text." If you ran the
phone, that TextView, depending on the implementation of the operating system could behave slightly differently depending on what you had, yes.
Q. And TextView is run as part of an individual Google app, right?
A. You have to clarify that question. If you wanted to render text, you could say, "I want to textView," but you don't have to render using TextView. You can render by yourself. But if you do refer to TextView, then depending on the phone that you were running on, you will get the TextView from the operating system.
Q. If an app wanted to render text, it could call TextView, and that would run as part of the app's process? A. Yes, if an app wants to render text, it can say, "I would like it to be rendered with TextView."
Q. And if the app decides to use TextView as running as part of its process, then that would cause Smart Text Selection to work in the app, right?
A. Yes, so if an app was -- if an app was running on an operating system that had the feature, and it was -- the text said, "I would like to use TextView," the Android Framework TextView, then that feature will be there if it was existing on that version of the operating system.
Q. So the apps code would call TextView, right?
A. The apps code doesn't necessarily call for TextView.

How can $I$ explain this? So if you wanted to render text, you have the text, and you can say, "I want to render it in a TextView component."

And so that TextView component -- you could have built the TextView component to your app, or you could have included it using a library that had implementation of TextView. But in this case, you know, an app doesn't have to do. It just says, "Hey, I believe there will be a TextView component on the operating system" and use that if that's available.
Q. If we can pull up DTX-166 and look at Page 7 in the lower left-hand side.

You looked at this page with Google's counsel, right? On the screen here?

MR. DIEHL: Mr. Boles, can you pull up -- yeah, there we go.

THE WITNESS: Yes.

BY MR. DIEHL:
Q. On the lower left, the app includes the TextView, right?
A. The app doesn't include the TextView. Like $I$ showed when it was in color, the TextView was part of the framework, and they were in the same color. But I was trying to refer that its TextView was serving the app in that use case.
Q. And as it's drawn here, the TextView is inside the app, right?
A. Yes. But you show it in black and white. It is not very clear what my intention is with what it is.
Q. Okay.
A. My intention is to say that the TextView was -- is serving the app.
Q. And there is an arrow -- once you have TextView, inside the app there is an arrow to the TC service, right?
A. Yes. So once you have the TextView in the app, then TextView will talk to all those different components that eventually lead to this set of features like Smart Text Selection.
Q. And if the app developer didn't put TextView in the app, then TextView would never talk to those services, right?
A. Correct. TextView wouldn't -- if the app didn't include the TextView, then it wouldn't have that feature. But the user -- the app has not necessarily included in TextView for that feature. The app has included in TextView to render text.

So if you ran that same app that wanted TextView on an older version of Android, then it will get what it wanted, which was text to be rendered, but then it wouldn't have the feature. So the app is not explicitly
saying, I want the Smart Text Selection feature. It is just saying, Use the standard operating system's text to cover it.
Q. The answer to my question was correct, right?
A. Your question was how does -- if the app -- can you repeat your question.
Q. My question was, if the app calls TextView, then TextView will call the TC service, and that will run as part of the app's process, correct?
A. No, there are so many -- so many processes are going on here, right? So there will be so many processes that are going on. Everything is not just the app's process. Whenever you are running a code, there could be multiple processes running, right? And, yeah, there will be multiple processes running. I can't really explain it. But like there is a lot of coordination of what is really happening at any time on the screen, right?
Q. Okay. I would like to look at PX-94 with you. If we can go to PX-94. And I want to look at the paragraph you looked at with Google's counsel. It says here, "Version 1 of Smart Text Selection shipped with Android O."

That was Android 8.0, right?
A. Yes.
Q. Okay. I want to finish the sentence Google's counsel highlighted: "The automatic selection expansion is
disabled and planned to be re-enabled in O-MR1 time frame."

But Google's counsel, they didn't finish this sentence, did they?
A. I can't remember. What was the rest of the...
Q. Let's finish it. And then it says: "And the sharing part of the model is enabled."

Do you see that?
A. Yes.
Q. So when Android O launched the sharing part of Smart Text Selection, that was enabled, right?

That's what it says here?
A. That's what it says there.
Q. Okay.
A. That's what it says there. But I can't remember.
Q. And I want to ask another question: You were working on Smart Text Selection before Android 8 came out in 2017, right?
A. So yes, the process will be you build a feature, and then when it is ready, it ships. So, yes, I did work on it before.
Q. And you don't contest that the ' 843 patent issued in 2011, right?
A. I don't know. You said the eight what?
Q. The '843 patent, the patent at issue in this case.
A. And what was your question?
Q. You don't contest that that issued back in 2011, right?
A. I don't really know when the patent was issued or -the first time I heard about this was when I was asked for, you know, asked questions about it. And when I knew about it was when I was deposed. I can't remember maybe 2018, 2019 was when I was deposed that I knew more about like this -- that this lawsuit was going on.
Q. No one told you about the patent while you were working on Smart Text Selection, right?
A. No.
Q. Do you disagree that Google knew about the '843 patent and Google knew that Arendi was protecting itself against the ' 843 patent and already filed suit against Google someone should have told you?
A. I don't know. I think Google can answer that question. My job is to think about experiences and build, you know, user experiences. Things about like, you know, there's a legal team that would probably he handling things like that, but I basically just focus on developing technology and building user experiences.

MR. DIEHL: I pass the witness, Your Honor.
THE COURT: Thank you. Any redirect?
MR. KAMBER: No, thank you, Your Honor.

THE COURT: All right. Sir, you may step down.
Thank you.
MR. KAMBER: Your Honor, may Mr. Toki be excused?

THE COURT: He may. Thank you, sir.
Ladies and gentlemen of the jury, it has come to the end of our day three of trial. We will be recessing for the evening. Remember, don't talk about the case with each other or anyone else. Thank you.
(The jury exits the courtroom at 4:43 p.m.)
THE COURT: Please have a seat. I hesitate to ask this question. Is there anything we need to address before we recess for the evening?

MS. SRINIVASAN: Not for Arendi, Your Honor.
MR. UNIKEL: Not for Google, Your Honor.
MR. ARD: One thing, Your Honor. I forgot to ask earlier. May Mr. Weinstein be excused as well?

THE COURT: Yes.
MR. ARD: Thank you.
MS. SRINIVASAN: Easy one.
THE COURT: That's an easy one. Correct. All right. Thanks everybody. I want to try as best we can to get started on time tomorrow as soon as all the jurors are here. So we'll try to get started as soon as we can once everybody is here. So depending on what issues come up,


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## EXHIBIT C



I was thinking is that we could reconvene with counsel tomorrow morning. I don't want to do it at 8:30 tomorrow morning. The problem is that I have matters from 10:00 to noon, from 12:30 to $1: 30$, from $1: 30$ to $2: 30$, and from $3: 00$ through the rest of the afternoon. So I think the only choice we have is to do it at 8:30 tomorrow morning.

So I was looking over the proposals, which came in, at this point, a few weeks ago, and it seems to me that some of these are going to be easy changes because we've had claims drop out. I don't know if we're also going to have defenses drop out as well. But once we make those changes, it seemed to me that most, if not all, of the rest of the disputed proposals were semantic differences. I didn't know if there were actually any disputes as to what the law was as opposed to just how the law should be presented in the jury instructions.

So I think what might make sense is for the parties to get together and give me an updated joint proposal by tomorrow morning at 7:00 and then we can just sit through and see how far we can get. And if by 10:00 a.m. I'm not able to make a decision on all of this or if we don't get through it all, then we can work in chambers to get an updated Court proposal and then have objections filed on that.

Does anybody have a better idea about how we
call their corporate representative to start. And then -we had had a discussion earlier. We had the corporate representative on our witness list. We agreed with counsel that they could call their corporate representative in their case and we would be allowed to do a full and bounded cross-examination, and then we would rest after that point.

THE COURT: Okay.
MS. SRINIVASAN: So that's our intention today after the first witness.
the court: Got it.
MR. UNIKEL: Yes. So the order of witnesses for today is going to be Mr . Choc, who is our corporate representative, then the Anind Dey deposition designations, then our expert, Dr. Martin Rinard, then the James Miller deposition designations. And if we have time, beginning expert on validity at Fox. We are prepared to move through those efficiently because I know time is an issue.

THE COURT: Okay. So we're not hearing from
your non-infringement expert?
MR. UNIKEL: Yeah, that's Dr. Rinard.
THE COURT: Right. Understood.
MR. UNIKEL: And one question, Your Honor. So at the close of evidence, obviously we do have $50(a)$

File $08 / 21 / 23$ Page 406 of 775 PageID \#: 60985 should proceed?

MS. SRINIVASAN: No, that sounds fine, Your
Honor. We will see, obviously, how much we can narrow things. If for some reason there are outstanding disputes after our conference tomorrow, perhaps we can submit competing proposals on just those few things that remain for the Court to resolve on the papers and have a conference on Monday morning, if we need to, before the jury comes in about what's still outstanding.
the court: Yes. I understand. By the way, I don't need it in any sort of different form than $I$ have it here. I think this was very helpful to me to see where the proposals came from.

Mr . Unikel, any ideas?
MR. UNIKEL: No, that's fine. The only other thing, though, Your Honor, is I assume we're going to roll the verdict form into that as well because we're going to have to do a whole new verdict form based on what we submitted the first time.

THE COURT: Yes. That's a great idea and I'm glad you brought that up. So proposals regarding the verdict form should be filed at the same time.

The next thing I wanted to ask was how we are intending to proceed today in terms of witnesses.

MS. SRINIVASAN: Your Honor, Google is going to

THE COURT: I think you are accurate in your recollection.
motions that we're planning to present. We're planning to present them based on your suggestion by writing at the end of the day.

The question was whether you wanted me to make any sort of oral statement about that on break?
the court: Yes. I think that would be
helpful. Why don't you make an oral statement about it on break and then you can put it in writing.

Any objection to that procedure? That's consistent.
the court: Okay. Please have a seat. So for the deposition designations, have the parties had a chance to look at the Third Circuit's model jury instruction on depositions? I was -- I would usually read that. It's very basic. I can pull it up right now. If you all want to take a second, you might pull it up as well.

MR. UNIKEL: I have my phone off. I'm sorry, Your Honor.

THE COURT: That's fine.
MR. UNIKEL: I believe you had delivered an instruction similar to that in the preliminary instructions on deposition designations.

## MS. SRINIVASAN: No, Your Honor.

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THE COURT: That s fine.

MS. SRINIVASAN: You did.
THE COURT: So I would propose that I read it again before we present the deposition.

MR. UNIKEL: That's great.
THE COURT: Is that fine?
MS. SRINIVASAN: No objection, Your Honor.
the court: Okay. So what I will just have counsel do is the party proffering the deposition just say, Your Honor, at this time we'd ask the Court read the instruction on the deposition testimony.

MR. UNIKEL: Right. One thing -- again, I'm trying to make things as fast as possible for the jury.

There are a list of exhibits that there are no objections to that have been put into the video, as you're aware. We were going to preadmit those. I can either make the motion before the video is played or we can preadmit them now, I suppose, depending on how Your Honor wants to handle it.

THE COURT: So the exhibits will be used with the witness; we're going to see the exhibits. The witness is going to describe what the exhibits are while they are on the stand?

MR. UNIKEL: Correct. And as I had asked the other day, it's going to be side by side. So you're going to have the witness's testimony -- this has been shown.

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the Court: This is for the depositions, okay.
MR. UNIKEL: Right. For the depositions.
Because otherwise the testimony won't make sense if they can't see the exhibit that he's testifying about.

THE COURT: Understood. Any objection?
MS. SRINIVASAN: We don't have any objection to
that. The video does need to be played for purposes of laying the foundation, but we won't object if they want to preadmit so they're not interrupting the video.
the court: Okay. That's fine. So we will ask for admission of those in advance. And if there's no objection, they will be admitted.

MR. UNIKEL: So should I just give that list at the time it's played or should I provide the list for you now and then I can just say preadmit the exhibits?

THE COURT: I think it would be better just for what the jury has seen so far, if they hear you ask to have the exhibits admitted and then I'll admit them so they understand clearly that they're in evidence.

MR. UNIKEL: Great. Thank you, Your Honor.
MS. SRINIVASAN: That sounds fine, Your Honor.
THE COURT: Okay. All right. Anything else we need to address?

MS. SRINIVASAN: Not for Arendi, Your Honor.
MR. UNIKEL: Not for Google, Your Honor.

## Choc - Direct <br> THE CLERK: Please state and spell your name

 for the record.the witness: My name is Ted Choc. It's T-E-D $\mathrm{C}-\mathrm{H}-\mathrm{O}-\mathrm{C}$.

TED CHOC, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:

THE CLERK: Thank you. Please be seated. DIRECT EXAMINATION

## BY MR. UNIKEL:

Q. Good morning, sir.
A. Good morning.
Q. Would you please introduce yourself to the jury.
A. My name is Ted Choc, and I work for Google.
Q. Sir, where do you live?
A. I live in Menlo Park, California.
Q. Is that where you grew up, sir?
A. It is not. I grew up in -- I was born in Wichita, Kansas and I moved to Georgia when I was six, and that's where I grew up.
Q. Sir, where did you go to college?
A. I went to Georgia Tech.
Q. And what did you study there?
A. Computer science.

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on where the jurors are, and we will hit the bench when they all get here.

MR. UNIKEL: Thank you very much.
(Whereupon, a recess was taken.)
THE COURT: All right. Please be seated. We've got all the jurors here. Are we ready to bring them in?

MS. SRINIVASAN: Yes, Your Honor.
MR. UNIKEL: Can we wait one moment?
the court: Yes.
MR. UNIKEL: Our corporate representative was
just using the restroom.
THE COURT: Understood.
Ready?
MR. UNIKEL: We are. Thank you, Your Honor.
THE COURT: All right. Let's bring in the jury.
(The jury enters the courtroom at 9:17 a.m.).
THE CLERK: Your Honor, the jury.
THE COURT: Welcome back, ladies and gentlemen. Please have a seat. We are here for the fourth today of trial. Let's have Google call its next witness.

MR. UNIKEL: Good morning, Your Honor. Google calls Mr. Ted Choc.


A. 2004 .
Q. After graduating from Georgia Tech, what did you do for your first job?
A. When I graduated from Georgia Tech, I worked at Cisco Systems in California.
Q. What did you do for Cisco Systems?
A. When I worked for Cisco -- I was a software engineer.

I worked on configuration software, basically setting
up -- if you've got a lot of firewalls, protecting your network from bad people. I worked on the software that helped manage it, like -- often like walmart would buy, like all your units for all your stores at once, instead of doing one at the time.
Q. And about how long did you work at Cisco?
A. I worked there three years.
Q. And after Cisco, did you go to Google?
A. Yes.
Q. What year did you begin at Google?
A. I joined Google in 2008 .
Q. And can you please describe for the jury your roles at Google?
A. Sure. So when I joined in 2008, I joined as the most junior level software engineering. You call them ICs, which is individual contributor. And $I$ worked on -- my
first team was Google Analytics, and that's the way -- as a website author, you try to make a better website. So that's what we built it for, and I did that for three years.
Q. And then what did you do after that?
A. After Google Analytics, I joined Chrome for Android. I joined in April 2011. I was still an individual contributor, and I worked on that team for the last 12 years.
Q. What is Chrome for Android?
A. Chrome for Android is an Internet browser. It helps you navigate the web. If you're not familiar with Google Chrome, this would be equivalent to Internet Explorer on Windows of old, or you're talking about Safari on a Mac book or an iPhone.
Q. And what sorts of things did you do for Chrome for Android when you joined that team?
A. Sure. When I joined, we actually had not launched anything yet. So we had zero users starting around from the very beginning. If you're familiar with Chrome, like you could do menu, new tab, like I built the first version that shows you, like, your favorite websites.

In Chrome, there's the bar at the top that you search or navigate. We call it the Omni Box. I built that. As you're typing in suggestions, like I built that from the team at Chrome?
A. There are, I think, 55 or 56 . I have to check.
Q. Sir, are you familiar with Smart Text Selection?
A. Yes. Yes I am.
Q. How are you familiar with Smart Text Selection as a functionality?
A. As I mentioned, I've dealt with kind of the Android releases for a very long time. And one -- as a Google app, we worked with the Android team very early on to understand if there's anything we need to do. So I remember when we started talking about Smart Text Selection. And trying to figure out what, if anything, we need to do with Chrome and by when.
Q. Can you please describe, from a user's perspective who's using Chrome for Android, how Smart Text Selection would appear and would be used?
A. I apologize for my hiccup now being contagious.

It would look just like you've seen it kind of in other apps. It's -- you see some text on a web page and you can long press on it and it would -- if it is a phone number, you press on one part of the phone number and it would expand, and you make it an option to call that number.
Q. And, sir, are the instructions for Smart Text
${ }^{2}$

Selection located inside of the Chrome for Android app?
A. No. No, they're not.
Q. Where are the instructions for Smart Text Selection located?
A. The instructions are in the Android framework.
Q. And how do you know that, sir?
A. I looked at the code. And as I also was familiar with, as it being built in the technical discussions, but I also reviewed the code.
Q. And, sir, why did Google make the instructions for Smart Text Selection in the framework as opposed to putting them into the individual Chrome for Android app?
A. As you've heard before, the goal was that an app developer shouldn't need to do anything to get this feature. And by putting it in the framework, most app developers had to do nothing.
Q. Sir, you you've been sitting through the whole trial, correct?
A. That's correct.
Q. And did you hear the testimony of Dr. Smedley the other day?
A. Yes, I did.
Q. And Dr. Smedley suggested that Smart Text Selection becomes part of and included in the app when it runs. Do you recall hearing that?
A. Something to that accord, yes.
Q. Is that accurate?
A. Not from my standpoint, no.
Q. Why not?
A. The code is, again, in the Android framework. If it were included in the app, again, Chrome would work on older versions of Android. So, to me it's a different component that is unrelated to the --

As the app developer, I can't change that code. I look at the code that I can change as the things that are part of the Chrome.
Q. Sir, let me pull up a slide that was used by Dr. Smedley.

MR. UNIKEL: Sir, if we could please pick up PDX-3-69.

BY MR. UNIKEL:
Q. Do you recall seeing this slide presented by

Dr. Smedley?
A. Yes, I do.
Q. Sir, what do you call the parts that were highlighted by Dr. Smedley?
A. Those are comments. That's just a hint that we write as a developer.
Q. So why are comments put into code?
A. The reason you write a comment is that when you are

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authoring code, the next time that you might look at it might be a week, a month, a year later. So it's basically enough hints for you to figure out kind of what you were doing back in the day. So it's just a reminder that -- I guess importantly, you might not be the one touching it next. So it's trying to leave, basically, breadcrumbs for the next person.
Q. Sir, are comments actual instructions that the computer will follow?
A. No, not at all.
Q. Do the comments on this page indicate that Smart Text Selection is actually part of the Chrome code base?
A. No. I think the first sentence is a bit misleading, but this is really just managing Chrome's interaction with the framework code.
Q. And what actually dictates how Chrome runs, the comments or the code?
A. The code. The code is the truth. Comments are -they are hints, but the code is the truth.
Q. When Smart Text Selection is operational for Chrome for Android, what group of instructions actually sets up the menu bar that a user will see on their screen after long pressing?
A. That would come from Smart Text Selection from the framework code.

## Choc - Direct

Q. How does Chrome interact with that framework code for Smart Text Selection? How do they communicate with one another?
A. That would be through the Textclassifier API.
Q. And can you explain how that would work?
A. Certainly. As we've heard throughout the trial, an API is basically a contract for code, which says that if I call this thing, I should expect this result. And in the case for Chrome, we actually did have to do a little bit of work, which is Android doesn't know about the text that we are rendering in a web page because we don't use, as you have heard before, TextView.

So Chrome's got to get the text out of the web page and then pass it along to the Android framework. So that's the way we use those APIs.
Q. Sir, as a result of that interaction that you just described, is it ever true that the instructions for smart Text Selection actually become a part of the Chrome app? A. No, no. We don't do anything smart, in this instance.
Q. Is it ever true that the instructions for Smart Text Selection somehow join together with the instructions for the Chrome app?
A. No. No, they don't.
Q. Is there ever a single container that contains both

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the code for the app and the code for Smart Text
Selection?
A. No. Smart Text Selection is a multi-process feature,
so no, there's never one.
Q. Sir, if I can show you one of the demonstratives used by Dr. Smedley.

MR. UNIKEL: If we please pull up PDX-3-107.
BY MR. UNIKEL:
Q. Sir, do you see that the title of this slide from

Dr. Smedley was "Android 8.0.0_r1 Input Device Step"?
Do you see that?
A. Yes. Yes, I do.
Q. Where is this code that is shown on this slide, where is that located?
A. So this code is -- from the title, it says
"TextView.java," and that's in the Android framework.
Q. Let me show you the next slide, PDX-3-108.

Do you see that the title of this slide also refers to Android 8.0.0_r1 and says "Input Device Step"?

Do you see that?
A. Yes. Yes, I see that.
Q. And where is this code that's shown on this slide? Where is that located?
A. This would also -- this is TextClassifier and that's also in the Android framework.
Q. And how do you know that?
A. I looked it up.
Q. Sir --

MR. UnIKEL: Next slide, please.
by mr. unikel:
Q. PDX-3-109. Again, do you see that this is now "Android 9.0.0_rl Input Device Step"? Do you see that in the title?
A. Yes.
Q. Where is this code located?
A. This is the updated version of TextClassifierimpl from Android 9 .
Q. From where --
A. -- also in the Android framework. Sorry.
Q. Okay. Sir, do you -- when you said --

MR. UNIKEL: The next slide, please.
PDX-3-110.
BY MR. UNIKEL:
Q. This is another slide from Dr. Smedley that refers to the input device step. Do you see that?
A. Yes, I see that.
Q. Where is this code located?
A. Similar to the last slide, this is

TextClassifierimpl, which is also in the Android framework.
Q. Thank you.

MR. UNIKEL: You can pull down the slide,
please.
BY MR. UNIKEL:
Q. Sir, are you familiar with something called Android Intents?
A. I'm very familiar with that, yes.
Q. How are you familiar with Android Intents?
A. In my time on Chrome in the last decade, I've been the primary owner or reviewer of our interactions with the Intent framework.
Q. And can you describe for the jury, what is the Android Intents system?
A. The Android Intents system is the way for Androids to be able to pass information to another application, but it always goes through the Android OS. There's many reasons for that.
Q. Well, can you describe the reasons why the Android Intents system is part of the Android framework as opposed to an individual app?
A. Sure. The main -- I see two main reasons. One, there's security. And then there's -- one is actually user choice. So one of the core tenets of Android was its openness. So we were trying not to say, if you're using a Google app, that it needs to launch another Google app.

## Choc - Direct

So if you happen to be in Google Chrome but your default e-mail client was Outlook, that should work. The user should be in charge.

So when you define an intent, you're not defining where it's going. You are actually letting the Android framework figure that out based on the user choice. And the fact as if -- as an app developer, you could be in charge of that. It could be malicious. And it's so core to how things communicate. It can't be part of an app. It would be fundamental security flaw of the operating system.
Q. Sir, just to be clear, where are the instructions for the Intents handling system located?
A. Those are also in the Android framework.

MR. UNIKEL: Mr. Spence, if we could please pull up PDX-3-104.
BY MR. UNIKEL:
Q. Sir, do you recall seeing this slide during Dr. Smedley's testimony?
A. Yes. Yes I do.
Q. And, sir, there's some highlighted text there. Do you know what this, these code instructions relate to, in general?
A. This is part of the Smart Text Selection feature.
Q. And when it refers to "final intent, intent

0
factory.create," what is that generally referring to?
A. This is saying: For this particular type of selected text, tell me the type of intent that would be used there.

So for a phone number, it would be "Dial." For an e-mail, it would be a "Mail to" link. So it's sent to the right e-mail client. Or for an URL, it would be opened in a browser.
Q. Sir, do you see the title given by Dr. Smedley, which
is "Google's Public Source Code for Chromium"?
Do you see that?
A. Yes, I do.
Q. Is this part of the public source code for Chromium?
A. No. No, this is not.
Q. How do you know that?
A. This is referencing TextClassifierimpl, which we
actually showed in the previous slides. It's from the Android framework. So that's a false claim.
Q. To what extent can Chrome for Android, by itself, launch another application, like a phone dialer or an e-mail program?
A. That's impossible.
Q. Why does -- and what does Google need -- what does Chrome need in order to launch another application, like a phone dialer or an e-mail program?
A. Chrome is not any different. It realizes that on the
Q. When Chrome sends an intent to the intents handling system, does Chrome know what other applications eventually are going to get used?
A. No. No. That's the -- that's the intent of the intent system, is that one app should know what the other app will -- well, other half will be launched.
Q. Does Chrome for Android know when it sends an intent what all of the behaviors of the eventual application that's going to get opened will do?
A. No. No. That's, again, not the purpose of the intent system.
Q. If you eliminated the intents handling framework code from the operating system, would an intent from Chrome ever cause another program to open?
A. If you could get Chrome to work without it, it's -you'd never leave chrome. It'd be, if you clicked on a link to Maps, it would never open. So you'd always be left in the browser.
Q. Sir, when did Android 8 first release?
A. That was August 2017.
Q. And how do you know that?
A. I was working on Chrome for Android at the time. And it's been mentioned here, and I believe. That's correct.
Q. And, sir, am I correct, Android 8 is also known as

## Choc - Direct

Q. And so what is -- when you say "O-MR1," what does that mean?
A. MR1 -- MR means maintenance release. We heard, I think it was Toki, and Brahim mentioned that it's -- it's basically -- it was bug fixes, bug fixes we couldn't get in time for the original release.
Q. When did O-MR1 actually release?
A. December 2017.
Q. And how do you know that?
A. As part of the -- I refreshed my memory as part of reviewing for this trial.
Q. And, sir, from August 2017 until December 2018, were any actual device users able to use their apps with Smart Text Selection -- sorry, from August 2017 to

## December 2017?

A. From -- the original from Android 0 to Android $0-M R 1$, no. No users could use Smart Text Selection.
Q. When Google enabled Smart Text Selection for potential use by users in December of 2017, did it immediately become available for all users to actually use Smart Text Selection?
A. No. It would only be available to users whose phone was on O-MR1.
Q. And why was there a delay? Why -- why wasn't it immediately available to all users?

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Android 0 ?
A. Yes, or Oreo.
Q. Is there any difference between when we talk about Android 8 and when we talk about Android 0 ?
A. No. They're the same.
Q. When Android 8 was first released in August of 2017, did that release contain the code for Smart Text Selection?
A. Yes. The API for Smart Text Selection was in the original launch.
Q. Could users use Smart Text Selection as part of the release with Android O?
A. No. No, they couldn't.
Q. Why not?
A. It wasn't -- the quality was not where we wanted, so it was disabled until Android MR1. Android O-MR1.
Q. When you say it was disabled, what does that mean? How was it disabled?
A. They disabled the models that would do the classification. So they would never classify anything. It didn't know -- it could never figure out if it is a phone number or an e-mail address.
Q. And when did Google actually first make it possible for users to use Smart Text Selection in Android 8? A. It would have started working in Android O-MR1.

A. Because this relied on O-MR1 being on the device, it just takes quite a long time, potentially never happening to users' phones.
Q. And how does $0-M R 1$, for example, get downloaded to non-Google devices?
A. It would have to be first approved through a few different channels before it can go to the device. Happy to elaborate.
Q. Yeah. Can you describe that, please?
A. Sure. So when -- this is not specific to O-MR1 or 0 .

This is actually the process for all Android releases, is that Google is going to build this version of Android, and they're going to make the code publicly available on a particular date. And then you're going to have -- the first thing that will happen, is the manufacturers are going to pick it up. This is the Samsungs, the Motorolas, the Lenovos, the OnePlus.

And they're going to first add on top of their additional requirements. They've added things on top of Android over the years. So they've got to make that work on the new version. And then they just actually have to figure out, does it work, does it crash, are there problems, and fix those bugs.

Then they have to look at their device portfolio, figure out which, if any, will get the release at all.

It's actually quite expensive to do this. So they've got to see, like, okay, which one should get in.

So you kind of go through this whittling process to figure out which devices get it, and it takes a long time to make sure for the devices that get it, are there bugs or is it ready to go.

So that's the first process. That's the manufacturer validation time.

Then, because we live in America, we deal with carriers. Then you've got your ATTs, your Verizons, your T-Mobiles. And they will take that version from the manufacturer, and they're going to run their own set of validation on it. They want to make sure that the phone that they sold you or made part of your plan is going to keep working. And therefore, they're going to do a lot of rehearsed testing.

I've dealt with a lot of this personally, a lot of back and forths. It's a very long, lengthy contract. And they want to make sure that by the time you get it, your phone's great, it works exactly the way you want, and it works still.

So that somewhat lengthy process is what it takes from one Android -- from when Google says, hey, you can't start using this, to when it gets on phones.
Q. And approximately how long does that whole process

## BY MR. LAHAD :

Q. Good morning, Mr. Choc. My name is John Lahad. We've not met.
A. Good morning.
Q. Thanks for coming.

You are here as Google's corporate representative, correct?
A. That is correct.
Q. And that means you're not just testifying on behalf of yourself, but also on behalf of the corporate entity Google, right?
A. That is my understanding.
Q. You're kind of like the mouthpiece of the company this morning, correct? At least for this trial?
A. For where I can provide expertise. Again, I think Google is much larger than me, so I think there will be areas where I'm not the expert. But I will try to provide my opinion where appropriate.
Q. So the accused STS functionality has been part of Google's products since 2017, correct?
A. It was launched in -- as part of the Android o -- the API was Android 0 .
Q. And since its release, Google has not ceased providing that STS functionality in its apps and products, correct?

MR. LAHAD: Sorry, Your Honor. May I proceed?
the court: Yes.

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A. Since -- once -- again, the caveat O-MR1? Yeah, Smart Text Selection still works today.
Q. You don't know whether Google has developed any alternatives to STS that would operate in a different way in order to avoid infringing the ' 843 patent, correct?

MR. UNIKEL: Objection, Your Honor. Calls for a legal conclusion.

THE COURT: Overruled.
the witness: Can you repeat the question?
Sorry.
BY MR. LAHAD:
Q. You don't know whether Google has developed any alternatives to STS that would operate in a different way to avoid infringing the ' 843 patent, correct?
A. I don't believe I can, again, provide patent guidance on the full breadth of the $' 843$ patent. There was actually a feature in Chrome that did something similar to STS, but nothing at the level where STS makes it available for all apps.
Q. So upon learning that STS might infringe, Google did not undertake any effort to cease that allegedly infringing activity, correct?
A. When STS was developed -- again, I think this is where Toki is certainly more the expert than I -- that was 2017, and I didn't know about this patent until 2019 when
Q. Well, you understand that Arendi sued Google in 2013 on this patent, correct?
A. As a part of this trial, I learned that, yes.
Q. So if Arendi sued Google in 2013, then clearly Google knew about the 843 patent in 2017, right?
A. There was -- someone on the Google legal side was aware of this.
Q. And you understand the accused technology in this case, of course, was released in 2017, right?
A. Yes, that's correct.
Q. So at the time that Google initiated its infringing conduct in 2000 -- strike that.

At the time that Google initiated its allegedly infringing conduct in 2017, Google had knowledge of the ' 843 patent, correct?
A. That's right. Google legal would have known.
Q. Does Google think it is appropriate to infringe intellectual property?
A. No.
Q. Does Google make any effort to avoid infringing intellectual property?
A. Yes.
Q. Sorry. What was that?
A. Yes, yeah. Yeah, we -- I'm sure we do. I know -- I

Google has willfully infringed; that means kind of like intentionally infringed the Arendi patent, right?
A. I don't know if I've heard willfulness. I don't know if that's a particular legal term or not.
Q. Does Google have any policies or procedures that it implements to avoid infringing intellectual property?
A. They might, but $I$ think that is a question for the legal team.
Q. You didn't ask anybody on the legal team in advance of appearing today?
A. I did not.
Q. So you don't know either way if Google has policies -- let me strike that.

You don't know -- if there are policies, you don't know whether or not Google undertook them in this case with respect to the ' 843 patent?
A. While -- I mean, I know that Google was aware of this. But, again, I don't know what the policies are, so I think I -- I don't want to speculate.
Q. Does it make a difference to Google -- with respect to representing intellectual property, does it make a difference if the owner of the patent is making a product? A. I don't see why it would. Q. Does Google feel that if someone doesn't make a product, that gives Google permission to infringe that

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## Choc - Cross

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mean like, $I$ think this is -- the legal team ensures that we are being appropriate.
Q. Yeah. But you're here as the corporate rep, right?
A. I am, yes, that's right.
Q. You're here speaking on behalf of Google, the
company, right?
A. That's correct.
Q. Okay. So --
A. With my limitations on expertise, yes.
Q. All right. Great.

So what does Google do to avoid infringing
intellectual property?
A. I don't actually know. That's -- again, our legal team would be a much better answer for that.
Q. I mean, I'm not trying to be cute, but you knew this was a patent case, coming into it, right?
A. That is correct, yeah.
Q. Yeah. You got on a plane, probably in SFO, flew out here with the intent of testifying in a patent case, right?
A. That's right.
Q. And, of course, one of the issues in a patent case is whether or not there's an infringement, correct?
A. That's right.
Q. And you understand that Arendi has asserted that
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Filed 08\|21/23 Page $414^{\mathrm{c} b f} 77^{\mathrm{c}} 5^{s}$ PageID \#: 60993 person's IP?
A. Again, while that is better answered by the legal team, but I don't see why that would be the case.
Q. Well, you were in the courtroom on Monday when your lawyer was casting aspersions against Mr. Hedloy for not making a product?
A. I think it's still making a product.
Q. You think Arendi is making a product?
A. No, no. I think there was the OneButton thing. It's whether it's still making a product, was the line of questioning, if I recall.
Q. Oh. But do you recall the line of questioning from Mr. Unikel with -- to Mr. Hedloy saying, you know, Arendi hasn't made a product in 20 years, Arendi hasn't been doing -- remember that?
A. Yes. Yeah, that's the line of questioning I recall.
Q. Okay. So -- but the absence of a product doesn't
mean that person's IP can be trespassed, correct?
A. That is fair. But that is my understanding -- my limited understanding of the patent law. And you are patent law experts, not I.
Q. Okay. So just to put a bow on it, whether someone makes a product is irrelevant to whether Google has infringed that person's IP, correct?
A. That is my understanding, yes.

## Choc - Cross

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Q. And you recall Arendi gave Google claim charts in this litigation that mapped out how Google's products infringed Mr. Hedloy's '843 patent all the way back in 2013, correct?
A. No. I -- it -- I did not see them.
Q. So you don't know either way?
A. Yeah. I can't provide a definitive answer.

MR. LAHAD: Your Honor, may I approach?
the court: Yes.
BY MR. LAHAD:
Q. Mr. Choc, I've handed you two documents. Please take a second and let me know if these documents refresh your recollection as to whether or not Arendi provided Google with claim charts in the 2013 time frame explaining the infringement by Google.
A. I have never seen these documents before.
Q. You've never seen them before today?
A. To my recollection, I don't believe I've ever seen this.
Q. Okay. And you have no reason to believe that Google didn't get these documents through the litigation, right?
A. I would have to assume you're telling me the truth, so yes.
Q. At the time of Google's infringement in 2017 --
sorry. Strike that.
Q. Now, of course, Google has its own intellectual property, right?
A. That's right.
Q. But to be fair, patents aren't just for technology companies, right?
A. That's right.
Q. They can come from big companies, right?
A. Yeah. Yes.
Q. They can come from little companies?
A. Yes.
Q. They can come from individual inventors, right?
A. Yes.
Q. And just as between Google's patents and IP and Mr. Hedloy's patents and IP, Google's aren't more important or more valuable just because they belong to Google, correct?
A. That's my understanding, yes.
Q. Google released the accused STS technology in 2017 with the understanding that that technology might infringe one or more claims of the ' 843 patent, correct?
A. That one, I don't know. I don't know when STS was accused.
Q. Well, Arendi's complaint in this case referred to Gmail and other Google products, correct?
A. Yes, that's correct.

## A. Yeah.

Q. At the time of Google's alleged infringement, 2017, Google did not have a good faith belief of the ' 843 patent's invalidity, correct?

MR. UNIKEL: Objection, Your Honor. Calls for a legal conclusion and an ultimate conclusion for the jury.

MR. LAHAD: Can I be heard at sidebar, Your
Honor?
Never mind, Your Honor. I --
THE COURT: That objection --
MR. LAHAD: Go ahead. Sorry.
THE COURT: That objection is overruled.
BY MR. LAHAD:
Q. Do you need the question again?
A. Yes, please.
Q. Sure.

At the time of Google's alleged infringement, 2017, Google did not have a good faith belief of the ' 843 patent's invalidity, correct?
A. There are several words that I'm not sure what they mean.
Q. Sure. Let's break it down. Filed A. What's "invalidity" in this case?
Q. Well, invalidity that the patent was --
A. Yeah. I don't know what that implies for a patent litigation. I guess, I'm not a patent lawyer. I didn't go to law school like you guys did. So I think that's why we're here, aren't we? I mean, isn't this trial to determine the validity of the patent?
Q. Right. That's why we're here. That's why you're here, right?
A. Well, I mean, I think we're defending that Google --

I think ours is that Google didn't. I believe that is our position.
Q. But Google has also taken the position that the patent -- the ' 843 patent is invalid, right?
A. I -- that one -- that's the legal team's
responsibility. I don't know their arguments. I'm a technical witness.
Q. Well, you're also the corporate rep, right?
A. Yes. And I will defer to the legal team when appropriate.
Q. And you're speaking on behalf of Google LLC as the company, right?
A. That is my understanding of my role.
Q. Okay. And part of the company is -- rephrase that. The legal team to which you keep referring is part of

## Choc - Cross

itself, sue Arendi, right?
A. I guess. Can't you sue anybody?
Q. Well, you're aware of something called -- maybe you aren't -- are you aware of something called a "declaratory judgment"?
A. No, I'm not. Sorry.
Q. It's not wrong for a company to protect its IP, right?
A. That's correct.
Q. Let's go back to why you think you're here. Let's talk about some technical aspects.
A. Sure. Yeah.
Q. So while at Google, you worked on the Chrome app for Android devices, right?
A. That's correct.
Q. You were working on it in 2017, right?
A. That's right.
Q. And your team installed the code necessary to make Smart Text Selection work in the Chrome app for Android, correct?
A. Installed? No. I don't think that -- that does not sound like what we did.
Q. Well, in the context of 0 Android, you integrated the APIs necessary for Smart Text Selection, correct?
A. We added the -- again, a bit of code in Chrome to be
A. It is.
Q. Okay. So sitting here as Google's corporate representative for the company, including the legal team, can you explain to me any kind of factual basis for Google's good faith belief, at the time of the alleged infringement, that the ' 843 patent was invalid?
A. I think that's, again, a legal argument for the legal team. I think Google has hundred-thousand people, so I can't speak for us all.
Q. Did Google think the ' 843 patent was invalid in 2017?
A. I don't know.
Q. During Mr. Unikel's examination of Mr. Hedloy, also in his opening, he referred to the idea that Arendi didn't reach out to Google before initiating litigation.

Do you recall that?
A. I do recall that, yes.
Q. What would Google have done had Arendi reached out to Google before the lawsuit?
A. I'm not sure.
Q. Would Google have taken the license?
A. I have no idea.
Q. Would you have ceased the alleged infringement?
A. I have no idea.
Q. One of the things that Google could have done was to,
A. We added a bit of code to call those APIs, yes. We had to do that text extraction that I mentioned.
Q. So you had to add the bit of code to call the APIs?
A. That's right.
Q. That bit of code was added to Chrome?
A. That's right.
Q. So you had to modify the Chrome code?
A. Yes, that's correct.
Q. And so as we stand here today, the code for Chrome for Android calls the APIs for Smart Text Selection, correct?
A. The code in Chrome for Android calls the -- yeah, that's right.
Q. You would agree that Smart Text Selection in Chrome for Android is a nice utility for the user, correct?
A. Yes. Nice utility.
Q. And STS provides for a consistent user experience, correct?
A. That is correct.
Q. You were in the courtroom when we saw that video, PX-314, during Dr. Smedley's examination? That's the video with David Burke.

Do you recall that?

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A. That was Google I/O one, right?
Q. Yes.
A. Yes. Yes, I recall that.
Q. You recall the audience cheering when Mr. Burke was demonstrating the accused functionality?
A. Yes. That's manufactured, I'm sure, yes.
Q. You think it was fake cheering? Is that what you're saying?
A. No. It's a developer conference. I mean, they cheer for everything.
Q. Well, they're cheering for this technology, right?
A. Yeah, I mean -- yes. That doesn't mean a whole lot.
Q. The cheering doesn't mean a whole lot?
A. No. I mean, it's more -- it's not -- they do it for, basically, everything that is announced. So I don't think it's indicative of anything, although than that human beings were present.
Q. The human beings were present?
A. Yes. I think that's the best we can say. It was not robots.
Q. Programmed to cheer on everything?
A. Yeah. We are developers; we are excitable.

MR. LAHAD: May I approach, Your Honor?
the court: Yes.

## Choc - Cross

(Whereupon, the following occurred at sidebar:
THE COURT: Is this document on the exhibit
list?
MR. LAHAD: On Defendant's exhibit list.
MR. UNIKEL: It was disclosed for us with use with this witness. It wasn't like they provided a list of topics he was going to cover as the corporate
representative. He doesn't know all the documents on the exhibit list.

THE COURT: I am not going to allow this witness to admit this document. He said he hasn't seen it before. So you are welcome to ask him questions about it. It is not going to be admitted unless I hear more foundation that suggests he knows what this is or some topic about what it is. It's not going to be published to the jury at this time.

MR. LAHAD: Thank you, Your Honor.
MR. UNIKEL: Thank you, Your Honor.
(Whereupon, the discussion at sidebar
concludes.)

THE COURT: That objection is sustained. The document is not admitted at this time.

BY MR. LAHAD:
Q. Mr. Choc, does Google undertake study --

## by Mr. LAHAD :

Q. Mr. Choc, I've handed you DTX-765.
A. I see this.
Q. Do you recognize DTX-765?
A. No, I do not.
Q. This is an "Assistant Label for Smart Text Selection
\& Shortcuts Study Findings." Do you see that?
A. I do see that title, yes.
Q. This is a Google document, correct?
A. Likely, yes.
Q. This is a study that -- this is a document that purports to describe the results of a study regarding assistant label and Smart Text Selection and shortcuts, correct?
A. I've never seen this document, so I don't know what it is asserting. Based on the title, that says "Assistant Label for Smart Text Selection \& Shortcuts Study Findings," so I assert that that is probably what it is doing.

MR. LAHAD: Your Honor, I'd offer DTX-765.
MR. UNIKEL: Objection, Your Honor. There was no foundation with this witness.

MR. LAHAD: He is the corporate rep, Your
Honor.
THE COURT: Let me see counsel at sidebar.

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A. I'm sorry to interrupt.

Do I keep the document up here.
THE COURT: Yes.
THE WITNESS: Sorry.

## BY MR. LAHAD:

Q. Mr. Choc, Google does undertake studies and surveys regarding features it offers in its products, correct?
A. Not always; but, yes. We do it for certain features, yes.
Q. And one of the reasons you do that is to see how useful the feature is for user's, right?
A. It can be one of the reasons we do it, yes.
Q. And one of the reasons you do that is to determine whether or not the feature should remain as a feature in a product or a OS, right?
A. It can be one of the reasons, yes.
Q. And as we agreed earlier, STS has been a part of the accused products since its launch in 2017, right?
A. By "launch," MR1 when it can be usable, yes.
Q. So despite, you know, it being around for six years, despite, you know, the cheering going on at the conference, Google's position is that this technology is worth about 35 K ; is that right?
A. Oh. I don't know that.
Q. Well, you were in the courtroom during opening,

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## right?

A. Yes. I don't know if I was excluded -- I have been excluded from certain things, so I don't -- maybe I was there.
Q. Fair enough, sir. Fair enough.

Do you recall the slide from Google's lawyer about, you know, if Google does infringe and if the patent is valid and Arendi is entitled to, like, 35 K or maybe even 400 K on its best day? Do you recall that slide?
A. If I can see it again, it probably would refresh my memory.
Q. And did you understand that as part of reaching
damages calculations in this case, the experts had to assume infringement and invalidity -- excuse me -validity of the claims, right?
A. I think based on the damage expert yesterday. I am not a damage expert.
Q. Yeah. But you heard yesterday Mr. Weinstein talk about that's one of the assumptions that damages experts in patent cases have to undertake, right?
A. I don't recall if that was when $I$ was excused from the courtroom again.
Q. What is Google's view -- putting aside this lawsuit, what is Google's view of how much the STS technology is worth?
. I am not aware of any dollar figure.
Q. So outside of this lawsuit, Google didn't do any kind of valuation of the STS technology?
A. If they did, I'm not aware of it.
Q. You understand that as part of this case, Arendi and Google exchanged information, right?
A. I'm not -- I am aware of that general process in legal proceedings, so I assume it happened here, yes, based on the discovery effort.
Q. Yeah. It's called a -- process called discovery, right?
A. Yes.
Q. You've heard that?
A. I have heard of discovery.
Q. All right. We are halfway to your law degree.
A. After this week, no, I'm good.
Q. So you understand that as part of discovery in this case, Arendi asked for information related to downloads and installs of the accused applications, correct?
A. I am not aware of what was requested.
Q. But you were aware -- well, let me ask you this. Google does not share that download information publicly, right?
A. That is correct.
Q. Okay. So I can't go "Google" how many times Google

## Choc - Cross

apps have been downloaded, right?
A. No.
Q. And Google doesn't disclose that information to its competitors, right?
A. Again, I don't work on the Play Store, so I -- I know that the information is public, but I don't know of anything else about disclosure or anything like that.

I know we that have our own Play Store that says roughly the number of users.
Q. And you were in the courtroom when -- during the
cross-examination of Mr . Weinstein, right?
A. I think there was also a part I was excluded from.
Q. Were you in the courtroom when he was asked questions about -- well, the insinuation was made that his number was inflated or overinflated based on an incorrect number of downloads? Do you recall that?
A. I do recall that.
Q. Okay. So how many -- how far off is he?
A. I think this would be -- one, I don't know what the number is included, so I don't know what -- if it was all of them, massively.
Q. Well, you know, Mr. Weinstein was challenged. The insinuation was that he missed the mark when it came to download numbers, so $I$ just want to know how far off he was.

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A. If the numbers were for all Android versions -again, this is rough calculations in my mind and not knowing what this is, it would be probably 95 percent wrong.
Q. So he's off by pretty much the whole thing; is that what you're saying?
A. Yes. This is my understanding of the slow ramp-up process for Android, which takes a long time, years, before it actually becomes a meaningful amount.
Q. So your testimony is that based on what you know, Mr. Weinstein is off by -- he pretty much missed it completely?
A. If it is all the downloads for all -- every version. Again, he didn't know either. So I think until we know what that data represented.
Q. So you don't have that data?
A. I do not. I'm not part of the discovery team.
Q. You weren't asked to provide that data?
A. I was not. That comes from the Play Store.
Q. You came to this trial and your legal team came to this trial ready to challenge Mr. Weinstein and you didn't look at the data yourself so you could have, like, a counter for us?
A. I did not.
Q. That information is knowable, correct?

just trying to figure out where the bounds of your knowledge are.
A. Sure.
Q. You are here at Google's corporate representative for this trial, and you don't know which witnesses are on deck?
A. I know that we were doing two videos, but that was legal proceeding questions, so I'm here for mine, and to listen.
Q. You are here to -- strike that.
A. I'm here for my expertise, where appropriate.

Make sure Google is accurately represented in this trial.
Q. In 2017, Google donated $\$ 10$ million to the University of Washington computer science program, correct?
A. I don't know. If you say so.
the court: Counsel, can $I$ see everyone at sidebar, please
(Whereupon, the following occurred at sidebar:
the court: So, Counsel, I just want to make sure I understand what's going on here. This is not a 30 (b) (6) deposition. We have a trial witness on the stand. They have to have personal knowledge. We have a lot of questioning you are free to explore what he is knowledgeable about. When he says he doesn't know, that's Choc - Cross
appropriate way to use that at trial that binds Google. I am not hearing that so far.

MR. LAHAD: Well, I'd like to be able to lay a foundation, if I could. I asked the question. He hasn't answered.

THE COURT: Did you ask him some of this at deposition? Are you ready to --

MR. LAHAD: No, it wasn't asked at deposition. He is here in his personal capacity. Correct? We are having --

THE COURT: Those questions are fair game. If you can ask him questions what he has personal knowledge of, he can testify about things he has personal knowledge.

MR. LAHAD: May I be permitted to see if I can refresh his recollection on things?

THE COURT: That's fine. Once he says he doesn't know, that's where it needs to end.

MR. UNIKEL: The notion of unbounded cross was only -- they wanted to put him on in their case in chief. We said they could have unbounded cross as to matters related to his personal knowledge, not as to everything for Google generally.

Second of all, they are going to prejudice -it's very clear the next thing they are going to ask is did Google make donations the university where Dr. Dey
where it needs to end
Do you have disagreement about that?
MR. LAHAD: Yes, Your Honor, I do. He's the corporate representative for Google. There's no difference between 30 (b) (6) corporate rep and a corporate representative at trial.

THE COURT: What Federal Rule of Evidence are you talking about?

MR. LAHAD: With respect to a 30 (b) (6) notice, that's a 30 (b) (6) notice for discovery. At trial, he is Google. I can't call Google as a witness. I have to call their corporate representative.

MR. UNIKEL: 30 (b) (6) procedure is so he can ask the questions of Google with knowledge and advanced knowledge at a deposition, that could then be used at trial for the appropriate purposes.

MR. DIEHL: Just because somebody shows up because they have an interest in the litigation from a technical standpoint doesn't mean they are on the hook for any knowledge of Google.

THE COURT: Counsel, so I agree with defendants on this point. You are welcome to ask him if he has personal knowledge of these things. If he doesn't have knowledge, that's where the questioning needs to end. If you have particular 30 (b) (6) testimony, there is an
was -- that was not explored of Dr. Dey. To ask the questions when he clearly is not going to know is intending -- by asking the questions, they are trying to imply bias.

THE COURT: He is free to ask if he knew Google made the donation. He is free to ask Dr. Dey if the donation was made. They are fair game. Once the answer is he doesn't have knowledge, that's where it ends.

MR. LAHAD: Am I permitted to refresh his recollection?

THE COURT: You may be permitted to refresh if you have some reason to think he has knowledge. But I will take another sidebar if it looks like we are getting beyond that.

MR. UNIKEL: He does not have knowledge, as he said. When the circus comes and they hand him something to say: Does this refresh your recollection of a donation to the University of Washington, which he said he doesn't know anything about, it is increasing prejudice by asking the questions.

> This was never asked of any witness in the case, not just of him. No $30(\mathrm{~b})(6)$ witness, not even Dr. Dey, so the notion he would be expected to be refreshing his recollection when no such recollection exists doesn't seem to hold water, just as meant to be a

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THE COURT: Right. So I don't have the testimony in front of me. I think he didn't testify that he didn't recall. He testified that he didn't know; is that correct?

MR. LAHAD: Correct. He didn't know.
THE COURT: Okay. So if there's a reason to think his recollection needs to be refreshed, you can ask the follow-up question. Let's see how this goes, Counsel. If there's an appropriate objection made to whatever question is asked, we will deal with it at that time.

MR. UNIKEL: Thank you, Your Honor.
(Whereupon, the discussion at sidebar
concludes.)

THE COURT: May I see counsel at sidebar again.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: My courtroom deputy -- has
Defendants Exhibit 5 been admitted?
MR. UNIKEL: It has not.
THE COURT: So we shouldn't be putting it up on the screen?

MR. UNIKEL: Correct.

MR. UNIKEL: Your Honor, for our next witness, we will be calling Dr. Anind Dey by deposition testimony.

In advance of that, I would like to make a motion to admit the exhibits that will be discussed so that the jury can see those during the course of the deposition.

THE COURT: Okay. Can we put on the record what exhibits those are?

MR. UNIKEL: Yes, Your Honor. It's Exhibits DTX-4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 28, and 34, Your Honor.

THE COURT: Any objections?
MR. LAHAD: No objection, Your Honor, provided that the deposition testimony is played in full.

THE COURT: Those are admitted conditionally on the deposition testimony being played.

MR. UNIKEL: And, Your Honor, if I may ask for the instruction regarding deposition testimony, please.

THE COURT: Yes. Ladies and gentlemen of the jury, a deposition is the sworn testimony of a witness taken before trial. The witness is placed under oath and swears to tell the truth, and lawyers for each party may ask questions. A court reporter is present and records

Page $420^{c}$ bf $77^{95 s}$ PageID \#: 60999
MR. LAHAD: I don't think it was, Your Honor.
THE COURT: Pretty sure I saw it up there a few minutes ago.

MR. UNIKEL: We didn't put it up.
MR. LAHAD: I apologize, Your Honor. I didn't
ask for it to be put up. I apologize.
the court: That's fine.
(Whereupon, the discussion at sidebar
concludes.)

THE COURT: Let's proceed.
MR. LAHAD: Thank you, Your Honor.
BY MR. LAHAD:
Q. Let me ask it this way, Mr. Choc. Are you aware of a $\$ 10$ million donation by Google to the University of Washington Computer Science Program for which Dr. Dey is the dean?
A. I'm not.

MR. LAHAD: No further questions.
the court: Thank you.
Redirect?
MR. UNIKEL: No, Your Honor.
THE COURT: Thank you, sir. You may step down.
THE WITNESS: Do I leave all of this here?
THE COURT: Yes. That's fine.

## Deposition Designation - Dey

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the questions and answers.
The deposition of Anind Dey, which was taken on November 12, 2019, is about to be presented to you by video. The deposition testimony is entitled to the same consideration and is to be judged, insofar as possible, in the same way as if the witness had been present to testify.

You may proceed.
MR. UNIKEL: Thank you, Your Honor.
(The deposition designation of Anind Dey plays as follows:
BY MR. UNIKEL:
Q. Good morning, sir. Can you please state your name for the record.
A. Anind Dey.
Q. Also, I want to be clear, you are not involved in this lawsuit in any way.

You understand that?
A. I do.
Q. And Dey Exhibit Number 1 is a subpoena to testify in a deposition, and this is issued by Google LLC.

Do you see that?
A. I do.
Q. And am I correct, sir, you received a copy of this?
A. I do -- I did, yeah.
Q. And in fact, this is the reason you're appearing here for the deposition today, because you received a subpoena --
A. Several.
Q. And you have no financial interest in the outcome of this litigation whatsoever, do you?
A. No, I do not.
Q. Okay. Sir, as part of the subpoena, you will recall that you were asked to look for some documents in -- in the event that you might have any of those in your possession.

Did you do that, sir?
A. I did look.
Q. And did you find anything?
A. I could only find what was available on the public website.
Q. Okay. And when you say 'the public website," what is the public website that you're referring to?
A. There's a website called the "Future Computing Environment CyberDesk" page hosted at Georgia Tech in the College of Computing, where I did my Ph.D. That was a site I put together probably in 1997 through 1999. And that has the documentation of all the papers that I published and some source code, as well as some additional descriptions of -- additional descriptions of services

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said, was for FCE, and what -- what is FCE?
A. Future Computer Environments. It was the name of my researcher -- my -- my Ph.D. advisor was Gregory Abowd's research group at the time.
Q. Let me show you a document that I'm marking as Exhibit Number 3 .

Sir, is exhibit number -- what is Exhibit Number 3 ?
A. Exhibit Number 3 is the main homepage for the Future Computing Environments website that we just discussed.
Q. And this -- the Future Computing Environments, is that a group that is part of the Georgia Tech?
A. It was.
Q. The website in the Future Computing Environments website, that was up and available during the time that you were at Georgia Tech?
A. Absolutely.
Q. Was there restricted access to the website, or could anybody access it?
A. Anybody could access it.
Q. And what sorts of things were put on the future Computing Environments website?
A. It was a typical research homepage for fact in academia. So it was a list of people associated who were with the Future Computing Environments group, the project that were undertaken by the people involved in the group,
involved in the CyberDesk system that didn't show up in a publication.
Q. Am I correct you currently live here in Washington?
A. I do.
Q. And what is your current job?
A. I'm a dean of the Information School and a professor within the Information School at the University of Washington.
Q. And when you say "the Information School," what is the Information School in particular?
A. It's a college that comes from -- used to be an old library school, as library schools transitioned what they focused on, being much more about technology. It covers basically the interaction between human centered and humanities, as well as more of a STEM focus, so really looking at how to apply technology for the greater good.
Q. And then you received a master's of science in
aerospace engineering from Georgia Tech in 1995; is that right?
A. That's correct.
Q. And then you -- you received both a master's of science in computer science and a Ph.D. in computer science from Georgia Tech in 2000; is that right?
A. That's correct.
Q. Sir, you had mentioned a website that, I think you

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access to equipment, and as well as a list of projects that undergrads could get engaged in to be part of the research group.
Q. And did you -- let me show you, on this page of Exhibit 3 --
A. Yeah.
Q. -- which is the homepage, so to speak, of the Future Computing Environments website, you see there's a -- a tag called "projects"?
A. Yes.
Q. And am I correct that that was a link which would take you to a subsequent Web page?
A. That's right. All of these were links, yeah.
Q. Let me show you a document that I'm marking as Dey Exhibit 4.

Sir, am I correct that Exhibit 4 appears to be the Projects page from the Future Computing Environments website?
A. That's correct.
Q. Do you see on Page 2 of this "projects" tab, there's
a section for "past projects"?
A. Yes.
Q. And one of those past projects is CyberDesk, correct?
A. Correct.
Q. Now, CyberDesk, what was -- are you familiar with

Filed 08 8.
A. Yeah, I was one of inventors of it.
Q. So can you give me, at least at a high level, a description of what CyberDesk was?
A. CyberDesk was a -- both an infrastructure and a platform that allowed you to select information in some application, have that information be -- have the selected information be processed in a number of different ways, and to cause a number of services to be made available to -- in the user interface to somebody who's trying to get more information about the information they had selected.

The information could either be completely
highlighted with a mouse or if it -- a whole e-mail could be considered as a selection. The whole -- all the information -- content in a browser could be considered the selected information.
Q. And what was your role in creating CyberDesk?
A. So at the very beginning, I worked with a visiting Ph.D. Student from University of Birmingham, Andy Wood, Andrew Wood. He had built an infrastructure called "Cameo" something. I don't remember exactly the name of it, Cameo. And it was a system that allowed you to plug different software components together. Together, we had
this idea that we could build a system that could do what

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the first -- but the work was -- the first working version of it was in summer of ' 96 .
Q. Okay.
A. Because we had to have gotten it done before we could submit the paper, update.
Q. Sir, am I correct that Exhibit Number 5 is the -- is the Web page for the CyberDesk project that we just saw the linking to on the Future Computer Environments Web page?
A. That's correct.
Q. And did you have some role in creating this index and this Web page?
A. I created the whole thing.
Q. And when would you have -- sir, when did you first post any information relating to CyberDesk?
A. It would have been in the spring of 1997 when we got the paper published -- when we found out the paper was getting published, and then it was updated for a couple of years while the project was still active.
Q. But all of the material that's on this particular Web page, would you personally have put it onto the Web page?
A. Why yes.
Q. And would that include, for example, the linking to any articles or publications that are included here?
A. That's correct.

CyberDesk did, and so building off of his Cameo work, we put the first -- first version of CyberDesk together that allowed these different components to work together, one where you were able to select information from one application and have it be represented in some way in another application.
Q. And when did you start working on CyberDesk to the best of your recollection?
A. Yes. So that would have been fall of 1996.
Q. -- on CyberDesk, and when did you have your first prototype version of CyberDesk?
A. We submitted the paper in September of '90 -- sorry. We submitted the paper -- the paper was published in -- at CHI 1997. The conference is in April, I'm just trying to make sure I get my calendar years right. So it means we submitted the work in the fall of '96. Sorry, which means we did the work in the -- in the summer of ' 96 .
Q. Okay. When you say you "submitted the paper," what do you mean?
A. We wrote up a paper that is -- if you went to the -the link on CyberDesk, it would come to a list of publications, there's one paper that's listed, it's a short paper, like three or four pages long -- actually, it might -- in those days, it might only be two pages -- that was a description of the first instantiation of it, but
Q. I see at the top, under version 2.0, there is your name, correct?
A. Uh-huh, correct.
Q. As well as Gregory Abowd?
A. Correct.
Q. Who was Gregory Abowd?
A. My Ph.D. advisor.
Q. And he was on the faculty of Georgia Tech?
A. That's right.
Q. And then Chris Atkeson is also listed, correct?
A. Correct.
Q. Who is Chris Atkeson?
A. Chris Atkeson was another faculty member of Georgia Tech and he was the co-founder on the Future Computing Environments group, but he didn't have anything to do with this particular project.
Q. And you said the first paper that you would have uploaded onto the Web page and linked on the Web page was, I think, a -- a -- is a CHI or CHI?
A. CHI.
Q. CHI '97?
A. That's correct.
Q. Can you find that for me in this listing of CyberDesk and related papers, please?
A. Yes. It's the -- it's called "CyberDesk: Automated

Integration of Desktop and Network Services. Andy Wood, Anind K. Dey, Gregory D. Abowd. Technical note in the proceedings of the 1997 conference on Human Factors in Computing Systems."
Q. And approximately, when did you link to that article on this Web page to the best of your recollection?
A. It would be -- have been in February or March of 1997.
Q. And why do you think February or March of 1997?
A. The camera-readies would have been due for that
conference at that time in order to be published in time for publication in roughly April or May of 1997.
Q. And just because I'm not as familiar, when you say the "camera-readies," what does that mean?
A. You submit a -- a version of your paper, you get reviews on that. So if the paper was submitted for review in September of '96, by December of '97, we'd get feedback and saying whether the paper was accepted or not, with some reviews request for changes, if necessary. And the camera-ready is the -- the very final version that will then get published.
Q. Okay. And the other papers that are listed here on the CyberDesk website, am I correct, you also personally loaded these onto the Web page along with their links? A. Yes, I did.
Q. And while you were at Georgia tech, were -- were all of these links live, were they accessible to anybody in the public who was interested in the project?
A. That's correct.

Sorry, there's one exception. There are two little dots at the very, very bottom, right above the FCE logo.
Q. Yes.
A. Those were internal links, where I did some -- it was just a quick shortcut for me to get to some internal testing I was doing.
Q. But everything else that is linked on this page, was that accessible to a visitor to the Web page at the time?
A. Yes, it was.
Q. And is that true in 1997?
A. Yes.
Q. In 1998?
A. Yes.
Q. Why did you post all these papers and all these
related materials on the CyberDesk Web page during this time period, 1997, 1998?
A. Part of this is in building your brand as an
academic, that show what the work that you've done is. So link to Exhibit 3, there's a "people" link off of that page, I would have been listed there on that page, and then it would have had my list of projects, which was,

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want more information about and then have the system guess to some degree, but suggest things that you might want to do with that information and then populate a list of -- an interface that shows you all of those suggestions, you pick what you want, and then you get the result rather than you having to carry this information through multiple tools.
Q. So we'll go from the end of the section, the -- the third to last paper in this section is entitled "CyberDesk: Automated Integration of Desktop and Network Services," correct?
A. Correct.
Q. And that is a technical note in the proceedings of the 1997 Conference on Human Factors in Computing Systems, CHI '97, correct?
A. Correct.
Q. And was this the first publication that you recall making about the CyberDesk system?
A. It was.
Q. And what -- what actually was -- can you give me some context for what you meant by the presentation that you made here?
A. Yes. So at the conference, every paper that is accepted for publication gets a presentation slot at the venue. So there are multiple sessions going on

simultaneously. At that time at CHI, there were probably like four or five sessions going on. And in my session, there would be -- have been papers that were very similar to mine in content, and I was given a speaking slot of somewhere between 10 and 15 minutes.
Q. And what CHI?
A. CHI is the premier venue, publication venue,
conference venue for the field of human-computer
interaction. Well, in industry, it's called "user experience."
Q. And that's what C-H-I stands for, correct?
A. That's correct.
Q. Computer-human interaction?
A. That's correct.
Q. And approximately, how many people do you think would attend a conference like CHI '97? Hundreds?
A. It would have been over a thousand, but I couldn't give you a closer number.
Q. And do you recall actually presenting at CHI '97?
A. I do.
Q. And approximately, how many people were there to -would you say -- I -- understanding it's a long time ago, how many people were there to hear your presentation?
A. A couple of hundred.
Q. And were there -- was there a $Q$ and A session at all?
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I presented that, which was essentially a summary of
the -- of the technical note that was published
separately.
Q. So Exhibit 8, sir, are the -- the blow-ups of the
slides that were available from CHI '97 on the Future
Computer Environments Web page.
A. Right.
Q. And so, for example, do you see that the first page of this Exhibit 8 appears to be a blow-up of the slide that was we see in the CHI technical note Exhibit 7? A. I do.
Q. And would you have been using these slides that appeared in the actual technical note as part of your presentation?
A. I would have probably used a modified version, where the As, Bs and Cs were not immediately visible. So I could show almost an animation, a physical animation.
Q. Got it.
A. But something very, very similar.
Q. Now, if you look at the technical note itself from CHI '97, do you see that there is -- we see Figure 1, which includes the slide that we're looking at as the first page of Exhibit 8 correct?
A. Correct.
Q. And just underneath, there's text that reads, "For
A. There was. Right after my talk, there was a $Q$ and $A$ session.
Q. And did you actually present on CyberDesk during
that?
A. I did.
Q. Sir, am I correct, Exhibit 7 is a copy of the technical note that was published for CHI '97?
A. It was.
Q. And did you author this?
A. I did, coauthor.
Q. Coauthored with Greg Abowd and Andrew Wood, correct?
A. That's correct.
Q. And this particular technical note shows a date, on the top right corner, of March 22nd to 27th, 1997, correct?
A. Correct.
Q. Is that approximately when CHI '97 happened, to your recollection?
A. Yes.
Q. So this particular technical note, did you actually present the technical note itself, or did you give a presentation and then the technical note was simply published as part of the proceedings?
A. The latter. So I produced a presentation, it was actually a physical presentation with physical slides, and

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example, at the top left in Figure 1 is an e-mail message informing Anind about the great work going on in the Future Computer Environments group at Georgia Tech. Anind is intrigued and decides to investigate further. Highlighting 'Gregory Abowd' causes the Acton Button Bar to suggest some actions. A."

Do you see that?
A. I do.
Q. Again, are you describing the operation of the CyberDesk system here?
A. I am.
Q. And so let's start with that -- that first step --
A. Yeah.
Q. -- that was shown in A. Can you describe -- maybe there's -- it's just as easy to rely on the words of the paper?
A. It is. It would be, but referring to the Exhibit 8 figure, an e-mail comes in, so what you -- what's a little hard to see from the figure is that there are four different windows on the screen here. So there's the top window, which is the -- an e-mail client; a -- in the bottom left, we have a contact manager; in the top right, we have an Acton, the core part of the CyberDesk system, essentially the user interface for the CyberDesk system; and then you have a web browser in the right side, the
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 bottom right.

And so what happened is, in this scenario, an e-mail was received, the user selected with a mouse the name Gregory Abowd. That went into the -- a CyberDesk infrastructure, which -- do you want me to go into the details of that?
Q. Yes, please. That would be helpful.
A. So what happens with any contact was -- when any content is selected is that it was published to any of the other components that could be listening. And so when everything first gets started, when these were all written originally as Java applets, which -- I don't even know if I can describe what an applet is any more -- essentially, a very lightweight application that we don't have today, just doesn't exist.

So all of these -- all of these applications would be launched, except for the Web browser, that didn't have to be launched, but the contact manager was an application, an applet, the mail tool was an applet, and the CyberDesk system had an applet, which was the -- the visual interface at the top right.

So when the -- when any -- when content was selected in any of the windows, it would publish to the rest of the listeners, to anybody that was interested in the
information, that had registered itself for the CyberDesk

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using -- oh, no, sorry, that's not true. It's look up the phone number for name using the Switchboard.

So that was a tool that converted names to phone numbers, which I can't imagine you could have today, but it existed then. So that converted a name to a phone number and that's what you see in a Web browser on the bottom right.

And then looking up the name in the content -- sorry, contact manager tool, another one of the running applets occurred in the lower left.
Q. But in the technical note from CHI '97, Exhibit 7, right above the graphic, the text says, "The user highlights some text in the window of the one service and CyberDesk determines the type of the text to suggest how the user can invoke behavior in the other services using that text."
A. Correct.
Q. When -- when it said that the "CyberDesk determines the type of text," how would it do that?
A. So there were a number of -- mostly it would do it by regular expression matching, which is essentially comparing it to a template. So a phone number, think of it as a three digits followed by three digits followed by four digits, a name, first name capitalized -- or first word capitalized, second word capitalized, a URL, it had a
system, and they didn't -- those listeners did not have to be visible on the screen, they could be hidden, they didn't need visual interface.

But then you selected the content, that information was available to all the listeners, not all the listeners could leverage that content, so you could have something that maybe converted phone numbers to, I don't know, an address, and since Gregory Abowd is clearly not a phone number, it would get ignored, but it would go to all of the components that could use text or could use
information on a name. There was some integration work that happened behind the scenes while -- after the person has selected it, which was to determine that this text, Gregory Abowd, was a name. And it was pretty trivial, it used some regular expression matching to figure out capitalized first word, capitalized second word, therefore it's a name.

And so the interface in -- that we see in the top right, got dramatically generated with buttons or interactions that could occur based on the highlighted text being selected. -- being seen as both a string and as a name. And the three that got picked in this case were: You could search for that string using the
AltaVista Web -- Web search tool, which is what you see in the bottom right; you could look up a phone number

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number of these types that were built into the system just that were sort of common at this point in time.
Q. When you say in the description here that "once the text is determined to be of a particular type, it would invoke" -- "it would allow the user to invoke particular behaviors that were suggested."

So if the type -- a type was determined, how would the system then know what behaviors to suggest?
A. So there were a number of services that were registered with the CyberDesk infrastructure on -- on start up, and each of those could either -- in this instantiation, those could do one of two things. They could either just consume the information, which means use it and then perform a service, or it could convert it to another type of information. And that's where you see a -- a string being converted to a name.
Q. And would there then -- I notice that some of these, for example, it says "lookup name."
A. Correct.
Q. I assume, then, there had to be an identification by CyberDesk of the information as being a name?
A. That's correct.
Q. And if information was determined to be a name, were there certain suggestions that would be different if, for example, the information was a phone number?


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A. Correct.
Q. How would it determine which actions to suggest?

Would there be some predefined actions that would go along with a particular kind of information?
A. It was not predefined, but it was determined dynamically depending on which services were running at the time. So at any time a new service could get added and it would just connect to the CyberDesk system. And if that -- when it connected, it would say, "I have the ability to produce this kind of information or I have the ability to use this kind of information."

So if that kind of information was seen and it was a consumer, it would be pushed that information in which case it would tell the Acton button, "Hey, pop up an interface so that the user can select me."
Q. Okay. And so I noticed that the second -- the second button in the Acton-button screen says "Lookup Phone Number For Name Using Switchboard" --
A. Correct.
Q. -- do you see that?

So when it says "name," am I correct, it has identified Gregory Abowd as being a name?
A. Correct.
Q. And then how would it look up the phone number for -that would be associated with that name?
A. So I don't remember exactly how the Switchboard
worked, but my recollection is that there was a fairly trivial URL that could be created. So you would put in www. -- or http://www.Switchboard.com, then some form information, and then you'd pass in as a parameter -- an input to the -- to that form the name Gregory Abowd, and then it would -- it would know to produce this Web page.
Q. And this may be a silly question, but how would a user actually interact with that button that says "Lookup Phone Number For Name Using Switchboard"?
A. They would simply click on it with a mouse.
Q. And so when they clicked on that button, what would happen?
A. A Web browser would be launched and that's what this Web page is showing on the bottom right of this page.
Q. And so on the bottom right of this page on this -it's designated with the letter C, am I correct, we are seeing the display of information from the Switchboard website?
A. Correct.
Q. And the information that's being displayed includes the name Gregory D. Abowd, correct?
Q. And it also includes a mailing address that's in Atlanta, Georgia, correct?
A. Correct.

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Q. And it also includes a phone number?
A. Correct.
Q. There's another button in the Acton-button screen that says "Lookup Name Using Contact Manager," correct? A. Correct.
Q. So, first, let me ask: "Contact manager," what is that referring to?
A. This was our very simple representation of a traditional contact almost like a phone book, so it allowed us to store some very trivial information about you. You can see the information here, you can put somebody's name in, their URL Web page that represented them, a phone number, an e-mail. And then below this, you'd be able to see an address and some other kinds of traditional personal information management system tools. This was not a commercial application by any stretch, this is an application we built for this purpose.
Q. Was the contact manager maintained on a user's device?
A. That's correct for this one, yes.
Q. Whereas, Switchboard, for example, was that
maintained off a user's device on a website?
A. That's correct.
Q. And am I correct that a user of this contact book actually could separately access the contact book?

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A. Correct.
Q. And they could input this information directly if they wanted to?
A. That's right.
Q. Here, the button that says "Lookup Name Using Contact Manager," what -- what would happen if a button -- if a user clicked on that button?
A. It would take the name, Gregory Abowd, that it got from the e-mail window, so -- sorry, the e-mail -- so once the user selected Gregory Abowd, it would go into the CyberDesk system, get converted to a name. When the user clicked on "Lookup Name Using Contact Manager," that name would be put into the search window of the contact book. Q. And then what would happen? Would it -- would the contact manager actually do that search?
A. We had it done in two different ways, where you could -- we sometimes -- one instantiation we had it so that you would automatically do the search. And then the first instantiation here or in this -- the graphic we're showing here, it didn't do the search automatically.
Q. It would just populate the screen?
A. Yes, with Gregory Abowd. It was more of a issue with users just being a little uncomfortable with the system doing too much on -- on their part. They wanted some -some agency and click on the button.

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Q. And then -- so now looking back at Exhibit 7, which is the technical note from CHI.
A. Yes, absolutely.
Q. Am I correct that what's described here, you intended to be an accurate description of the way the system worked at the time?
A. Yes.
Q. And did you present the features that are prescribed here in Exhibit 7 as part of your presentation at CHI '97?
A. I did.
Q. Looking at -- in the CHI ' 97 technical note, I see that there's a Figure 3 .
A. Yes.
Q. And in Exhibit 8, if you look at the third page, do you see that Figure 3, then, is blown up there on that third page of Exhibit 8?
A. Yes.
Q. And can you just give me a general description of what's being shown here in this diagram of Figure 3? And I can tell you Figure 3 is -- is tagged as the "Runtime Architecture of cyberDesk" in the article itself.
A. Right. So within the -- within the mail tool that's on the first page of Exhibit 8, you can have multiple different -- the user can select multiple different pieces of information.

They can select someone's name, they can select text, they can select an e-mail address. And so first under the display portion of this figure, that's just information that's displayed in the personal information management tool. In this case, the mail reader.

Once the user selects one of those, the CyberDesk system consumes that information, consumes what was selected and determines whether it can convert the chosen information to any other different type.

So the two examples given here are: If an e-mail was selected, that e-mail address could be changed to a piece of text. And if a text was -- piece of text was created, it had the opportunity to be converted to a name.

Based on the conversions that occurred, the Acton button would suggest -- so now we're in the suggest portion of this image -- it would suggest, via the buttons that were -- that it was populated with, the kinds of actions that a user could perform. And then they would select one of those actions. And depending on the action that was selected, it would send the appropriate information to the appropriate service which was -- is delineated quite well on -- on the buttons themselves. Q. So if I could ask you to look at your CV for me, please, in particular at the "Conference and Workshop Publication" section. And if you could find on Page 5 the

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system to whoever -- all the attendees for -- for that period of time.
Q. And this -- this particular UIST demo, which instantiation of CyberDesk was that, the first or the second?
A. The second.
Q. And in the second, I think one of the things you said was it could actually analyze the entire contents of an e-mail?
A. That's correct.
Q. And Exhibit 10 is actually what appears at the HTML link for that same CHI '97 paper?
A. Okay.
Q. Did you -- when you would publish the HTML or PDF and provide both links, were they the same paper?
A. Yes, absolutely.
Q. So, once again, in 1997, after CHI '97, if -- if I was a user of the website, would I have been able to access both this HTML version as well as the PDF version off of the -- the website for CyberDesk?
A. That is correct.
Q. Sir, do you see that Exhibit 11 is entitled "CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services," and it is authored by you, Gregory Abowd, Mike Pinkerton and Andrew Wood?
A. Yes.
Q. You've mentioned the other three, but who is Mike Pinkerton?
A. Pink was a -- Mike Pinkerton, sorry. Pink was his nickname. Mike Pinkerton was a master student working with my -- in the College of Computing at Georgia Tech working with my Ph.D. advisor, Gregory Abowd.
Q. Now, this particular -- this appears to be a technical report, correct?
A. That's correct.
Q. So what is the difference between a technical report and a -- a journal article?
A. Success in publication versus not success in publication. So we -- we submitted this originally to the UIST Conference when it was not -- when it was not accepted, we created a technical report which meant that we could still share it with the -- with the world.
Q. Okay. So now, again, I'm going to cross-reference here. If we can go back to Exhibit 5, which is the website page for the CyberDesk project, please.
A. Yes.
Q. If you could please find the entry that corresponds with this Exhibit 11, UIST technical report.
A. Yes. It's the "CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services."

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A. I do.
Q. And why did you permit users actually to click on the figures in the published reports on the website so they could actually get these kinds of blow-ups of the figures?
A. It was really for transparency of how --
understanding the system and how it worked. It just made the -- oftentimes a text is not sufficient to understand what was happening, and small versions of the images were not helpful either. So having -- being able to see the images blown up and really seeing sort of that flow of information we found was very helpful.
Q. Am I correct in your technical report you attempted to accurately convey the operation of the CyberDesk system?
A. Correct.
Q. And in Figure 1, which is also the first page of this Exhibit 12, do you see there's -- in the technical report, it says "Mock screenshot of above user scenario"?
A. Yes.
Q. And in this particular screenshot of Exhibit 12, the first -- we see in the top-left corner, is that an e-mail?
A. That's correct.
Q. And what is shown in that e-mail, what is -- what action is being shown there?
A. The user selecting an e-mail address.
Q. Now, I see the technical report itself is identified as having been authored in April of 1997; is that correct?
A. That seems right. That's when we would have -- April 1997? Yes, that's correct.
Q. And then it was submitted to UIST '97, according to the Web page, correct?
A. That's right.
Q. So can you give me the timeline of that, when it came to this technical report, to the best of your recollection? In particular, what I'm trying to get a sense of is: When would this technical paper have been put up on the CyberDesk website?
A. My assumption is that we would have put it up on the -- on the website around June of 1997.
Q. And why is that your assumption?
A. The conference -- the program committee that I referred to usually met in June of the conference, the year -- well, the same year that the conference is being held.
Q. Yes. For this particular technical report, which sub- -- instantiation of CyberDesk?
A. The second one.
Q. Sir, Exhibit 12 is -- are the blow-ups that are contained on the HTML version on the website of this particular technical report. Do you see that?

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Q. And then it appears that certain Acton buttons have been created; is that right?
A. That's correct.
Q. And, again, can you describe in this instantiation of CyberDesk that's being described how that -- how that analysis occurred from the highlighted information in the e-mail to the Acton buttons?
A. So one of the innovations between the first instantiation and the second instantiation was the ability to, what we call, chain -- chaining information. So in the first instantiation, we show how you could take text and convert it to a name. And what we realized is that, well, there's something else that cannot only consume a name like the Switchboard demonstration we saw on the bottom-right of -- sorry, lost it -- Exhibit 8 .

So in addiction to that, we realized that there -- in addiction to services being able to consume that information, there were other services that could take that information and convert it.

So you could have some -- a name that could go to -sorry, a text that could be converted to a name, that name to a phone number, that phone number to an address, that address to and da-da-da-da, ad finitum. Not ad infinite --
Q. Right.

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and timestamp will be picked up as a date, and then John Doe would be picked up as a name, the URL, newbooks.com/ DOE would get picked up as a URL, the e-mail address DOE@newbooks.com would get picked up. And then all of the rest of the content would just be picked up as text.
Q. And then am I correct, then, it would generate Acton buttons for every one of those identified pieces of information?
A. That's correct.
Q. Now, the Acton buttons that were generated for DOE@newbooks.com, am I correct, are shown in the screen on the top right?
A. That's correct.
Q. And the first button that was created is "Search For String Using AltaVista," correct?
A. Correct.
Q. The second button that is shown is "Save Contact Info Using Contact"?
A. Correct.
Q. So can you take me through -- first of all, how would that button have been created from this particular information in the text?
A. So the e-mail address was selected in this case. For that first one, there are two things that could have happened here -- the second thing is what happened, but

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A. That's correct.
Q. And how would it determine as it went through the entire text of an e-mail whether something was a name or something was a phone number?
A. Same as it did before when it was -- was manually selected, the -- it's just a little bit more complex. So it would go through each word and each collection of words.

So it would start with the "Hello there" at the -actually at the top in the window frame itself, and it would say, okay, that's text, subject "hello there," that's text. Although, because of the colon -- if there were no colon between "subject" and "hello," it would have converted that to somebody's name, subject, first name, hello, second -- last name.

It does know some structure about e-mail. So when it sees "from," "to," and "date," it can assume it -- it knew that that first part was -- somewhere in there would be a name and somewhere in there would be an e-mail address, so it would parse those out.

So the e-mail address abowd@cc.gatech.edu and the name Gregory D. Abowd, would get picked up, the name CyberDesk would get picked and the e-mail address cyberdesk@cc.gatech.edu would get picked up. This date

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the first thing that happened was that -- is that that would just be taken as a textual string and then AltaVista could search for that string DOE@newbooks.com.

The second thing that happens is that
DOE@newbooks.com was converted to a name using some internal -- some service that as registered with CyberDesk. That produced this name, John Doe, and that's -- that -- when that got produced as a name, CyberDesk then consumed that and said, well, I can also search for that using AltaVista. And that's what you see in the bottom left.

The system we made -- I won't say an arbitrary design decision, but we made a design decision that always go for the higher level of type. So rather -- if you have text, if you only have text, then use -- do use the text. But if you're able to convert that text to something else, perform your services with that something else.
Q. So here, the second button that was created says "Save Contact Info Using Contact," correct?
A. Correct.
Q. If a user clicked on that button, what would happen? A. It would take all of the information that it was able to collect after it -- the user selected the e-mail address and all the conversions occurred and then try and populate this window in the bottom right.
Q. And so what do we see in the -- in the bottom right, has that happened because the user has clicked -- clicked on the "Save Contact Info Using Contact" button?
A. That is correct. So the information in the find John Doe -- sorry, find Doe, John -- text box was incorporated, and the -- the URL was added and the e-mail address was added.

I don't know about the phone and the fax, because what you can see also here is that John Doe already existed in this -- existed in this person's contact manager. And so what CyberDesk would have done is it would have added all the fields that were missing or that were left blank.
Q. So that if there was an existing contact --
A. It would add to it.
Q. And in this particular contact book, it appears that John Doe has been inserted into the find button; is that right?
A. That's correct.
Q. And that was done by CyberDesk?
A. CyberDesk.
Q. And as you understood it --
(Video stopped.)
the court: At this point in time it is time
for our morning break, so I've made the motion to counsel
the court: Okay. All right. No objection.
Then let's bring the jury in.
(The jury enters the courtroom at 11:27 a.m.)
THE COURT: Welcome back, ladies and gentlemen.
Please be seated.
Let's proceed with the deposition testimony of Dr. Dey.
(Video continues.)
BY MR. LAHAD :
Q. As you understood it, once John Doe was put into the find bar, what would the contact book do?
A. It would automatically -- if John Doe existed in the contact book, it would populate the rest of the interface with information about John Doe and then it would add to it the information that CyberDesk had found.
Q. When you say "it would add to it," first -- first it had to find it, correct?
A. That's correct.
Q. And so how would it find it using the -- the name John Doe?
A. So it would find it actually using the e-mail address doe@newbooks.com and then it would do that using the conversion tools that I mentioned earlier. So the e-mail address would get converted to a name, the name would get converted to a URL and -- and then a phone number or
to hit the pause button, and we've got it paused. So we will take you out for your morning break.
(The jury exits the courtroom at 11:12 a.m.)
THE COURT: All right, everyone. Let's take our morning break. We'll be back at 11:23.
(Whereupon, a recess is taken.)
THE COURT: Are we missing someone? All right. We will just hang tight. Have a seat.

MR. ARD: If we are just playing the video, Your Honor, we can start without her.

MR. UNIKEL: I think the case is closed for plaintiffs now. It hasn't been stated that way on the record. I have to at least let you know that we have $50(a)$ motions.

THE COURT: Why don't we wait for her to come back for that then, then. Feel free to have a seat. Feel free to talk amongst yourselves.

MR. ARD: We are also happy to defer that to the next break, if you want to proceed that way.

THE COURT: Any objection?
MR. UNIKEL: No, Your Honor.
THE COURT: All right. Let's bring -- is it
going to be a problem for plaintiff's side if she comes in while the video is being played?

MR. ARD: No.

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whatever else was available -- I'd have to look at the paper to be exactly sure what happened here.

But the way the system worked is whatever information it could get converted to would then get populated here if it wasn't already populated.
Q. And to be clear, the name John Doe could be searched for in the contact book, correct?
A. That's correct.
Q. And if it's -- if that information was in the find button, that would be the information that was searched for?
A. That's correct.
Q. And here am I also correct the user could, in fact, edit any of the fields that are shown?
A. That's correct.
Q. Okay. Now, going back to the Acton buttons, the third Acton button says "Call Phone Number Using Dialer." Do you see that?
A. I do.
Q. If a user were to click that "Call Phone Number Using Dialer Button," what would happen in CyberDesk?
A. I don't remember -- recall what the dialer application did, but it probably put up a fake phone interface and allowed -- would have populated it with a phone number that it found after it converted the e-mail

Q. And when you say "a fake," is that because this was a demo?
A. That was because this was a demo.
Q. In the CyberDesk system that you were describing, was the intent to have the ability for the user actually to make a phone call?
A. Yes.
Q. And other than clicking this one button that said "Call Phone Numb Using Dialer" -- was there anything else that was required for the user to actually initiate the phone call?
A. No, in this case, other than selecting the text, the e-mail address and clicking on "Call Phone Number Using Dialer."
Q. The last button on Acton button says "Send mail to this e-mail address using Netscape."

Do you see that?
A. I do.
Q. Again, what would happen if a user clicked on that button?
A. It would launch a web browser going to the mail
client inside of the Netscape browser, again, using a well formatted URL and it would tag that -- the parameter that

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Q. Second is "Lookup Phone Number For Name Using Switchboard," correct?
A. Correct.
Q. And third is "Lookup Name Using Contact Manager"; is that right?
A. That's correct.
Q. So once again, I -- I know it's very similar, but if a user were to click on the button "Lookup Phone Number For Name Using Switchboard," what would happen?
A. It would launch Netscape Web browser and would -sending in the parameter Andy Wood and that would launch a Web page that you see in the bottom left.
Q. In the bottom left, am I correct, we're seeing display or a particular Web page from Switchboard?
A. Yes, that's correct.
Q. And along with the name Andy wood, what other
information are we seeing displayed there?
A. A mailing address and phone number, as well as more listings beyond that that's not -- that are hidden.
Q. And then this -- the third button under the Acton buttons for this particular figure, Figure 3, says "Lookup Name Using Contact Manager"; correct?
A. Correct.
Q. Again, can you describe for me what would happen if a user were to actually click that button?
would be sent to that URL would be this DOE@newbooks. and it would create a window, a semi -- partially populated by the CyberDesk system.
Q. And then I assume a user could go ahead and send the e-mail?
A. Fill out the e-mail -- fill out the details and send it, yes.
Q. Am I correct that we see blow-up of Figure 3 on -- on the third page of Exhibit 12?
A. Yes.
Q. And, again, on the top left, can you take me, again, through what's happening on this screenshot that we see as Figure 3 of the UIST technical report?
A. Yes. So this is the -- this actually demonstrates the -- the first instantiation or the -- the simple instantiation of CyberDesk where, in this case, you select a name and it does no combinations and it does no multiple conversions, but only does single conversions. So it takes the text "Andy Wood," realizes that it's a name and offers solution -- offers interactions only for strings and names.
Q. And so, for example, the -- the three buttons that were produced here are: "Search For String Using AltaVista" is the first one, yes?
A. Yes.
A. Yeah. So in this case, it would populate the -- it would populate the -- the contact manager was already launched. It would populate that -- the "find" text box with "Wood, Andy," because it went last name, first name. And then it would automatically search and then it populated the bottom-half or buttom two-thirds of the screen with information that you had about Andy Wood.
Q. And on this screen, for example, a user could still edit any of the fields that are shown?
A. That's correct.
Q. And a user could add a new contact, as well?
A. Correct.
Q. And again, I think you testified that this -- this screen, Figure 3 of the UIST technical report, that's displaying the first -- the original instantiation of CyberDesk; is that right?
A. It's displaying the -- the abilities that the first instantiation had, but as they were developed in the second instantiation.
Q. So here in this UIST technical report, this one is -is describing the second instantiation of CyberDesk?
A. That's correct.
Q. But the second instantiation included the
functionality from the first?
A. Absolutely, plus more.

Q. And again, when do you recall, to the best of your recollection, that this was actually published onto the website?
A. Spring of '97.
Q. And did you personally load this technical report onto the website?
A. I did.
Q. Sir, do you see Exhibit 13 is an article entitled "CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services"; do you see that?
A. I do.
Q. And this has -- says on the bottom left UIST '97 Banff, Alberta, Canada?
A. Correct.
Q. And it has a copyright date of 1997, correct?
A. Correct.
Q. Is this -- what is this?
A. This is the two-page abstract for the demo that I published at the UIST Conference.
Q. And so when you say that "this was the" -- "the abstract," what -- what did do you with this particular piece? Did you hand this out at the conference? Was it just published in a journal?
A. It was published in the proceedings that were
distributed at the conference and that, then, shows up on
A. I do.
Q. And do you see that Exhibit 14 is entitled "UIST '97 Preliminary Program"?
A. I do.
Q. And this is for the October 14 th-17th, 1997, at Banff Park Lodge in Banff, Alberta, Canada, correct?
A. Correct.
Q. And if I can ask you to look at Page 2 of 5, do you see that under the 8:00 p.m. to 10:00 p.m. slot is "Demos: Banff Center for the Arts"?
A. I do.
Q. And am I correct that the first demo listed there is "CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services," again, with you, Gregory Abowd, Mike Pinkerton, and Andrew Wood listed?
A. Yes.
Q. And again, would you have then presented your demo in the same hall, basically where these other demos were being presented?
A. That's correct.
Q. Do you recall, were there -- was there ability to sort of talk with people and have a $Q$ and $A$ session with them?
A. Very much so.
Q. Do you recall people asking you questions about your
the Association for Computing Machinery, their digital library.
Q. And what would you have actually, then, presented during the demo at UIST?
A. So I had access to a machine in Banff, and I would walk through many of the scenarios that you -- we've discussed in the past. So I'd show, you know, the first -- the first version of -- sort of simpler instantiation of CyberDesk where it -- it didn't involve any chaining or combining. And then I would get more sophisticated. I would then show a chaining example and then a chaining and combining example, and then $I$ would show what's referred to sort of at the end -- closer to the end here, but other forms of context which was faked because it was at a -- in a site I didn't have any control over, but it would take information. I had another window that could -- another window like what we're seeing on Exhibit 12, the first page, where you could specify the location of the user at any time.

So to demonstrate how it -- the Acton system, the CyberDesk system, could leverage location information as well as it could take into account strings and contact information, et cetera.
Q. And do you happen to recall -- do you recall that particular presentation UIST?

## demo?

A. I do.
Q. Before we take a quick break, if I can ask you to find Exhibit 5 which is the Web page of -- for CyberDesk on the Georgia Tech website, please.
A. Yes. Sorry.
Q. Yeah, I guess what I -- well, maybe it's this: Are all of these papers and articles describing the same CyberDesk system?
A. Yes. They are all the same CyberDesk system. The last one on the page that was published at the CHI Conference was a -- the first instantiation. The remain -- the papers above that are, I would call, all of the second instantiation.
Q. And do you recall ever meeting a man named James Miller?
A. At Apple, yes. I couldn't tell you when I met him. I do remember meeting him on a number of occasions, though. I think the first time was -- we had almost monthly Demo Days in the Graphics, Visualization and Usability Center.

And on one of those occasions James -- Jim came and visited, and that was my first occasion to meet him. And then we ran into each other several times during these conference events.

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## Q. Do you recall when that would have been, roughly,

 when Jim Miller might have come and seen one of your demos?A. I'm guessing it was 1997.
Q. And when you said you had these near "monthly Demo Days," can you describe what those were about?
A. Yeah. They're kind of tortious. I appreciate them in retrospect. The entire Graphics, Visualization and Usability Center, which was a lot of people, would set up various rooms and demo for people that were invited from around the country and sometimes visitors from around the world.
Q. And was this at Georgia Tech?
A. This was at Georgia Tech in the Graphics,

Visualization and Usability Center.
Q. And so do you recall actually presenting CyberDesk at any of these Demo Days?
A. On several occasions.
Q. And would this occurred -- have occurred around 1997?
A. '97 through probably early 1999.
Q. Did you start demoing the -- the CyberDesk system before you submitted the CHI paper?
A. I don't believe so.
Q. So if the CHI -- if CHI was 1997, you would have submitted the CHI paper for consideration by the fall of

## '96?

A. September of '96, yeah.
Q. And so as soon as you would have submitted it for publication, then you would have begun Demo Days?
A. That's correct.
Q. And approximately how many Demo Days do you think you had in '96 and early '97 until CHI of '97?
A. Approximately five.
Q. And how many people on average would you say would attend Demo Days at Georgia Tech?
A. Approximately -- it varied depending on the time of year. So it varied between, I'd say, 60 to 75 to as high as 150 to 200 people.
Q. And were there -- did any of the attendees at Demo Days who would have seen CyberDesk, did they have to sign, for example, nondisclosure agreements?
A. No, not at all.
Q. Was there any restriction on what they could do with the information that they learned as part of the review of your demos?
A. There was none, at least not for my demo.
Q. And, sir, do you see Exhibit 15 is a technical report entitled "Context-Awareness in Wearable and Ubiquitous Computing"?
A. I do.

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"Describing the Application"?
A. Yes.
Q. And you have a Figure 2 that's shown in that, correct?
A. Correct.
Q. Let me show you what I'm marking as Exhibit 16.

Sir, am I correct that Exhibit 16 is a blow-up of Figure 2 from this technical report, Exhibit 15?
A. Yes.
Q. And then looking at this, do you recall what instantiation of the CyberDesk system this would have been showing?
A. The second version.
Q. And why did you include screenshots in your published technical reports and articles?
A. Again, because the textual description of the systems are not always the clearest and sometimes a visual aid is helpful at conveying the ideas that we're trying to get across.
Q. And then am I correct, in this particular figure from the technical report of May 1997, you, once again, are showing certain screens that are presented to the user as part of the -- using the CyberDesk system?
A. That's correct.
Q. And in the top left corner, what is that that's being

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Q. And again, can you find for me that -- this particular technical report on Exhibit 5, the website, please.
A. It's the second to last -- wait, sorry.
Q. Is it the last one in the section?
A. Yes, that's right, it is the last one in the section,
the buttons are -- yes, it is. The bullets are a little
off.
Q. And this one has the date of May 1997, correct?
A. That's correct.
Q. And so when you do you believe you would have published this on the website for CyberDesk?
A. In May or June.
Q. And then it says "The abbreviated version is presented as a poster," and that's in October of 1997, correct?
A. That's correct.
Q. So when do you believe you would have loaded the -the -- that abbreviated version onto the website?
A. Sometime in the summer.
Q. And then on the next page, the third page of this technical report, you see there's a section on "CyberDesk"?
A. Yeah.
Q. And, for example, you have a section called
A. This is the same example, the exact same screenshot we went through earlier. So the user has selected with the mouse cursor the e-mail address, DOE@newbooks.com, that -- that e-mail address is getting converted to a string, a name, a phone number. It's being combined together to create a whole contact chunk of information -information.

And then that information is being consumed by the -by the CyberDesk system after it's been converted and these are the four options that come up as the list of suggestions of what CyberDesk can now do with it.
Q. And just so I'm clear, the first option presented to a user is -- I'm sorry, the first option presented to a user is "Search For a String Using AltaVista," correct?
A. Correct.
Q. The second option presented to the user is "Save

Contact Info Using Contact"?
A. Correct.
Q. And if a user clicks onto -- that button, what we see in the bottom right-hand corner occurs?
A. Correct.
Q. And am I correct that that includes searching for the name that goes along with the e-mail address from the document?
A. Correct.
Q. And that name is John Doe, shown here, correct?
A. Correct.
Q. And as a result of that search, we see the contact information in this contact book that's displayed?
A. That's correct.
Q. And that includes, for example, not just the name John Doe, but also a primary e-mail, a primary phone, and a primary fax number, correct?
A. Yes. Some of that information would have been -already existed before the -- the person selected the e-mail address in the top left, and some of it was populated as a result of selecting the e-mail in the top left and clicking on the button "Save Contact Info Using Contact."
Q. And in that came contact book screen, we -- I think you just said, some of this information has been automatically populated into the text fields by CyberDesk?
A. Correct.
Q. Also in the Acton Button Bars, the next option given to the user is "Call Phone Number Using Dialer," correct?
A. Correct.
Q. So for example, CyberDesk would allow the user to click that button and actually make a phone call?
A. It wouldn't actually place the phone call, but it
A. That is correct.
Q. And you would have loaded it approximately when?
A. May or June of 1997.
Q. And again, was there any restriction on who could access this from the website?
A. None.
Q. Do you see that Exhibit 17 is a printout from a Web page entitled "Applying Dynamic Integration as a Software Infrastructure for Context-Aware Computing"; do you see that?
A. I do.
Q. And again, the authors are listed as Gregory Abowd, yourself, and Andrew Wood, correct?
A. Correct.
Q. And am I correct that on -- going back to the web page for CyberDesk, Exhibit 5, this is actually the second article that's listed in the section on related papers? A. That's correct.
Q. And according to the CyberDesk website, this
technical -- this was submitted to ICSE '98?
A. Correct.
Q. What is that?
A. The International Conference on Software Engineering.
Q. And this -- what we see in Exhibit 17, this was actually a technical report, correct?

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A. That's correct.

2 Q. And it shows a date on the website of September 1997?
A. Correct.
Q. What does that mean?
A. That is the date at which I received a -- a technical report number from our administration at the GVU Center at Georgia Tech and the day the -- the approximate date that the work was completed and the paper -- this paper was written.
Q. And then you submitted this for consideration by ICSE?
A. Correct.
Q. And again, was this -- was this one accepted for publication?
A. No, it was not.
Q. So when do you believe you would have posted this technical report, Exhibit 17, to the website?
A. September or October of 1997.
Q. And which -- which version or instantiation of the CyberDesk system was this technical report describing?
A. It's describing the second instantiation. The image,
the second -- Figure 2 on the third page of Exhibit 17, makes it clear that chaining was involved in the system.
Q. And I notice in this particular technical report, you have a -- a bibliography, which is included at the end?
A. Correct.
Q. And I assume these are sources that you were aware of and consulted in some way?
A. That is correct.
Q. And so, for example, I see that the Number 5 entry in the bibliography is for "Apple Research Labs, Apple Data Detectors homepage. Available at," and then you provided a Web address with a 1997 date, correct?
A. That is correct.
Q. And what were the Apple Data Detectors that you were referring to here?
A. While we were doing this work, we discovered that Apple was doing a similar project, and I actually think it was Jim Miller who introduced this -- the concept of Apple Data Detectors, we did not find this on our own.

The idea was on -- on a Mac, on the early Apple computers, built into the operating system was kind of a something very similar to CyberDesk, but a little bit more -- very similar to the first instantiation of CyberDesk, where you could select text in -- in one of their applications, and then based on what you selected, it would -- it would give you -- I think that you right clicked or you had to hit some kind of modifier key, and it would show you the list of services that you could run based on the information that you had selected.
A. Right.
Q. What is being shown here as far as desktop services and network services?
A. So the desktop services were the applications that we had access to that were built -- I believe these were all applications that were built at Georgia Tech where I had access to the source code.

So these were fully -- full-fledged, real
applications built in Java. So that's a Calendaring system, an e-mail system, a second e-mail system, and a contact manager. And so those were applications where I was able to modify the source code to essentially speak the CyberDesk internal language, and so that they could tell CyberDesk, "This is the kind of information I can consume and run services on." I don't believe any of these could -- I apologize. These could also do conversions, as well. So they could both convert information as well as perform a service for the user. Q. And just so I'm clear, when you say "they could convert information" --
A. Yes.
Q. -- can you describe one more time what you mean by that?
A. Sure. So if someone selected an e-mail address, it could -- the contact manager could convert that to a
Q. And Exhibit 25 is, I'll represent to you, what happens when you click on the "Click Here" button.

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Q. And have you ever -- so have you ever heard of a product called "OneButton Contact Manager" that would have come out sometime around November of 1998?
A. I don't recall.
Q. That's not something that you were familiar with at part of your review of the literature?
A. I don't believe so.
Q. Am I correct that the second instantiation of the CyberDesk system, that's what you have described in all the articles that we've looked at thus far except for CHI '97?
A. That's correct.
Q. And in CHI '97, you were describing the first
instantiation of CyberDesk?
A. That's correct.
Q. Now, after the list of related papers, there's a section called "CyberDesk Services," do you see that?
A. I do.
Q. And it says "Click here for a list of all the services available for use with CyberDesk" --
A. Right.
Q. -- do you see that?
A. I do.

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## mailing address or a name or a phone number.

2 Q. And then you were going to say about network service? 3 A. Network services were -- it looks like really a whole
list of -- a whole list of Web-based services that could either do something with text, could produce something with recognized text, like phone numbers or e-mail addresses and one of the things we did in the second version, because I'm not sure if I made this clear, is that you could search -- let me find a good example here.
"Lookup phone number for a name using Bigfoot," so that's the one, two, three, four -- fifth one down. That' service could be used not just as something that would show up in the Acton button, but we could automatically run that service, scrape the Web page -- so each one of those populate a -- launched a Web page. Each one of these network services, if the user clicked on it, it would automatically launch a Web page, we could do that in the background. So each one of these services could also be a converter.

So it would launch the Web page, that Bigfoot Web page, in a hidden way, sort of off -- off the screen so you couldn't see it, scrape the information on the page and could grab a phone number, in this case, discard the Web page, and then say, "Now I've got a phone number, what can I do with that."
Q. Okay. And these were all network services that were available in the CyberDesk system, the second instantiation of the CyberDesk system that you described?
A. The first and second instantiation. There was a mix.
Q. And in fact, you looked back at the Web page index, Exhibit 5, do you see that the second to last section of the Web page is entitled "Mini-projects Integrated (or to be integrated) into CyberDesk"?
A. Yes.
Q. Now, I notice on the Web page for CyberDesk,

Exhibit 5, you actually have a section entitled "Sample CyberDesk Code Segments (for the adventurous)," do you see that?
A. Yes, I do.
Q. And it says under that, "The following code samples were described in the paper submitted UIST '97"?
A. Right.
Q. And then when would you have actually loaded these codes segments onto the CyberDesk Web page?
A. Sometime between March and June.
Q. And so in the work that you did on CyberDesk, was CyberDesk able to access information from mobile devices like a Newton device?
A. Yes, it was.
Q. And did you ever actually demonstrate the use of

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but not the actual system. The actual system was done at Demo Days, would have been sort of late -- I was going to say winter, like February, March of 1997.
Q. So last, but not least, on the Web page for CyberDesk, Exhibit 5, are -- there's a section on "Related Work," do you see that?
A. Yes, I do.
Q. And when you posted these things, did you expect that people who are looking at the CyberDesk website might actually go and look at some of these on other resource? A. If they were interested in it, yes.
Q. And in fact, the second bullet point under Related Work is for "Apple's AppleScript Site for Data Detectors or the original site for Apple Data Detectors," correct?
A. Correct.
Q. Is and the underlying there suggests you've actually linked to other materials, correct?
A. That's correct.
Q. So you weren't just identifying these, you were actually providing links for users to go and see these materials?
A. Correct.
Q. Could -- were there multiple different types of text that CyberDesk could work with, or was it only workable
with e-mails?
at a conference but a Demo Day. I don't know if I ever demoed this at a conference. Certainly mock-ups of this,
of any your demos?
A. I did.
Q. If you look at the second page of this particular -"How to Set Up the CyberDesk Demo," you see it says the -"This page written by Mike Pinkerton, last updated 6/4, June 4, 1997"?
A. Yes.
Q. And again, is -- is that around the time that you recall the effort to integrate CyberDesk with the Apple Newton?
A. Yes, that's correct.
Q. And by June of 1997, had you successfully been able to use CyberDesk in connection with an Apple Newton device using LLamaShare?
A. That's correct. In fact, it was earlier than this. This was just when we got around to writing up the demo instructions so other people could run the demo.
Q. And seeing does -- this, does this refresh your recollection at all as to when you might have demoed the use of CyberDesk in connection with a Newton publicly at any of your conferences?
A. The first time we would likely -- would likely be not


A. There were multiple different kinds of information content it could work with. I remember we had a text editor, we could pull from the calendar, we could pull from the contact manager, and we could pull from e-mail. Those are the ones I remember.
Q. So, for example, when you were talking about an e-mail, when it could pull text from an e-mail, was it possible that a user could be working in an e-mail when the text was selected for the CyberDesk to work?
A. Absolutely. Yes, it could.
Q. And for example, then, if a user was working in an e-mail and they highlighted an e-mail address, CyberDesk would generate the Acton buttons?
A. That's correct.
Q. And one of Acton button might be "Find Phone Number For E-mail Using Contact Manager"?
A. That's correct.
Q. And if the user clicked on that button, am I correct, they would get a display of a contact book entry much like we've seen in many of the demos?
A. That is correct.
Q. And so for example, the information that was in that contact book entry, the user, if they wanted to, could cut and paste that into the e-mail that they were writing, correct?
A. That is correct.
Q. Did you ever come with a version of CyberDesk that allowed the user actually to automatically insert any of the text that was found by CyberDesk?
A. Into e-mail address you're asking me?
Q. Yes, into a working document.
A. Oh, sorry. Into a working document.

Absolutely. Absolutely. The -- the example that comes to my mind is a text editor.

So you are writing with a text editor, this actually came from -- the idea for this came from an existing system called the "Remembrance Agent" from the MIT Media Lab. By Bradley Rhodes and Thad Starner, I think were the authors of that system, probably predated CyberDesk by six months or so.
Q. Okay.
A. The idea in their system, which I put -- we just stole, borrowed, but re-implemented within CyberDesk is that as you're working in Emacs, which is a technical editor, an editor that techies use. As you are working in that, the content that you are producing, as you were typing it in, was automatically getting thrown out to this larger knowledge base. And then it would give you suggestions on, "Hey, you might be interested."

So the idea is I'm writing this paper on CyberDesk,
of these items which are included on the $W e b$ page as a result of your own work on the CyberDesk system?
A. That's correct.
Q. And am I correct that this Future Computing Environments Web page was maintained by Georgia Tech as part of its ongoing Future Computing Environments project?
A. That's correct.
Q. And in fact, this Future Computing Environments Web page for CyberDesk has been up and running for the last 22 years, correct?
A. Correct, with the exception of that many of these links don't actually work anymore. Don't do anything. Q. But at one time, am I correct all of these links actually worked?
A. That is correct.
Q. And, again, for the articles and the papers that are recited here, am I correct that it was your practice to publish them on the website shortly after they became eligible for publishing?
A. That's correct.
Q. So, for example, if a paper was submitted but was ultimately not -- like a technical report, was ultimately not accepted for publication, you shortly thereafter would actually publish it on the website?
A. That is correct.


Q. Okay. And same thing with the code segment, when do you first recall posting code segment to the website?
A. It would have been at the same time that we posted the UIST '97 paper on the website, which -- or the UIST submission, sorry, to the website. So around April of 1997.
Q. Okay. Did you speak with defendants' counsel?
A. In preparation for this, no.
Q. Did you speak with them before -- before today?
A. Yes. I was contacted by your office -- it feels like months ago. I don't remember when it was, yes, and they asked me about the CyberDesk system at that point.
Q. Okay. What questions did they ask you, just generally, at a high level?
A. I think as soon as we converted to I could not be an expert witness for this case, I kind of just put it out of my head completely until the subpoenas came. The general kinds of questions they were asking, I think they -- we -we went through a lot of what we talked about today, which was the general process by which CyberDesk worked. I think we did talk about Apple Data Detectors and the Intel Selection Recognition Agent, but I don't have much more of a recall about that conversation.
Q. Was it just one conversation?
A. It was just one conversation.
Q. Okay. And who was this with? Was it with

Mr. Unikel?
A. Yes, and there was another woman on the line, which I don't remember her name.
Q. Okay. Was she from Mr. Unikel's law firm?
A. I believe so.
Q. Okay. And did Mr. Unikel ask whether you would be interested in being an expert witness in this case?
A. I think that was the original reason that his team reach out to me.
Q. Okay. And then why were you not able to take that role?
A. I don't know the technicalities behind it, but apparently I'm too expert for that -- for this case. Because I'm a -- I don't remember the term that he used. He used some term that basically said because I am a material -- not a material witness, but something like that to -- I could not serve as an expert witness.
Q. Was that based on your background having worked in this space and published these publications?
A. That was my understanding.
Q. Okay. And you thought you were interviewing or trying to get an expert-witness job?
A. Yes, I think that's the right answer.
Q. Okay.
A. I wouldn't call it an interview. I was answering their questions.
Q. Okay. I mean, you were interested in getting that role as an expert witness for defendants?
A. Yes.
Q. Okay. And did the defendants provide you with the Court's claim construction order?
A. No.
Q. So in addiction to the pre- -- to the papers and technical reports themselves, how many times, do you think, in 1997 and the first part of 1998 do you believe that you would have demonstrated the CyberDesk system to -- to people without restriction on what they could do with the information?
A. To how many people or how many times did --
Q. How many times.
A. It would be dozens of times and in any given Demo Day because each person I interact with is essentially a new demo, from my perspective. If you take it from that perspective, it would be hundreds of times.
Q. And during the demos, am I correct that there was an opportunity for questions and answers?
A. Yes, there was.
Q. And so is it possible that people would have asked to seen -- to see certain features of CyberDesk ask what it

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could do that were not necessarily exactly described in any of the papers themselves?
A. Yes, yes, yes, that was the case.
Q. And how often, you know, in the various demos -- how many times would you say on average people would be asking you to see some aspect of the system that wasn't exactly described in the papers?
A. They would often ask for things that both existed in CyberDesk and things that did not. I would say that independent of them asking, I also chose to show things that were not in the papers because I had a vested interest in showing off different features of CyberDesk. Q. You mentioned that you personally had tried in CyberDesk the implementation where it would analyze an entire e-mail or an entire document, correct?
A. Yes, that's correct.
Q. And I think you said that in some of the versions of CyberDesk there was a flag that allowed you to turn that functionality on or off, the functionality of looking at a whole document?
A. That's correct.
Q. And in what version of the CyberDesk system was that?
A. That was the second instantiation that we've
discussed today.
Q. And is that one of the instantiations that you then


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A. That was the one that I demonstrated the most often as part of my demos.
Q. Okay. And if -- if somebody wanted to see that particular functionality, even though you felt it wasn't useful, could you have turned that flag on in the code?
A. I -- I could have and I did often. And, again,
without them asking, I wanted to show that version of it because it showed a functionality that they -- somebody might not have assumed existed in the system.
Q. So just as a -- I know it's a bit of a guesswork, but if you were going to guess as to how many times you showed that functionality as part of your various presentations and demos, how many times?
A. Hundreds.
(Video clip ends.)
MR. UNIKEL: That's the conclusion of the clip, Your Honor.
the court: All right. Very good.
Should we have Google call its next witness?
MR. UNIKEL: Yes, Your Honor.
MR. KAMBER: Your Honor, Google would call
Dr. Martin Rinard as its next witness. And if you can just give us a minute to play musical chairs here.
the court: That's fine.

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A. $\$ 975$ an hour.
Q. And is that your standard consulting rate,

Dr. Rinard?
A. Yes, it is.
Q. And is your compensation impacted in any way by the outcome of this litigation?
A. No, it's not.
Q. Have you prepared anything to deliver your testimony here today?
A. Yes, I have. It's the slide deck here.
Q. So Dr. Rinard, if you could please walk the jury through your educational background.
A. Sure.

So I got my bachelor's degree in computer science from Brown University. And I also hold a Ph.D. in computer science from Stanford University.
Q. When did you get your Ph.D. from Stanford?
A. 1994 .
Q. And do you have any -- 1994, you said.

And do you have any professional work experience as well?
A. Yes. In between my undergraduate degree and going back to graduate school, I worked at two small tech start-ups.
Q. Where were those, Dr. Rinard?

## stand -- Dr. Rinard

MR. KAMBER: Thank you, Your Honor. Please state and spell your name for the record.

THE WITNESS: Martin Rinard. M-A-R-T-I-N, R-I-N-A-R-D.

THE CLERK: Please raise your right hand.
MARTIN RINARD, having been called as a witness, being
first duly sworn under oath or affirmed, testified as follows:

DIRECT EXAMINATION.
BY MR. KAMBER:
Q. Good afternoon, sir.
A. Every witness stand has its problem.
Q. Can you please introduce yourself to the jury.
A. Sure. My name is Martin Rinard.
Q. And what is your role in this case, Dr. Rinard?
A. My role in this case is to evaluate the analysis, the infringement analysis of Dr. Smedley, and see if I agree with it.
Q. And are you being compensated for your time in this case?
A. Yes, I am.
Q. And at what rate are you being compensated?
A. One was in Providence, Rhode Island. It was a start-up that I joined immediately after leaving -graduating from Brown; and the other was in Waltham, Massachusetts, outside Boston.
Q. So what did you do after you finished at Stanford in 1994?
A. I started as an assistant professor at the University of California, at Santa Barbara.
Q. How long were you at UCSB?
A. Approximately three years.
Q. And what did you do once you finished -- or what did you do next?
A. After, I left the University of California Santa Barbara and went to the Massachusetts Institute of Technology, otherwise known as MIT.
Q. It says here on the slide that you're a tenured professor. When did you receive tenure?
A. Around 2003.
Q. So as a professor at MIT, what are some of the things that you do?
A. My two primary responsibilities are teaching undergraduates and graduate students, and doing research.
Q. So with respect to your research, what do you do with your research findings?
A. Well, when we find something or develop a system that
we're proud of, we will try to publish our findings. And we will choose a publication venue that we like; could be a journal, could be a conference, sometimes it's a workshop. We'll submit it for publication. It will be reviewed. And sometimes it gets accepted.
Q. Do you review papers from other academics?
A. Yes, I do. As part of my service responsibilities to the field, one of my responsibilities is serving on program committees and evaluating other people's research. Q. Can you please give some examples of who has supported your research over the years?
A. Sure.

So on the left here we see the National Science Foundation. This is the peer research arm of the United States Government. This is the kind of blue sky curiosity driven research.

Next to that, you see the United States Department of Defense. I've done a lot of research for DARPA, which is the Defense Advanced Research Projects Agency. It's the advanced research arm of the United States Department of Defense.

I've done research for NASA through the Jet
Propulsion Laboratory.
Q. And who else has supported your research besides those government entities?
A. Some examples of companies that have supported my research are Boeing, IBM, Microsoft, and Samsung.
Q. Have you ever received research funding from Google?
A. No, I have not.
Q. So Dr. Rinard, what, if any, experience do you have with mobile applications, apps?
A. So some of our major research projects involved mobile applications and, more generally, mobile platforms.
Q. Are you familiar with the Android mobile platform, or operating system?
A. Yes, I am.
Q. And first of all, what is Android? How would you characterize it?
A. So Android is an open-source operating system. It's been supported by Google for use on mobile phones, and also mobile devices like tablets, since around 2007. One of the prominent features of Android is the Android framework. This is a large library of code that all apps can use.
Q. What do you mean by "a code library that apps can use"?
A. So it has instructions, code, that provides
functionality for app developers who want to develop their apps and need this functionality, and they can go to the library and get it there.

Can you explain what that was about?
A. Right. So this project was a bit different because it analyzed code before it ran, as opposed to monitoring code when it ran.

Here, the goal is to analyze the code before it runs to see if there's any security vulnerabilities in the code, and then, you know, ideally, do something about them before that code is actually deployed.

MR. KAMBER: Your Honor, at this point, Google moves to qualify Dr. Martin Rinard as an expert in computer science.

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THE COURT: Any objection?
MR. LAHAD: No objection, Your Honor.
THE COURT: He is so qualified.
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## BY MR. KAMBER:

Q. Professor Rinard, what were you asked to do in connection with this case?
A. I was asked to evaluate Dr. Smedley's analysis. And to do this, I went off and read Dr. Smedley's -- started with Dr. Smedley's report and videos.
Q. What other materials did you consider in connection with this case, and then responding to Dr. Smedley?
A. I looked at Google documents, Google source code, something called "Application Package Files."
Q. And what are application package files, or APKs?

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A. So application package files are how Google apps are packaged onto the Google Play Store so that people can download them onto their devices.
Q. And what did you do to analyze those?
A. We have -- there's a tool that you can use to go in examine contents of the app and see what's there. And I used that tool.
Q. So this also lists the deposition testimony of Google's engineers. What did you do with that
information?
A. I read the deposition testimony, and then took it into account in my analysis.
Q. What, if anything else, did you do in terms of the materials considered?
A. Sure.

So I was provided with two, they're called
"representative devices." The devices that have software on them that everybody agrees is representative of the products at issue in this case, the apps and the devices. And I used those devices.
Q. Were you able to use all of the functionality that Dr. Smedley opined on in this case?
A. No, I was not.
Q. Why not?
A. Because I was informed, when I was given the devices,

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that I should not connect the devices either to Wi-Fi or to the cellular network.
Q. What's your understanding as to why you shouldn't do that?
A. Because there's a possibility that the representative devices could be automatically updated and then the apps would be updated, and then all of a sudden the devices would not be representative anymore and the analysis wouldn't be valid.
Q. For purposes of conducting the analysis that you did, how important was it that you be able to test that
functionality while connected to a network?
A. It wasn't that important at all. I was able to test much of the functionality while it was not connected to the network. But I think more importantly, in this case, you can't tell whether a product infringes the claim just by using the device.

You may, per the term, look under the hood. You have to look under the hood, see how the software is built. So the majority of my analysis focused on that aspect of this case.
Q. I think you heard Dr. Smedley explain there was a distinction between how Chrome worked one time on a phone and then how the source code suggested it would work, and he deferred to the source code in that. Do you remember

So now Claim 30 has every element of Claim 23 plus that one additional element that it has. And to infringe Claim 30, you have to infringe -- to infringe Claim 30, you to have do every element of Claim 23 plus the additional element of Claim 30 .
Q. So there's a lot of language in Claim 23, specifically. And could you please explain to the jury what this claim requires as a general matter?
A. So what we're going to focus here on today is this element or this component of the claim that is called a "first computer program." If you look at the claim, you will see this shows up in four places. First, the preamble, where it's all highlighted in red. Then down in the element where you see the highlighting in yellow, where it says "displaying the document electronically using the first computer program."

Then again down in the element where the first part of that element is highlighted in green where it says "Providing an input device configured by the first computer program."

And then, finally, in the element where we see the highlighting in blue, where it says, "In consequence of receipt by the first computer program of the user command from the input device causing a search for the search term."

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So those are the four places that this first computer program shows up in the claim, and we will be focusing on the first computer program element.
Q. And did you apply the Court's construction of the computer program in formulating your opinions?
A. Yes, I did. It turns out that people can use the term "computer program" in a variety of ways, depending on the context and perspective of the person using the term.

In this case, however, the Court has provided all of us with the definition of the term "computer program." And here you see the definition of the term "computer program."

I will just read it out, and then I will tell you where we will focus. So it says: A self-contained set of instructions as opposed to a routine or library, intended to be executed on a computer so as to perform some task.

First thing I'd like to focus on is a set of instructions. According to this definition, a computer program has to be a set of instructions. These are instructions that presumably tell the computer what to do one at a time.

Next thing I would like to focus on is -- see the term "a self-contained set of instructions"? So to be a computer program according to the Court's construction for this term in this claim, this computer program has to be a

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 self-contained set of instructions. And, of course, the rest of Court's definition as well.Q. What other ways are there to organize software, Dr. Rinard?
A. Okay. So what I've done here is illustrated two approaches to using software. And you will see one approach on the left, what we call Approach 1, one approach on the right we call Approach 2.

In Approach 1, the software developer is writing up the program only -- he's writing up the code and using it only for that app. No intention that it could be used elsewhere. Maybe this is very specialized code. Maybe the programmer is only interested in this one app.

So in this case, the programmer would write the code, the code would be located inside the app. And this is the self-contained approach. This is the approach that the claim requires.
Q. What is Approach 2? Can you please explain what Approach 2 is for the jury?
A. So approach 2, there's some functionality and perhaps this functionality is functionality that would be useful for multiple apps. So what you would do, what the developer would do is write this functionality in a way where multiple apps could use it. So you have one implementation of this functionality. And then instead of 918

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you have to change every app, and it's a problem.
The other advantage or another advantage, I should say, is you get a consistent user experience if the tool is part of the user interface. So everything looks the same across all apps because they are all using the same common functionality.
Q. For purposes of responding to Dr. Smedley's opinions, did you focus on any particular claim limitations from that long recitation of Claim 23?
A. Yes, I did.
Q. I think we have that up here on the screen. Can you explain which claim elements you focused on?
A. The first one is the claim element that says "providing input device, configured by the first computer program," then it goes on. So that's one element I focused on.

And the second element $I$ focused on is the claim element that starts -- and that first one was highlighted in green on the slide.

The second claim element is the one that starts "In consequence of receipt by the first computer program of the user command from the input device causing a search for the search term." And then the element goes on from there.
Q. Why did you focus on only these two claim elements

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Case 1:13-cv-00919-TJECH ${ }^{\text {Di }}$ Dotcument 601 for purposes of your analysis?
A. Well, these are the ones that drew my attention -these are the ones where I thought they were particularly relevant claim elements that -- where I thought, quite frankly, analysis was incorrect about these claim elements.
Q. So let's walk through those one by one, starting with the first one. That's the "providing an input device configured by the first computer program limitation." Again, here we have it on the screen.

So what does this claim element require?
A. So there are two claim constructions that are
relevant here. Both of them were provided by the Court, and we have to follow both of those as we apply -- as we analyze this claim.
Q. Let me show you the first one, Dr. Rinard. Can you explain this or recite this definition from the Court for the jury?
A. Sure. This is the definition of "Providing an input device configured by the first computer program."
Q. And what is required?
A. The Court's definition is: Providing an input device set up by the first computer program for use by the user. Q. Let me show you again the second definition that's required for this claim. This is the computer program
A. That is correct.
Q. Which versions of the Android framework is that code in?
A. I analyzed two versions, Android 8 and Android 9, it's in both versions. Slightly different variants of codes, but that does this in this both versions.
Q. When you say "the Android framework," can you explain to the jury, please, what you mean?
A. Sure. So you've seen this Android architecture document before. Here it is again. And here we are. So at the very top, you've got in blue, the system apps, and blow that up. And there, you will find things like Dialer, E-mail, Calendar. Things that someone using the device would use an app and all of the apps we're talking about are located, basically, in this blue layer.
Q. What's in the layer below this, doctor?
A. The layer below that is the green layer. This is the -- it says Java API framework. We know this here as the Android framework. And this contains all those pieces of functionality that I talked about before where you can have all the apps, use all the apps, and share them. And this reduces the developer app effort, provides the benefits that we were talking about like better maintenance and that sort of thing.
Q. Where are the code instructions that are written for
instruction that you discussed a few moments ago, correct?
A. That's right. I don't think I need to read it out again. I will say a set of instructions -- a computer program has to be a set of instructions and has to be self-contained set of instructions.
Q. And what do you understand Dr. Smedley to be contending with respect to what meets this particular claim element of providing an input device?
A. So he's identified the input device here as this floating menu bar. So I've shown the floating menu bar up on the screen with the claim kind of grayed out behind it. You may have seen a menu bar that looks like this before. This happens when someone does a long touch on some text and it comes up. You will see you get options like cut, copy, share. None of those are accused. Select all, and then dot, dot, dot, which gives you more options.

Here I've shown the call option, and that's the input device that we're talking about here when you select that call button.
Q. In Android, what is it that sets up this menu bar?
A. That is code in the Android framework.
Q. What code specifically?
A. There's code in the file called

TextClassifierimpl.java.
Q. And, again, that's in the Android framework?
P down at the bottom is a web page for, I believe it's the -- is that 8 or 9 ?
Q. This is 8.
A. Yeah.
Q. Sorry. About that.
A. This happens to be code from the Android 8 platform, and you will see that on the right there, there's a TextClassifier circled, and this is the code that Dr. Smedley analyzes for the step of providing the input device configured by the first computer program, some of it.

On the top, you see code from the code repository for

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there's different code repositories, different source code
for these two different -- for the framework in all
different apps.
Q. What do you derive from that in terms of seeing
these, the code for the Calendar app and the code for the
TextClassifier functionality are in these different parts
of the source code repository?
A. Oh, the source code is separate. You know, the
Calendar source code isn't in the TextClassifier
functionality code. And vice versa. The framework isn't
contained in the Calendar source code.
Q. Do you agree with Dr. Smedley that the code for Smart Text Selection effectively becomes part of the code for an application?
A. No, I do not.
Q. Why not?
A. Well, let's go ahead and take a look at some of the analysis that I did on the next slide. So this is an excerpt from a document called "Android Developer Application Fundamentals." And one of the things it says is -- and I've highlighted this in yellow here -- one APK file contains all the contents of an Android app. And is the file that Android powered devices use to install the app.
Q. So Dr. Smedley accuses -- excuse me. Dr. Smedley opines that 12 Google apps infringe Claim 23 and Claim 30, right?
A. Yes.
Q. And did those apps -- well, to what extent do those apps have APK files?
A. All of the apps have APK files. So what this is saying here is, what you do is, you take an app, all the source code, build it -- complicated things -- pack it into this APK file, and then this is the file that goes, for example, on the Google Play Store.

And then you can download this file and install the app, use this file to install the app on the Android -- on Android devices, smartphones, that kind of thing.
Q. And given that Dr. Smedley opined about the applications themselves, did you look to see what was inside of these application files?
A. Yes, I did. So what I did was, I used a software tool called the "Android Debugging Bridge," and I tapped the cable from the representative devices to my computer and extracted the APK files for these apps off of representative devices.
Q. Those are the -- again, the APK files that the user would get from the Google Play Store and download onto their device?
A. In this case, they all came with the representative devices. But, yes, these are examples of things that you could find on Google Play Store to download.
Q. What -- so I'll show you this DDX-0821.

Can you explain to the jury what shows?
A. Sure. So there's a developer tool called "Android Studio." It's things that Android developers use. It's a software tool. One of things you can do with this tool is you can use it to explore what's in the APK file.

So now let me go through and try to talk through what's here. Let's look at the top half. You see the gray bar across classes.DEX. That is -- classes.DEX is the place where the Java -- I'm sorry. The JAVA compiled code, the Java code, the instructions from the Java code resides in this APK.

Now, if you look down below where you see the blue bar going across, this is where someone using this tool can go through and see what code is there.
Q. And what does this show, at least this particular example show as to whether or not code is there, for example, for the InfoBarContollayout code?
A. Okay. So let's take a look at that column of text on the left. And you'll see that all the text there is straight up and down, looks like normal text. Okay. And what that means is -- and it turns out that the

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InfoBarContollayout is highlighted. You can highlight any of these.

If the text looks like this, what that says is the code for, for example InfoBarContollayout, is present in this APK. That's what this shows.
Q. Is there anything else that shows that, Dr. Rinard? A. If you look to the next column over where you see "Define Methods" at the top of the column and a bunch of numbers going down, if there's numbers there, that means that there's some code there. For example, in this case, InfoBarContollayout. And the important thing here isn't that we're talking about InfoBarContollayout. This is just some example of code that's there. And this is code for info bar that pops up. When you run the browser, this is the analysis of the Chrome APK. The important thing is you look at the text, you look at the defined methods column, and those two things tell you whether the code for what's listed in the left-hand side here on the code column is present in there or not. And it looks like this was present.
Q. So can you compare and contrast that to the next slide that we have here, which is showing the application packages analysis that includes that TextClassifier class and some of the code files there?
A. Sure. So again, this is the APK file for the Chrome

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browser. If you look, immediately you can see -- well, I hope you see it -- that the text here is not straight up and down. It's slanted. It's in italics. Everybody see that?

So what that means is, that means that the code for this APK file, this app, may use this functionality, may use this Textclassifier functionality, but it doesn't contain the code for it. That's contained -- that code is elsewhere. In this case, that code is in the Android framework. That's what that shows.
Q. Is there anything else that shows that here, Dr. Rinard?
A. You see where the defined method column is blank? That means code is not there.
Q. So this is for the Chrome file or the Chrome APK, correct?
A. That's correct.
Q. And what was your conclusion based on, whether or not Chrome had -- the Chrome APK included this TextClassifier code in the package?
A. The APK file does not contain this code.
Q. I want to show you the next, and I think last
example, at least of this. Can you explain what's being shown here, Dr. Rinard? This is an application packages analysis where it seems to be showing TextView.

Do you see that?
A. Right. So this is the Calendar APK. You may have heard of -- I think TextView has come up in the case before. And you can see here that TextView is slanted, so the code for TextView isn't, you know, isn't here.
Q. And did you use this analysis for all 12 application files?
A. Yes, I did.
Q. And what did --
A. All 12 -- I'm sorry.
Q. Pardon me
A. Yeah. All 12 application files on both devices.
Q. What did you conclude from that analysis?
A. Well, this Android framework code, none of it's present in these APK files.
Q. And when you were going through, Dr. Rinard, for -we saw the example of Chrome on this slide. And then we're seeing the example from Calendar on this -- on DDX-08023. For your analysis of the other for the other ten, I guess, remaining accused Google apps, what did it look like?
A. It looks -- you know, there's various differences, but if you navigate to, for example, TextView, sometimes it's not there at all. Actually, I think for almost all the apps it's there. It's never -- it's always
being in blue, but inside of the app. Can you explain -well, what's the significance of that to you in terms of your analysis?
A. So what I heard Mr. Toki say was that the reason the TextView is in blue is to denote it's part of the Android framework, just like the AOSP TC, here in the app. And what he said was, the reason that the TextView box was inside the app was because he was trying to indicate that the TextView was serving the app.
Q. Does this align with the APK analysis that you did on the packages for the 12 accused apps?
A. It does, because I looked there, and the code for TextView is not in any of these packages. It's in the framework.
Q. Dr. Rinard, let me move on to the next slide?

MR. KAMBER: If we could get that back,
Mr. Spence.
BY MR. KAMBER:
Q. And I believe you said you did this analysis for all 12 apps, correct?
A. Yes, I did the analysis.
Q. So what does your code analysis and that APK analysis tell you about which approach Google is using with respect to -- in comparison to the patent?
A. So Google is using the not self-contained approach.

THE COURT: I understand. And I wasn't sure if I wanted to make a scene of it while we had the non-infringement expert on. So we'll have you make that application after we bring the jury back in after lunch. I would like to hear about the specific bases for your motion, but I also would like everybody a chance to get some food. So...

MR. UNIKEL: So we will be prepared to submit the motions in writing this evening. I can give you the five that we are going to be indicating just by sort of the issue if that's enough for Your Honor.

THE COURT: Let's hear what they are, and we'll see if they are specific enough.

MR. UNIKEL: Okay. We'll be making a Rule $50(a)$ motion of no direct infringement based on the lack of the first computer program elements that have been specified.

We will be making a Rule $50(\mathrm{a})$ motion for no indirect infringement, no inducement or contributory infringement.

We will be making a notion under 50 (a) for no willfulness infringement or enhanced damages. We will be making a motion under $50(a)$ for no support for Arendi's damages inquiry and demand generally. And lastly, we'll be making a motion under Rule 50 for no damages
computer program.
MR. KAMBER: Your Honor, if I may be so bold as to suggest that now might be a good time for a break.

THE COURT: Perfect. It sounds like counsel has gotten to a good stopping point in the examination. Ladies and gentlemen of the jury, I understand that your lunches have been delivered, so we'll take you out for lunch break. We're going to try to make up a little time, so we'll try to take a half-hour lunch break today. All right?

Ms. Garfinkel, take the jury out.
(The jury exits the courtroom at 12:50 PM.)
THE COURT: All right. It's 12:51. Let's try to get back and ready to go at 1:20.

Counsel?
MR. UNIKEL: Quick housekeeping matter. I
think plaintiff has to officially closed their case, and at least I have to put on the record that we have 50 (a) motions.

THE COURT: All right. That's fine.
MS. SRINIVASAN: Arendi rests its case in
chief. Arendi rests its case in chief. And following the testimony of Mr. Choc, and we would like to do that in front of the jury. We neglected to do that following his testimony, but we can do it quickly.
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THE COURT: Can you tell me more about
Number 4?
MR. UNIKEL: Yes, Your Honor. For Number 4, we will be requesting, basically, a JMOL of no damages, or in the alternative, nominal damages, because the basis for the demand put forth during the plaintiffs case was legally insufficient to support a reasonable royalty calculation. As to royalty base, there was improper apportionment both of the Google apps by operating system and by downloads. As to the royalty rate, there was improper apportionment as to portfolio of the agreements and individual patents attributable to the settlement payment, the license duration, the specific considerations for each agreement, and an inconsistent unit count methodology.

And lastly, that there was insufficient support for a times multiplier based purely on conversations with the inventor and plaintiff.

Also, there would be no damages due to waiver because, to the extent that there was abandonment of certain claims on the eve of trial and the remaining damages theories could not support the existing theories that were presented, that there is no ability to sort of

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Case 1:13-cv-00919-JLH Document 601 fill that gap after the fact.

THE COURT: Okay. With respect to item
Number 4 and with respect to the base, does your argument apply to both the Chrome downloads as well as the other app downloads?

MR. UNIKEL: It does, Your Honor. Just for the honors -- Your Honor's awareness, the download numbers for all of the apps, including Chrome, do not specify Android operating systems. That's because, during the majority of the case, and certainly during fact discovery, there were older functionalities that were still involved in the case. It was Linkify, which was then eliminated by summary judgment. And then on Friday, they eliminated Content Detectors and Quick Actions from Chrome. Because those were present in the case during fact discovery, for whatever reason, plaintiff did not ask for any information that would correlate downloads to app operating systems on the devices.

At the time, it was true that all the operating systems were accused, but as Linkify was eliminated from the case, no further effort was made to try and identify downloads by operating system. Then when Content Detectors and Quick Actions was eliminated from Chrome, that same issue infected the download numbers for Chrome as well.
does not make, use, sell, or offer for sale the computer-readable media aspect of the claims.

THE COURT: Understood.
MR. UNIKEL: Thank you, Your Honor.
THE COURT: Okay. We ready to proceed?
MR. LAHAD: Yes.
MR. UNIKEL: Yes, Your Honor.
MR. LAHAD: Yes, Your Honor.
THE COURT: All right. Let's bring the jury
back in.
(The jury enters the courtroom at 1:26 PM.)
THE CLERK: Your Honor, the jury.
the court: Please be seated welcome back
ladies and gentlemen I hope you enjoyed your lunch. We will continue with the direct examination of the witness.

Please proceed.
MR. KAMBER: Thank you, Your Honor.
BY MR. KAMBER:
Q. So I believe we were done with your opinion as to the first -- this claim element. And let's move on to the second opinion regarding non-infringement, Dr. Rinard. This is your analysis of the in consequence of receipt causing a search claim limitation?
A. Yes. This is the next limitation that we are going to talk about here today.

So right now, all that has been presented are total download numbers. It's established that not all of those downloads could be potentially infringing, because some are going to be devices that have older operating system or, in fact, Android 8 before the MR1 release. And there's absolutely no basis to know which downloads actually went to devices that had operating systems that could support the infringing functionality.

THE COURT: All right. That sounds specific enough for me. I understand the bases for your motion, and I will reserve judgment. We will await getting a paper from you tonight. Thank you very much.

MR. UNIKEL: Thank you, Your Honor.
THE COURT: We will be in recess.
(Whereupon, a recess was taken.)
THE COURT: All right. Please be seated. Have the witness retake the stand.

MR. UNIKEL: There's one 30 -second thing. I need to say if it's okay.

THE COURT: Okay. Sure.
MR. UNIKEL: Your Honor, I apologize. I was
made aware that there was one ground for a no direct
infringement Rule 50 (a) motion that $I$ failed to mention.
THE COURT: Okay.
MR. UNIKEL: And that is four apps that Google
Q. Okay. And just to reorient the jury now after lunch, what claim limitation are we talking about? Where is it? A. So we've shifted from the claim limitation that we were talking about, the providing an input device. That limitation was highlighted before.

And now we are moving down, and we are going to talk about the in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term. We are going to talk now about that particular claim element.
Q. What does this claim element require generally?
A. So we have a claim construction here that is, I believe, relevant, and that is the computer program claim construction. I think we've all seen it. Just as a reminder, computer programs have a set of instructions, and it has to be self-contained.
Q. So what does Dr. Smedley identify in terms of meeting this claim limitation so far as you understand?
A. So what he talks about -- let's go to the next slide.
Q. Sure.
A. Sure. So this is -- what I'm showing here is two screenshots from videos that Dr. Smedley made. You saw some of those earlier. These are some of his videos. And what you see on the left is we've frozen the video at a certain time where someone has long pressed on

F floating menu bar show up. It has various options: Cut, copy. Nobody is saying those infringe.

And then, there is the Gmail button on the left. And there is a command that's associated with tapping that Gmail command. And -- tapping that Gmail icon.

And when somebody uses -- using this machine, using this device taps Gmail, the screen on the left will disappear, will go off the device, and the screen on the right with the compose screen will show up. And that's the user experience that we're talking about here and that Dr. Smedley was talking about.
Q. And Dr. Smedley referred to Intents being the thing that goes from the screen on the left to the screen on the right, correct?
A. Yes, that's right. In all of the apps, what's going on here is we have something called the intent
mechanism -- I think you've heard about that before -that is generating this -- what you see on the screen here. So go to the next slide.
Q. And what is the Intents mechanism, Dr. Rinard?
A. So this is a mechanism that's been built into

Android, essentially ever since it began. And the idea here is an intent carries basically what are commands between things called activities. Activities are screens

And so one of the mechanisms you can use or that an Activity can use is something called startActivity. And what this will do is it will take an intent. It will go through the Android Framework, into other parts of the Android system, back out of the Android Framework. And then it will cause another intent -- sorry -- cause another Activity to happen, another screen to happen.

So in this case, what we're looking at here is, again, what's under the hood and what you saw on the previous slide where you have the intent going through the framework and then starting another Activity.
Q. By the way, where did this illustration come from, Dr. Rinard?
A. It comes from the document on the left.
Q. Is this something that you reviewed in formulating your opinions?
A. Yes.
Q. And so where is the code for the Intents handling and Intents objects in Android?
A. It's in the Android Framework, and also it's in some of the lower-level layers of the system below it.
Q. Did you find any code for the Intents handing system in the 12 accused apps?
A. No, I did not.
Q. Did you find them in any preloaded apps?
A. No, I did not.
Q. So what, if anything, causes the search to be performed based on your analysis?
A. So this limitation also requires that the search be caused by the reception of a command by the first computer program. Okay? So then, if you look at what causes the search, it's actually instructions in what is, basically, the second computer program, the Activity feature. Those are the instructions that cause the search.

What this says is that the command is being received by the second computer program, not the first computer program as the claim requires. So we can go back and take a real quick look at the claim maybe?
Q. Sure.
A. Okay. In consequence of receipt by the first computer program of the user command from the input device -- so the first computer program. This is what we are saying, basically, the Activity associated with that on the screen on the left you saw earlier.

Okay. That has to receive, according to this claim limitation, the user command from the input device. That's the floating menu. That reception has to cause a search. Okay?

Now, using a second computer program -- in this case
the second computer program that we are talking about is the Activity on the right, the compose. Okay?

So it turns out that the instructions that decide to do a search, cause a search to happen are on the Activity on the right the second computer program, not the first. Okay? That's another reason why this claim wasn't met. Q. To what extent is it automatic that a search will be performed in consequence of a user pressing that Gmail button on the left?
A. It's not automatic until it receives the Gmail Activity. Okay. So that's what decides whether a search happens or not. It's not a first computer program.
Q. So, Dr. Rinard, can you please explain to the jury what your conclusions were with respect to this particular claim limitation, the in consequence of receipt by the first computer program of the user command from the input device causing a search for the search term?
A. This limitation is not met by the accused apps and devices.
Q. Can you please explain to the jury why?
A. Sure. So this is -- they use an Approach 2 approach, not self-contained approach, because they use the Intents mechanism which is in the Android Framework. The accused -- the Intents handling code is in the framework, not in the apps.

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So if the apps -- the first computer program doesn't have the code that does this. And because the user command is received by the wrong entity, namely the second computer program instead of the first.
Q. Thank you, Dr. Rinard.

So were you asked to do anything else in connection with this case?
A. Yes, I was.
Q. What was that?
A. It's my -- I was asked to do several things relating to damages.
Q. What specifically were you asked to do relating to damages?
A. First thing I was asked to do was look at
non-infringing alternatives.
Q. And what is a non-infringing alternative, so the jury understands?
A. Non-infringing alternative is something that provides much of the benefit of an infringing alternative but doesn't infringe.
Q. So what, if any, non-infringing alternatives have you identified for the ' 843 patent and specifically claims 23 and 30 ?
A. Those would be Linkify and Smart Linkify.
Q. The jury has heard a little bit about those two
functionalities.

Can you please explain what Linkify is?
A. Sure. So here we see, again, two screenshots from Dr. Smedley's videos. On the left, you see the text. You can you e-mail him at wjackson@arendi.net.

And you'll see that that text is underlined and in blue. Okay? So what's happened is something called linkification has happened to that text. And when a user taps on that text, the compose Activity comes up. So you tap on it. You get the compose Activity. That's basically what Linkify does.
Q. Does it use the same Intents handling framework that we were just looking at a moment ago?
A. Yes, it does.
Q. And what is Smart Linkify?
A. So Smart Linkify is sort of a better version of Linkify. It uses the same code as the Smart Text Selection code. And -- but it delivers the same kind of thing where you see these underlined blued-out pieces of text that correspond to things like e-mail addresses and telephone numbers. And you can tap the link, and it will do the next thing.
Q. When you say that Smart Linkify uses the same
underlying code as Smart Text Selection, what do you mean? What are you referring to?
think, at this point as DTX-0224, correct?
A. Sure. I'm willing to believe it.
Q. So, Dr. Rinard, what did you do to analyze whether or not the ' 761 patent was technically comparable to the ' 843 patent?
A. I read the patent, and I compared various aspects of the patent.
Q. What did you find based on that comparison?
A. The field of inventions were technically comparable in both the information handling for computer system. And what the ' 761 patent does is when an e-mail arrives, it scans the e-mail. It's looking for something called a reference. So it's scanned the header part of the e-mail for a reference to at least one feature in the context.

So you have got an e-mail address. You are looking for a reference to the context that might be something like a business name or a state. And if you find it, you go obtain such reference from a location external to the message, and you put it in. That's basically what it is. So you can see that it's technically comparable to what's going on at some level in the 843 patent where it's analyzing information to find second information and then performing a search associated with that first information and gathering the information back.
Q. Did you ultimately find that or conclude that the
A. That's the TextClassifier code. It's the code that determines where the boundaries of the text are, recognizes elements like phone numbers and e-mail addresses in text.
Q. So why is it your opinion that Linkify and Smart Linkify are non-infringing alternatives to the accused Smart Text Selection functionality?
A. It turns out that to infringe this claim, any product has to work on editable text. If it's not working on editable text, it doesn't infringe. And because Linkify and Smart Linkify work only on text that's not editable, they don't infringe.
Q. Were you asked to do anything else in connection with damages, Dr. Rinard?
A. Yes. One last thing.
Q. What was that?
A. It was to evaluate a patent called the ' 761 patent.
Q. What is the ' 761 patent?
A. The ' 761 patent is a patent about e-mail handling technology. It basically handles information about when an e-mail comes in.
Q. And did you hear Dr. Smedley's testimony about the ' 761 patent?
A. Yes, I did.
Q. Okay. And that's been admitted into evidence, I
 mechanism was shared between all the apps. And the code
A. Yes, I did.
Q. Dr. Rinard, because we've had a little bit of separation between your first opinion and your second opinion with lunch in between, could you please summarize your opinions regarding whether or not the accused apps,
including those on the accused Pixel devices, set up the input device in a manner that's required by this claim and the Court's claim constructions?
A. They do not.
Q. Why not?
A. Because they use Approach 2, the not self-contained approach, where they share the code and framework instead of having a code be within the app. The accused apps don't contain the code that sets up the device. That code is in the framework.
Q. What about with respect to the second limitation that received the user command causing a search that we just discussed when we came back from lunch, Dr. Rinard, can you summarize, please, your opinions with respect to that particular limitation and whether it's met?
A. Sure. So it's not met. And the reason is, is that, again, because of the Intents handling mechanism,
Approach 2, the not self-contained approach, where all of the code in -- that implements the Intents handling

THE COURT: We will have cross-examination.
MR. LAHAD: Thank you, Your Honor. May I?
THE COURT: You may proceed.
MR. LAHAD: Thank you, Your Honor. CROSS EXAMINATION

BY MR. LAHAD :
Q. Good afternoon, Dr. Rinard. How are you?
A. I'm fine. How are you?
Q. Nice to meet you. I'm John Lahad. I have a lot of questions for you. Let's get started. For purposes of today, we're just going to talk about two claim limitations, correct?

MR. LAHAD: Mr. Boles if I could get slide 11 from Dr. Rinard's slides, please.

## BY MR. LAHAD:

Q. All right. So we are going to talk about just these two claim limitations, correct?
A. You are asking the questions. But yeah, that's fine for me.
Q. And for purposes of today, you would agree that the other claim limitations are met by the accused products and devices, correct?
A. I don't dispute that, no.
Q. Okay. And you would agree that the accused
applications, at least at a high level, make available the STS functionality to the user, correct?
A. Sure. Because they go off and they use the framework to do so.
Q. Right. Google Docs makes the STS functionality available to the framework, correct -- excuse me -- it's a lot of framework.

Google Docs makes available the STS functionality to the user, correct?
A. Sure. It uses TextView. And via TextView, you get the STS functionality, for example.
Q. Google Sheets provide STS functionality to the user, correct?
A. In the same way or similar way as Google Docs does, yes.
Q. Same thing for Gmail and Google Slides and the rest of the accused applications, correct?
A. There's a difference between the way Chrome, as you say, provides the STS functionality, delivers it, but -and the rest of the apps. But in general, they all use

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the framework, and they all allow the user to access the framework through various mechanisms.
Q. And same for the devices right, the Pixel 2, Pixel 3, they also make the STS functionality available to the user, right?
A. I think we're talking about the apps installed in the devices; is that what you mean?
Q. Yes, sir.
A. Yes.
Q. So the answer is yes?
A. Oh, yes.
Q. Thank you. And you reviewed the expert reports that Dr. Smedley produced in this case, correct?
A. Yes, I did.
Q. And as part of performing your opinions -- as part of forming your opinions in this case, you examined the representative products and devices produced in this case, right?
A. The ones that were produced to me, yes. The ones that were given to me.
Q. And you observed -- you did not observe a specific behavior that contradicted any of the behavior presented in Dr. Smedley's report, correct?
A. Yeah, I think that's accurate. In the videos associated with Dr. Smedley's report, that's correct.
Q. Google Docs is a computer program, correct?
A. Not as -- okay. So I don't -- so are you referring
here to Google Docs as construed in this litigation?
Q. Let's -- I'm sorry.
A. I'm sorry. Computer program -- let me get this down.

Computer program as in this litigation, right?
Q. Yes. Well, you understand that in this litigation, this lawsuit, this trial, the Court's construction of terms from the patent control, right?
A. Yes. That's right. Absolutely.
Q. So if the Court construed this to mean "wine," it would be wine even though it looks like water, right?
A. For the purposes of the appropriate litigation, yes.
Q. Correct. And so when I say "computer program," can we agree that I'm using that word as the court has construed it?
A. I'll try to keep that in mind, yes.
Q. Thank you. Google Docs is a computer program, correct?
A. I believe my opinion is it's not a computer program that satisfies the first computer program limitations in the claims.
Q. Okay. I hear you. I'm asking you about whether Google Docs is a computer program. I haven't included first or second yet.

But you would agree that Google Docs is a computer program, right?
A. So based on the -- I don't think I've put forth that opinion one way or the other here yet. My opinion is it's not a first computer program that satisfies the limitations of the claim.
Q. Right. But the Court construed the term "computer program," right?
A. Yes, it did.
Q. And you're familiar with Google Docs and the rest of the accused applications, correct?
A. Absolutely, yes.
Q. Okay. So is it your opinion Google Docs is a computer program as construed?
A. So I don't really have an opinion one way or the other because that wasn't the analysis I was asked to do.
Q. So you are able to opine on whether or not Google Docs is a first computer program, but you can't opine on whether Google Docs is a computer program?
A. The analysis I was asked to do was to respond to Dr. Smedley's analysis. So, yes, I am opining, my opinion is related to whether it is a first computer program that satisfies the claim limitations.

MR. LAHAD: Can we get Slide 2 from Dr. Rinard's --
did, your familiarity with the patent, the Court's construction -- let me step back.

The Court construed "computer program," didn't it?
A. Yes.
Q. It didn't construe "first computer program," right?
A. That is correct.
Q. It didn't construe "second computer program," right?
A. That is correct.
Q. So you've got the Court's construction. You've got an understanding of the accused applications. You've got the Ph.D. You have got the bachelor's.

And you can't tell me and this jury whether or not Google Docs is a computer program because -- that's your testimony?
A. So that's not the analysis I was asked to do here.
Q. But you can tell me whether or not Google Docs is a first computer program, right?
A. I can tell you whether Google Docs is a computer program that satisfies the limitations of the claim because that's the analysis I was asked to do.
Q. Is "computer program" not a part of the claim?
A. It's a part of the claim for sure, yeah.
Q. Okay. So you were asked to do -- you were asked to analyze the claim, which you purport to have done, right?
A. Yes.

BY MR. LAHAD:
Q. Okay. You have a Ph.D. in computer science, correct, sir?
A. That is correct.
Q. You have an ScB in computer science as well, correct?
A. Yes.
Q. All right. You are a tenured professor at the

Massachusetts Institute of Technology, correct, sir?
A. That is correct.
Q. Okay. And you read the patent in this case, right?
A. Yep.
Q. And you read the Court's construction, right, which is at Slide 9.

MR. LAHAD: If we could go to Slide 9,
Mr. Boles. Thank you.
BY MR. LAHAD :
Q. You read the Court's construction, and of course you reviewed lots of information about the apps and products, right?
A. Sure.
Q. And you reviewed source code?
A. Yes.
Q. You reviewed lots of technical documentation, right?
A. Sure.
Q. Despite your credentials and all the work that you

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Q. And this computer program is in the claim, we agreed on that front, right?
A. Yes, it is.
Q. All right. And you understand the words in this construction, right?
A. Sure.
Q. And you understand the words in the patent?
A. Uh-huh.
Q. Right?
A. Yes.
Q. You were able to give an opinion on whether or not something is a first computer program, correct?
A. You are referring here to some of the claim
limitations, $I$ am assuming, yes?
Q. Yes.
A. Yeah, yeah, that's right.
Q. Okay. But you will not give me a answer to the question of whether or not Google Docs is a computer program, as construed by the court, because you weren't asked to do that analysis?
A. I was asked to respond to Dr. Smedley's analysis.
Q. Well, can you do it for me right now?
A. I would prefer not to. I prefer to do my analysis and take the time I need.
Q. What else do you need to know to tell me whether

 construction?
A. So the problematic thing here is whether it is a self-contained set of instructions. It is definitely a set of instructions.
Q. I'm sorry. Could you repeat that, please.
A. Yeah. So I don't dispute that -- you are talking about Google docs?
Q. Yeah, let's start there.
A. Yeah, okay. I don't dispute that Google Docs is a set of instructions.
Q. Well, do you dispute that Google Docs is a
self-contained set of instructions as opposed to a routine or library intended to be executed on a computer so as to perform some task?
A. So the analysis was whether -- the analysis I was asked to do was whether it is a self-contained set of instructions and the rest of it that satisfies the claim limitations.
Q. No, I get that, but computer program is in the claim limitations, right?
A. Yes.
Q. And you can't tell me whether or not Google Docs is a computer program which is in the claim limitations?
A. It's in the claim limitations required to do certain
A. Yes.
Q. You cannot cherrypick a portion of the Court's construction and ignore or disregard other parts of the Court's construction, correct?
A. That's correct. But if it's not self-contained, then it's not a computer program.
Q. You want to focus on self-contained set of instructions, but there's -- that's not the extent of the Court's construction, correct?
A. That is correct.
Q. Right. The Court's construction reads: "A self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task."

## Correct?

A. Yes.
Q. And that intended to be executed on a computer so as to perform some task, that is -- that is entitled, that portion of the construction is entitled to as just as much weight as a self-contained set of instructions that you're relying on, correct?
A. When you're looking to make this determination, sure, everything is important here in this construction, I agree.
Q. There's nothing in this construction about storage,
 correct?
A. Not directly. Are you referring to some aspect of the claim that is?
Q. There's nothing in this construction about storage of the instructions or anything else, correct?
A. There's -- yeah, I don't see anything about storage in this claim construction, no.
Q. Likewise, there is nothing in this claim about source code, correct?
A. That is correct.
Q. It speaks in terms of instructions, correct?
A. That's correct.
Q. By "it," I mean the construction speaks in terms
of -- I think I said it wrong. Let me strike that and rephrase.

This construction speaks in terms of instructions, correct?
A. I think you got it right that time, yes.
Q. Thank you.
A. I think you got it right the first time, but, hey.
Q. We'll check the transcript.
A. Okay.
Q. Computer instructions are not limited to source code, correct?
A. Absolutely.
Q. So you could have executed code, right?
A. For example, you could have code in the APKs, for example.
Q. So folks call it "executable code," some folks call it "object code." You can have all different types of code other than source code?
A. Absolutely. Sure.
Q. All right. So given that the instruction says nothing about storage, given that the construction says nothing -- or it's not limited to source code, it would be improper to focus or limit this instruction to simply about where the source code is stored, correct?
A. I think that's largely true. But, of course, that -where the source code is stored could be relevant if you're looking for something self-contained. But I don't think that's what you're talking about, right? We're just...
Q. Yeah. I'm just saying that by looking at this construction, it's not limited to storage, it's not limited to source code, correct?
A. It's definitely not limited to source code, and it doesn't say anything about storage either in the instruction.
Q. Thank you.

And so as I understand your opinion, the apps are

## happy to talk.

Q. No, I liked it. Thank you. It's helpful.

So we're on the same page that these apps can use the functionality provided in the framework, right?
A. That is precisely the reason the framework exists. Q. Correct.

Because what you want to do is be able to create an app and have these tools in the toolbox so you don't have to reinvent the wheel every time, correct?
A. We can get as technical as you want, but that's a great summary.
Q. I'm picking this stuff up. Thank you.
A. Hey.

MR. LAHAD: So if I could have Slide 18 from Dr. Rinard's slides. Yes. Thank you.
BY MR. LAHAD:
Q. So we have these -- this abstraction right here. There's communication and cross-talk going on between the system apps and the components of the Java APK framework, right?
A. Yeah, yeah. Yeah.
Q. It's not like there's some kind of wall in the instructions or cut off such that the e-mail app doesn't communicate with the view system or content providers' functionality and the framework, right?
A. Well, there's a mechanism that has to be in place to support that communication. But, yes, there is communication between, for example, the dialer and maybe the view system, e-mail and view system. These APK frameworks are shared across all the apps, and the apps are communicating with the code there, yes.
Q. Right. And you mentioned a mechanism that has to be in place. And that's in place in all of the accused apps, right?
A. Well, that's -- I wouldn't say it's there. It's
present in the Java system -- I'm sorry, in the Android system.
Q. In fact, in order to perform pretty much all of the tasks that these applications do, they have to use
functionality provided by the framework, correct?
A. I believe that's true. For example, many of these apps use TextView. They share -- they share the use of TextView extensively.
Q. Yeah. Like, for example, Gmail uses TextView, right?
A. Yeah. I believe that's true.
Q. So you can't identify any kind of task that Gmail can do solely with the code in the APK, correct?
A. I'm sorry. I didn't hear the second word of your questioning.
Q. Sure.

Can you give me a task that Gmail can perform solely within the code in the APK?
A. No. In fact, it relies on the APK for much of its functionality.
Q. And functionality includes displaying the text, right?
A. For example.
Q. Yeah. So when I open a Gmail e-mail, the display that I'm seeing -- the e-mail that I'm seeing, that's being rendered, if you will, by TextView, right?
A. Oh, for Gmail? I'm not exactly sure if it's that or TextView, but there is something in the framework involved causing that text to appear.
Q. Yeah. We wouldn't be able to see the e-mail without functionality provided by the framework, right?
A. That is correct.
Q. And we've been talking about Gmail, but that's true for all of the apps accused?
A. Oh, yeah. I mean, well, let's be sure what you mean by that here just to keep everything straight. If you mean doing a task like displaying text or something like that, for all the apps, that's going to go through the framework in one way or the other.

Which, I mean -- just to add, that's because that's the point of the framework, is to make doing things like you don't dispute that Chrome may use this TextClassifier code, right?
A. I believe that's correct. I think, in fact, it does use the functionality from the framework by executing this code from the framework.
Q. Okay. So your opinion is, these apps, the accused apps, aren't first computer programs because the code -strike that.

Your opinion is that these accused applications are not first computer programs -- even though they use this code, they're not first computer programs because the code is not stored in the APK; is that your opinion?
A. No, I don't think that's my opinion.
Q. Well, the APK defines the code for the application, correct?
A. Yes.
Q. The APK -- excuse me, can use this code from the framework, correct?
A. Let's get a little bit technical. When the code from the APK is installed on the Android device, then that code can call into the framework or interact with the framework in a variety of other ways to, you know, implement various functionality --
Q. Yeah.
Q. Okay. But you don't dispute that the Android app, or
A. -- from the framework.
Q. Yeah. These apps can implement the functionality
Q. I'm sorry. Go ahead, sir.
from the framework even though the code is not stored in the APK, correct?
A. They can use functionality from the framework to
accomplish various things the app may want to accomplish.
Q. Even though that code is not stored in the APK,
correct?
A. If it's installed on an Android device with the right framework present.
Q. Even if that code is not stored in the APK, correct?
A. Again, with the additional caveat it has to be
installed on the right Android device with the right
framework for it to use the functionality. Obviously, if
it's installed on an Android device where that
functionality is present. I think this has come up in the case previously. But it can't use the functionality because the functionality isn't there.
Q. Well, we're talking about Android 8 and 9, right?
A. If you say so. I mean, is that what you want to talk about.
Q. That's why I'm here.
A. Okay, cool.
Q. I do understand we're accusing --
A. I mean, I --
Q. Yeah. Remember that abstraction with the green and red?
A. Yeah.
Q. Take the green out.
A. That's a completely -- well, okay. I mean, yeah, I'm not going to say that you can use Gmail on that device.
Q. It would be largely inoperable, if not completely inoperable?
A. Yeah.
Q. So if in that context where there's no Java
framework, Google can't --
A. Android framework? I mean, I've called it Java framework myself; I'm sure that you all as well. If we try to work with each other and call it Android framework, maybe that would be -- keeps everybody happy.
Q. I am talking about the green box --
A. Yeah, yeah. Okay, good. Gotcha.
Q. What do you want to call that?
A. I try to call it Android framework. I'm sure I'm going...
Q. Well, can we call it what Google called it, Java API framework? Can we call it that?
A. If you want to, that's okay, as long as we understand each other.
Q. Excellent.
A. No, I'm sorry. Why don't you ask your question. I don't want to keep this thing going.
Q. Do we agree that if an app wanted to render text, it would call TextView, correct?
A. That's one way to do it.
Q. And that's --
A. I'm sorry. Let's -- it would have to -- at a high level, you're right, there's a lower, more technical level that I can get into if you want to; but, in general, one way of rendering text is through that app, to use TextView.
Q. If I've got Gmail, I've just got -- this goes back to your point, I think, you were trying to make earlier.

If I've got Gmail, and there's no Java framework at all --
A. Yes.
Q. -- Gmail can't do anything, right?
A. You mean it's just sitting there with no framework that it uses to do what it needs to do?
Q. Correct.
A. Okay, cool. And presumably it's installed on some Android device that has no framework on it?
Q. Yeah.
A. I mean, I am trying to get a hypothetical in place.

So in this world where there's no Java API framework, we agree that Gmail is largely inoperable, if not completely inoperable, correct?
A. Yes.
Q. Okay. And so if that's the case, then in this -going back to this world, back into real life --
A. You mean going with the green?
Q. Green's back in business.
A. The Java API framework is here.
Q. All right.
A. And we're talking Java 8 or Java 9 -- I'm sorry, Java API, Android 8, Android 9.
Q. All right. Java API framework back in business.
A. Uh-huh.
Q. Right. We agree it's on the bench, Google is a dud, doesn't do anything -- excuse me, Gmail is a dud. Right?
A. If it's not there, Gmail doesn't work, it's got to be there at least -- and some of the things have to be true for Gmail to work, sure.
Q. Right. So if I put it back in there, right, if it's back in play, I haven't done anything that -- to change Gmail, right?
A. Yeah, sure.
Q. Yeah. And so in your view, then, Gmail doesn't do anything; everything is in the Java API framework, right?
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A. No, that's not true at all.
Q. I mean, without the Java API framework, we agreed Gmail is largely inoperable?
A. Yeah, sure.
Q. Right. So I put the framework back in, Gmail hasn't changed. Gmail doesn't do anything. It's all in the Java API framework, isn't it?
A. No. Gmail has to do things like specify which parts of the framework it wants to use. That sort of thing. The framework sitting there doesn't do anything by itself it needs an app to, you know, use the functionality of the framework.
Q. Well, you said Gmail has to identify which portions of the framework are going to get used?
A. Sure. Look, the Java -- look, whatever happens there, that app has to specify which parts of the framework it wants to use and execute instructions that cause those parts of the framework to execute.
Q. Right. But the action like displaying the text, sending the e-mail, all that action, that's provided by the Java API framework, correct?
A. Yeah. And -- yeah, shared between all the apps and provided by the API framework makes Android app development easier, that sort of thing.
Q. Right.
A. In that way, sure. The TextView is helping the app provide some functionality because it's executing out of the framework, and the framework functionality for the app to use -- I'm sorry. Should I slow down?

## Okay.

Q. I would say yes.
A. Say what?
Q. Go ahead.
A. Okay. So in that case, the TextView is operating out of the Java API framework, and that is what is delivering the functionality.
Q. Yeah. To use another term, TextView is serving the app in that case, right?
A. Yeah. I think that's what Mr. Toki, the way he put it.
Q. Yeah. That's where I borrowed it from.
A. Yeah.
Q. Excellent. We're on the same page.
A. Yeah.
Q. And once you have TextView in the app, then TextView will talk to different components, and eventually lead to the set of features, including Smart Text Selection, correct?
A. Not correct.
Q. I'm sorry, what?
okay. So any app that wanted to render text could call TextView, and that would run as part of the apps process, correct?
A. I think that's correct, yeah.
Q. And if the app decides to use TextView as running as part of its process, that would cause Smart Text Selection to work in the app, correct?
A. Depends on how that TextView was configured and which version of Android we're running on.
Q. All right. Can we agree we're running on versions 8 and 9?
A. If we talk about 9, it might be easier because I understand there's some controversy here about which size and which version of 8 works, which it does and which it doesn't.
Q. Fine. Let's do 9.
A. Okay. Works for me.
Q. Excellent.

If the app decides to use TextView as running as part of its process, that would cause Smart Text Selection to work in the app, correct?
A. Assuming that the app didn't do something to disable that piece of functionality in TextView, sure.
Q. And in that situation, TextView is serving the app in that case, correct?
A. I said no.
Q. You disagree with that?
A. Yes. Because the TextView isn't in the app.
Q. If the app developer were -- you know, the developer of Gmail or Google Docs or whatever, if that person didn't put that mechanism to call TextView or invoke that functionality of the Java framework, then TextView wouldn't get initiated, correct? TextView wouldn't be invoked, right?
A. Yeah. I mean, you have to invoke -- yeah. You need to use the TextView from the framework if you want TextView to operate.
Q. Yeah. And -- but also, like in the app, you have to tell the app, go and get stuff from Java framework, right? A. You have to say, though -- well, I mean, who's telling -- the app developer is writing code.
Q. Right.
A. And that code will go off and it will, you know, interact with the framework to do various things.
Q. Yeah. It needs to interaction with the framework to do various things, right?
A. Yes.
Q. The process of an app is how it runs on the system, right?
A. I think with the right caveat, I'd agree with that

statement. It's, I mean -- yeah. There's some technical details there, but I -- why don't we move forward. I think we will be okay.
Q. And the process of an app, you agree that's different than the source code, right?
A. Yes.
Q. And when the Java framework is running inside the app's process, it means that the two are joined together, albeit temporarily, correct?
A. Now, you're referring to some testimony we heard yesterday?
Q. I am.
A. Yeah. I bet you are.

So I don't agree with that description. I would say there's transfer in and a transfer out.
Q. Yeah. You recall the context in which

Mr. Elbouchikhi was making that testimony?
A. Broadly, yes.
Q. Yeah. I mean, I was going through that document and the document said something to the effect of, the application processes are happening inside the APK, or inside the application.

Do you recall that?
A. No, I don't.
Q. And then he was trying to run away from that, explain
that away.

Do you recall that?
A. Well, I mean, I'll let you characterize it the way -whatever way he was doing and why.
Q. Well, that's what it looked like to me.
A. Yeah, okay.
Q. And he said, When the Java framework is running inside the apps process, it means the two are joined together.

Do you recall that?
A. I think I recall --
Q. Wait. I'm sorry. I'm sorry to interrupt you. I should be accurate.

He said, When the Java is running inside the apps process, it means that the two are joined together temporarily.

Do you disagree with that?
A. I don't know that he said exactly those words, but I do disagree with that characterization of what's going on. There is a transfer in and a transfer out.
Q. So as between you and Mr. Elbouchikhi, you feel that you know more about STS functionality than he?
A. I prefer my description and characterization of this app.

MR. LAHAD: Mr. Boles, can we please have
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functionality that's doing the displaying in Gmail, that's the Java API framework, right?
A. No. I don't think we said that.
Q. Well, we talked about Gmail and rendering text. The rendering text is provided by the framework, correct?
A. Sure, yeah. I think that's what we agreed on.
Q. Right. So the framework is displaying the document electronically using the first computer program, right, under your view?
A. I don't have any real opinion. Sure. I think if you have a TextView -- so the TextView is one way of displaying text, sure.
Q. Yeah. In that method, in that way, the first computer program would be displaying -- well, sorry, TextView -- strike that.

In that way, the text -- when we're talking about TextView, it's the Java API platform -- it's the Java API framework doing the displaying, right?
A. Actually, no, I don't agree with that.
Q. When we talked earlier about Google using TextView to render the text, right?
A. Yes.
Q. And, again, that TextView is part of the framework, right?
A. Uh-huh.

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Q. So in that context, the framework is displaying the text, right?
A. But it doesn't happen without the app.
Q. I'm sorry. It doesn't what?
A. It doesn't happen without the app. You need both.
Q. Well, so your view is, the app is doing the
displaying?
A. $\quad \mathrm{N} \circ$.
Q. You have to have both?
A. Yes.
Q. Providing an input device configured by the first computer program, your view is the Java API framework gives you those little buttons on the screen, right?
A. That's what the code does. That's one of the things the code does.
Q. Right.
A. Again, nothing happens here without the app around.
Q. Nothing happens without the app around, right?
A. Yeah.
Q. So in order to provide an input device configured by -- strike that.

In order to provide those little buttons that show up on the screen, you have to both the app and the framework, correct?
A. I think -- yeah, I would agree with that.
Q. You can't have one without the other, right?
A. You can, but, you know, I'm not thinking that's what you want.
Q. Well, you can't have one with the other and have like a decently workable product, right?
A. I agree with that. Not with the way the current Android platform works.
Q. And so you would agree that at least one task of Gmail is to write an e-mail, right?
A. Sure.
Q. Yeah. In order to write that e-mail, I guess Google uses the "Compose" button. In order to compose an e-mail, you need Gmail, the app, and the framework, correct?
A. If it's running on an Android device, yes, they both have to be present, otherwise you're not going to write any e-mails.
Q. And so the app, plus the framework, are needed to perform the task of composing an e-mail, correct?
A. Sure. I think that's -- yeah. I don't disagree with that.
Q. And for Google Sheets, the task is, you know, crunching numbers.

Sheets is like Excel, right?
A. Yeah. Well, I mean, at some level.
Q. It's a knock off, right?
A. I don't know of any way to easily combine those two using -- in any meaningful way, using any mechanisms that I'm aware of, given what we're talking about here.
Q. Yeah. But I can -- I'm sorry. Were you done?
A. I think so, yeah.
Q. I can take a program, I could take Gmail, right?
A. Uh-huh, yeah.
Q. And I could go into Gmail and take a whole chunk of functionality I need from the framework, right -- I could just like take that code and incorporate it into Gmail, right?

It wouldn't be efficient. It wouldn't be elegant. It may not make -- you know, the best way to do it, but I could do that, right?
A. How would you do it? Can you give me a mechanism? Q. Well, can't I just write the source code in? Can I just take the source code from here and put it into -into Gmail?
A. Oh, you're going to make a copy of the source code?
Q. Yeah. Let's do that.
A. Okay. You're going to make copy of the source code. So I've got -- which source code are you copying? Q. Whatever source code is necessary in the Java framework to service Gmail?
A. So you are going to copy all that code, and where are
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Filed 08\| $21 / 23$ Page $459^{\text {i }} 80^{\circ} 7775^{\circ}$ PageID \#: 61038 you going to put it?
Q. We're just going to slap it on the back of Gmail.
A. I'm not seeing that as a combination mechanism.
Q. I can't cut and paste the code from the framework into the Gmail code?
A. These are large, complicated source code
repositories. If you want -- I mean, you are going to have to be more specific about what you are trying to accomplish here.
Q. Well, I mean, it's -- I'm just trying to accomplish combining the two pieces of code.

I mean, you have done that before, right? You are
the computer scientist.
A. Yes.
Q. You know, if I asked you, "Hey, I would like to take the code from Gmail" --
A. Yep.
Q. -- "and the code from the framework that services Gmail" --
A. Uh-huh.
Q. -- "I want you to put it in one program."

How would you do that?
A. Oh, okay. So what you are saying is, you are going to copy all the code. You're going to make a copy of all of, I guess, what would be the framework, right?
A. So now this framework code is no longer shared like it is in Android.
Q. Yes.
A. Okay. So code no longer shared. Private copy. If you change one version, the other version doesn't change. If, you know, if the two diverge, common user experience, all this kind of stuff. But then, you are going to copy it all together, right? You're going to have a big source code repository; is that what you have in mind?
Q. Yes.
A. Okay. Now, I don't know how you build that in a way to get it actually to install.
Q. Let's pause right there.
A. Yeah.
Q. What you just described, this combination --
A. Yeah.
Q. -- you would agree, it is not a routine or library, right?
A. Depends on what you did with it.
Q. Well, we're going to run it; correct? I'm going to run it on Gmail.

Let me ask it this way: Gmail is not a routine or library, correct?
A. I wouldn't call it such, no.
from the input device causing a search for the search term, right?
A. Yes, yes.
Q. The claim does not state that the first computer program must do the search, right?
A. That's correct.
Q. And the claim says after -- or consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term, correct?
A. That's what the claim says, yes.
Q. All right. And so all that needs to happen under the claim term is causing a search for the search term -well, all that needs to happen with respect to the highlighted portion.

All that needs to happen is causing a search for the search term in consequence of receipt by the first computer program of the user command from the input device, correct?
A. So I believe you just read the claim language in two different orders, but I think you are right, yeah.
Q. And your opinion is -- I've got --

MR. LAHAD: If I can go to Slide 30, please,
Mr. Boles.

## BY MR. LAHAD:

Q. So you have got this, and you press on the e-mail
address, and that leads to the compose functionality that
we see on the right, correct?
A. Via the intent mechanism that I discussed, I think, on the next slide.
Q. Yeah. And what causes the Intents to activate to actually do anything, it's the user tapping the Gmail button, right?
A. That fires the first intent, yes.
Q. Yeah, that's the first domino, right?
A. The first domino -- okay. So --
Q. You know what dominoes are, right?
A. Yes, I played with them when I was a kid.
Q. Me too. Right?
A. Yeah.
Q. You can have 100,000 dominoes, right?
A. Uh-huh. Yep.
Q. And if I tap the first one down --
A. Uh-huh.
Q. -- the hundred-thousandth domino falls because I
tapped the first one down, right? It is a chain, correct?
A. Not if you have to do something in the middle to make
the second chain of dominoes happen.
MR. LAHAD: If we can go back to slide 28.

## Rinard - Cross

to have fairly limited utility, correct?
A. Sorry. Linkify?
Q. Yes. Linkify.
A. I don't know that I necessarily agree with that depending on the context, but in general, I can imagine that would be true.
Q. Let me ask it again.
A. Uh-huh.
Q. You would agree that Linkify was generally considered to have fairly limited utility, correct?
A. Linkify?
Q. Yes, Linkify.
A. I don't know one way or the other on that.

MR. LAHAD: May I approach, Your Honor.
THE COURT: Yes.
BY MR. LAHAD :
Q. Dr. Rinard, I am handing you a copy of your report.
A. Okay.
Q. If I could have -- Dr. Rinard, if I could have you join me at Paragraph 123 of your report.
A. Sure.
Q. It's on Page 47, if that helps.
A. Okay. Let's see. There it is. Yep.
Q. Yeah. So you said in your report on Paragraph 123, Linkify is generally considered to have had fairly limited

## BY MR. LAHAD:

Q. The claim language says, in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term, correct?
A. Yes.
Q. Doesn't say directly causing a search term, does it?
A. No, it doesn't.
Q. It doesn't say immediately causing a -- doesn't say
immediately causing a search for the search term, does it?
A. It does not say immediately.
Q. It doesn't say causing a search for the search term without doing anything else in the middle, does it?
A. Doesn't say that either.
Q. In fact, this claim limitation doesn't even state that the first computer program has to cause the search, does it?
A. It says the search has to happen in consequence of receipt by the first computer program.
Q. Yeah. But it doesn't say that the first computer program has to cause the search, does it?
A. No.
Q. Thank you. You discussed non-infringing alternatives with counsel

You would agree that Linkify was generally considered

## utility, correct?

A. That's absolutely right.

MR. LAHAD: Your Honor -- sorry -- am I permitted to publish this?

THE COURT: Yes.
MR. LAHAD: Thank you.
BY MR. LAHAD :
Q. And you would agree --

MR. LAHAD: You can take that down, Mr. Boles.
BY MR. LAHAD:
Q. You would agree that Linkify's success rate at identifying entities was a relatively low 30 percent, correct?
A. Absolutely.
Q. And in fact, Linkify only identified addresses correctly 21 percent of the time, correct?
A. That's right.
Q. And Linkify had so much difficulty identifying street addresses that functionality was eventually deprecated, correct?
A. Yes, that's right.
Q. In fact, Google told developers to avoid using Linkify to identify addresses when no alternative is available, correct?
A. So that's -- yes, that's what being deprecated means,
 yes.
Q. You also talked about Smart Linkify with your counsel correct?
as a potentially non-infringing alternative.
Do you recall that?
A. Yes, I do.
Q. Smart Linkify wasn't available as an alternative at the time that STS launched in 2017, correct?
A. I don't recall one way or the other. I mean, it's probably in the report someplace, but I don't recall, sitting here today.
Q. I'm sorry, sir?
A. I said it's probably in the report someplace, but I
don't recall the release date of Smart Linkify. But I
don't recall, sitting here today, precisely when the release date was.

MR. LAHAD: Mr. Boles, if I could have
Slide 35.
BY MR. LAHAD:
Q. Okay. The InNova license. You were asked questions
about the comparability of the technology licensed here, the ' 761 patent, right?
A. Yes, I was.
Q. This is not one of Mr. Hedloy's patents, correct?
A. That's correct.
Q. This is not any of the patents at issue in this case,

## Rinard - Redirect

questions, Your Honor.
THE COURT: All right. Thank you. Any
redirect?
MR. KAMBER: Very briefly, Your Honor.
Can I get -- well, we'll pull it up in a just a
minute.
Dr. Rinard, just a few questions. REDIRECT EXAMINATION

## BY MR. KAMBER

Q. Counsel was just asking you towards the end about the Smart Linkify.
A. Uh-huh.
Q. I think you said before that Smart Linkify used the same TextClassifier code as Smart Text Selection, correct?
A. Yes, that's correct.
Q. So that Smart Linkify could have used that same functionality whenever Smart Text Selection came out, correct?
A. That's right.
Q. So now, turning back to this discussion about code and merging, how code gets used together --
A. Yeah.
Q. -- you understand that Dr. Smedley's opinions in this case are that the 12 Google apps are the things that infringe the computer-readable medium claims, correct?
think is --
Q. Right.
A. It's come up before, I think.
Q. With respect to technical comparability, there is nothing more technically comparable to the ' 843 patent than the 843 patent itself, correct?
A. It sounds reasonable. I'm not sure of what you are trying to say. Sure. Yeah, sure, it's technically comparable to itself.
Q. Exactly --
A. Okay.
Q. -- there's nothing more technically comparable --
A. Well, you know, all right --
Q. I'm sorry. Go ahead.
A. Yeah, no, it sounds good to me.
Q. Yeah, nothing more technically comparable to the ' 843 patent than the ' 843 patent itself, correct?
A. It's technically comparable, I think, yeah, sure.
Q. And so clearly any license to the ' 843 patent is more relevant to damages than this InNova license, correct?
A. I have expressed no opinions on any damages-related issues except for these two.

MR. LAHAD: Thank you very much. No further

Rinard - Redirect
A. That's my understanding.
Q. Okay. So just to be clear, why is it that you believe that the accused apps do not provide an input device configured by the first computer program? We will pull the language up on the screen from I think it might be your second or third slide.
A. Sure.
Q. Just so the jury has it. In front of them.

MR. KAMBER: Sorry, Mr. Spence. Probably the claim language is -- there we go. Thank you.

## BY MR. KAMBER:

Q. So again, can you explain to the jury why it is that you believe that the accused first computer program, that is the 12 accused apps --
A. Yes.
Q. -- do not, quote, provide an input device configured by the first computer program?
A. Sure. So this patent claim requires Approach 1. The apps use Approach 2, the not -- not self-contained approach. The code for setting up the input device is present in the framework, which is shared across all apps and not present in the apps themselves.
Q. What does that mean about whether or not it meets the Court's construction of "computer program"?
A. It does not meet the Court's construction of

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Q. So let's turn to the other element that you talked about.

Why is it that you believe that the accused apps do not meet the claim element that starts in consequence of receipt by the first computer program?
A. Because here we have the Intents mechanism involved. And that means that the accused apps used an Approach 2 -I'm sorry -- yeah, Approach 2, the not self-contained approach as opposed to Approach 1, the self-contained approach, that the claim requires.

And the code for doing the Intents mechanism is not present in the apps. It's present in the framework which is shared across all of the apps. In addition, the entity is -- receives a demand to cause it to search. That is the second computer program, not the first computer program.
Q. Dr. Rinard, what causes the search, in your opinion?
A. The code and the second computer program where the decision is made to actually perform the search.
Q. Is it automatic that that search happened once that domino of the user selecting the button occurs?
A. No, it is not.
Q. No further questions, Your Honor.

THE COURT: Thank you very much. You may step

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Have a seat. I understand we've got a housekeeping
``` matter.

MR. UNIKEL: One quick question before the Miller deposition.

These are two PowerBooks that he refers to in the testimony that I prefer not to introduce as evidence unless you feel it is necessary. He just sort of talks about what's on these, these computers. They are technically Apple's, but these are the actual ones.

They are marked with an exhibit sticker. They are on the exhibit list. So we can treat them as demonstratives, or I can introduce them into evidence.
the Court: Okay. Have you talked to the other side? Is there any objection from the other side?

MR. UNIKEL: They are aware of them and of them in the video.

MS. SRINIVASAN: Yeah. We don't object to not treating them as evidence and that we assume that they are just for demonstrative purposes. They will not going to go back.

THE COURT: Okay.
MR. UNIKEL: Sure.
THE COURT: I think we are all in agreement.
MS. SRINIVASAN: And, Your Honor, I didn't rest before, but I am going to rest when the jury comes back,
the witness: Thank you.
MR. KAMBER: Your Honor, may Dr. Rinard be
released?
THE COURT: Yes, he may be excused.
MR. KAMBER: Thank you.
THE COURT: Let's have Google call it's next
witness.
MR. UNIKEL: Your Honor, the next witness we'll
be calling will be a videotape testimony of James Miller
from Apple Computer. I'm not sure if this is an
appropriate time to start or if you want to take a break
first.
THE COURT: That's what I was going to ask you.
Approximately how long is the video?
MR. UNIKEL: It is about an hour long, Your
Honor. I apologize.
THE COURT: Okay. At this point in time,
ladies and gentlemen of the jury, we will take our
afternoon break, and we will be back in ten minutes.
(The jury exits the courtroom at 2:48 p.m.)
THE COURT: All right. We will be in a
ten-minute recess.
(Whereupon, a recess was taken.)
THE COURT: Okay. We're back from the break.

\section*{Rinard - Redirect}
if I may.
THE COURT: Okay. All right. Absolutely. We will bring the jury in. I will look at you and ask you if you intend to make any applications. All right. That's fine.
(The jury enters the courtroom at 3:03 p.m.)
the clerk: Your Honor, the jury.
THE COURT: Please be seated. Counsel.
MS. SRINIVASAN: Thank you. Plaintiff Arendi rests its case in chief at this time. Thank you.

THE COURT: Thank you. Let's have Google call its next witness.

MR. UNIKEL: Your Honor, the next witness will be James Miller presented by videotape deposition testimony. The parties have agreed that the following should be introduced as exhibits in advance so the jury can follow along. That is DTX-179, 180, 182, 186, 187, 188, 189, 190, 191, 777, 880, 881, 882, and 883.

And the parties have also agreed, Your Honor, that these two very large PowerBook computers that are referred to in the video can be treated as demonstrative as opposed to evidence to enter into the record.
the court: Any objections?
MR. LAHAD: No objection, Your Honor,
provided --

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the court: Those exhibits are -- sorry. Go ahead.

MR. LAHAD: No objection provided that the
A. No.
Q. "No," it's not correct, or "no," you don't have an interest?
A. I own a few shares of Apple stock and a few shares of Google stock, possibly some of the others from the other defendants. But beyond that, I have no interest in the out come.
Q. Okay. So beyond the fact that you own some stock in the companies, there's nothing related to this specific piece of litigation that you have any interest in the outcome of?
A. That's correct.
Q. Sir, let me show you a document that I am marking Miller Exhibit 4.

Sir, do you see that Miller Exhibit 4 is a printout from the website for a company called Miramontes Interactive?
A. Yes.
Q. What is Miramontes Interactive?
A. That is my consulting company.
Q. And how long have you been affiliated with Miramontes Interactive?
A. Since 1997.
Q. And am I correct that this particular web page from the Miramontes Interactive website is your personal
personally to subpoenas that were issued by Google, Motorola, and some other defendants in the Arendi litigation?
A. Yes.
Q. And, sir, am I correct that you were aware that as part of this subpoena, you were asked to do a search for some documents and some materials related to work that you had done in the past?
A. Yes.
Q. And did you, in fact, look for such materials?
A. Yes.
Q. And am I correct that you actually produced a number of materials in response to the subpoena request?
A. Yes.
Q. You and I have never spoken on the phone before?
A. Correct.
Q. You and I have never corresponded in any way before, correct?
A. Correct.
Q. And today, Google, LLC, is not paying you a dime for your appearance here today, correct?
A. Correct.
Q. And, sir, you have no interest in the outcome of this litigation one way or the other as I understand it; is that correct?

\section*{Deposition Designation - Miller}

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\section*{biography?}
A. Yes.
Q. And, sir, I see that you have described your educational history.

Can you briefly give us an indication, just explain today what your educational background is?
A. Yes. It's -- well, it's as stated. I have a bachelor in science in computer science/social science from Michigan State University in 1972; a Master's in cognitive psychology from UCLA, I guess, in 1973; and a Ph.D. in cognitive science from UCLA in 1978.
Q. After you obtained your Ph.D. in cognitive psychology from UCLA, did you then go to work somewhere?
A. I did a postdoctoral fellowship at the University of Colorado until -- or from 1978 to 1981. And I then went to two jobs that are not listed on here prior to the last one shown. In 1981, I went to Texas Instruments in Dallas, and in 1983, I went to Computer Thought Corporation in Plano, Texas. And then in 1984, I went to MCC.
Q. Your work at Texas Instruments, for example, what sorts of work were you doing for them?
A. Research into intelligent tutoring systems.
Q. And what does that mean, "intelligent tutoring systems," at a high level?
A. Yeah, computer programs that could help teach people, you know, one topic or another using artificial intelligence techniques to do so.
Q. And then I see in 1984 to 1988, you went to work for Microelectronics and Computing Technology Corporation, MCC; is that correct?
A. Yes.
Q. And what did you do for MCC?
A. Research into the use of artificial intelligence for user interfaces.
Q. And after MCC, it appears that you went to work for Hewlett Packard Laboratories in Palo Alto, California; is that right?
A. Yes.
Q. And how long were you at HP Labs for?
A. About five years, maybe a little less.
Q. And can you generally describe what sorts of work you did at HP Labs?
A. Research into user interfaces.
Q. When you say "research into user interfaces," what do you mean by "user interfaces"?
A. The parts of a computer system that allow people to interact with a computer.
Q. And I notice that after -- it appears that you left Hewlett Packard Labs sometime around 1993; is that right?

\section*{Deposition Designation - Miller}
A. Yes.
Q. And you after you left Apple, where did you go to?
A. At that point, I began consulting. And so that's
when Miramontes Computing or Miramontes Interactive came into existence.
Q. Great. Thank you.

Sir, in your biography from the Miramontes
Interactive website, under the Apple Computer entry, the last sentence says, quote, "I led the transfer of one of these projects, Apple Data Detectors, from our team to Apple System Software Group, where it was released as a product," unquote.

Do you see that?
A. Yes.
Q. What is Apple Data Detectors?
A. Well, at the time, Apple Data Detectors was a project that we conceived of within ATG.
Q. Can you give me a general description of what it is that Apple Data Detectors did?
A. The idea at the time was to identify bits of information in -- in user documents. For instance, phone numbers or e-mail addresses or, you know, other sorts of things that could be easily identified, and make it very easy for people to carry out actions on them.
Q. And when did you start work on what became known as
A. Yes.
Q. And then it appears that you went to work for Apple Computer in Cupertino, California?
A. Yes.
Q. And what did you do at Apple Computer?
A. I was the head of the intelligence systems program.
Q. Can you describe for me what that program is?
A. We did a number of research projects into the use of artificial intelligence techniques for user interfaces.
Q. And I see here on your biography page that there's something called ATG Intelligence Systems.

What is ATG?
A. ATG was the advanced technology group that was the group inside of Apple that was responsible for longer-term research. We were not directly tied to any products, so we had the flexibility to look at ideas as they came about without immediate concern for getting them into a product.
Q. And what was your position -- were you actually
working, then, for ATG, the Apple Technology Group?
A. Yes.
Q. And what was your position at ATG?
A. I was the program manager for intelligence systems.
Q. And you started at Apple Computer in around January of 1993, and according to your bio, you left in about November of 1997; is that correct?

\section*{Deposition Designation - Miller}

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Apple Data Detectors?
A. I would say the middle of 1994.
Q. And what was your particular role in developing Apple Data Detectors?
A. Well, I was the leader of both the program and of that project. I -- so I was coordinating the work of the team. I was making some contributions of my own. And as the work progressed, I was also responsible for guiding the project out of the research lab into the product group that would ultimately productize and ship it.
Q. So would you say you were actively involved with the development of Apple Data Detectors?
A. Yes.
Q. So now, if we turn back to the exhibit that I'm going to hand you right now, which is Miller Exhibit Number 5. It has the title "Apple Data Detectors," and it says -the first bullet point is "Introduction: Jim Miller." Do you see that?
A. Yes.
Q. Am I correct on the bottom left of the first page, there is some text that says, "BN: WWDC. May 1996." Do you see that?
A. Yes.
Q. Does that indicate to you that this presentation was from about May of 1996 ?
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Q. Do you know what the BN:WWDC stands for?
A. The wWDC is -- especially, judging from the content of the document, refers to the Worldwide Developers

Conference.
Q. What is that?
A. That's an annual conference that Apple holds for its developers to expose them to new and soon-to-be-coming technology.
Q. And when you say, "developers," for those people who might not know what developers refers to, developers of what?
A. It's the people and the companies who write
applications and other related products for -- or that work with Apple products.
Q. And are these people who are -- who work for Apple, or are these developers that can be outside of Apple as well?
A. Some Apple employees will attend WWDC for a variety of reasons. The intent of the conference is for -- is to provide information to external developers.
Q. And as you understood it, what was the reason that you wanted to present ideas to external developers?
A. We wanted to show them what we were doing and
encourage them to build these technologies into their own
Q. And this particular presentation called "Apple Data Detectors," do you recognize this?
A. Let's see how to answer that. I recognize it as something that my team and I put together.
Q. And it appears that the introduction was given by you; is that correct?
A. Yes.
Q. And would that be the introduction that was given to the developers at the conference?
A. Yes. These were -- it appears that these were the slides that we used to give our presentation at the session where this was being discussed.
Q. Looking at the second page of Miller Exhibit 5, do you see there is a slide that's entitled "Data Detectives"?
A. Yes.
Q. And the first bullet point says, quote, "Find inherently structured data. Let user take action on data," unquote.

Do you see that?
A. Yes.
Q. What is that referring to?
A. That was perhaps the key idea in the project that -what we meant by "inherently structured data" were things

\section*{Deposition Designation - Miller}
protocol.
Q. Thank you.

And then I notice the last bullet point on this data detectives slide says, "Find any structured text or graphics. Take action."

Did you anticipate that data detectives would be usable with any type of structured text or graphics?
A. That was the intent of the project, yes.
Q. And then on Page 3 of Miller Exhibit 5, which is this slide show, do you see there's a slide called "user benefit"?
A. Yes.
Q. And the second bullet point on this user benefit slide says, quote, "Make contents of everyday documents more directly useful, get to your application faster, input data more easily," unquote.

Do you see that?
A. Yes.
Q. And can you describe for me what you meant with that bullet point?
A. The phrase "your application" refers to the applications that the attendees of WWDC were building. And the points that we wanted to make was that what we were building could provide a way for users to be able to very easily interact with those applications without

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go through many or the details of pulling down menus off of the menu bar and clicking on things and repositioning the cursor and typing stuff into text fields and clicking submit buttons and all of that.

They could just interact directly with the content, and then let the software go through all of the tedious parts of actually carrying out actions on that
information.
Q. And when you say, "Input data more easily," do you recall what that was referring to in your presentation?
A. Well, that if we could identify, say, a very long e-mail address and provide a way for someone to act directly on it, then a user would not have to open up a text box and remember and type in that e-mail address, possibly making mistakes along the way.
Q. So what sorts of things could be done with the e-mail address like that using the Apple Data Detectives that you're describing in this presentation?
A. In particular, you could create a new outgoing e-mail message to that e-mail address. You could also put it into an address book so that you could easily use it later.
Q. How would that work? Using the Apple Data Detectors or detectives, as their called in this presentation, how would you actually take an e-mail address in a document

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"Copland" or "Copland"?
A. It's Copland.
Q. Contextual menus in Copland. What does that refer to?
A. Copland was the code name, I guess, for what
ultimately became MAC OS 8 . And that was the version of the operating system that we were targeting our work for.
Q. And what is being shown, then, on this Slide 4, the Technical Overview with Contextual Menus in Copland?
A. Well, it's a description of how the functionality of what we were building fits into various system components in the operating system.
Q. And again, this would have been presented to
developers as part of the WWDC?
A. Yes.
Q. Out of curiosity, from a technical perspective, once the structure of an e-mail address had been identified in a document, how did that information then get passed to the program that would actually create an e-mail message?
A. That's what those little applications like "Send Mail To" do. Those were written -- those were often written in a language called AppleScript, which made it very easy to open connections to these other applications and tell them to do things.
Q. If I can ask you to look at Page 6 of the
and put it into an address book?
A. There were application programmatic interfaces, APIs, that would receive requests from outside parts of the computer system. And so the way that this would ultimately work is that our part of the system would identify this and then send a message through this API channel over to the application and say, "Make a new e-mail message addressed to this person."
Q. And how about to save it in your address book? How would that work?
A. There would be another kind of message that could be sent to the application. This one would be "Save this e-mail address inside of your address book."
Q. And did you actually build that kind of functionality into the Apple Data Detectors?
A. Yes. We would work with applications that could accept those messages, and then we would write the bits of code that would take the discovered pieces of information and send them to the application.
Q. And if you could look at Miller Exhibit 5, the next page, Page 4, please.

Do you see there's a slide entitled "Technical
Overview With Contextual Menus In Copland"?
A. Yes.
Q. First of all, what is contextual menus in -- is it

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presentation Miller Exhibit 5.
A. Yes.
Q. Do you see you have a slide on "developer
opportunities."
Do you see that?
A. Yes.
Q. And the first bullet point says, "Opportunities: Easy user access to your application. Your app, a mouse click away."

Do you see that?
A. Yes.
Q. Again, what were you trying to accomplish with this presentation to developers?
A. Well, this would point out to developers that their applications could be accessed directly from user information, as opposed to the user having to go back into the system finder and open up a sequence of folders until they finally got to the user's application, and then launch that and then do activities inside the application. Q. And why emphasize "Your app, a mouse click away!" A. That would make it easier for people to make use of user's applications.
Q. Okay. And then the last slide of this Miller Exhibit 5 says, "August plans." And I assume we're talking about August 1996? \\ \title{
Deposition Designation - Miller
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A. Yes.
Q. And the first bullet point says, "Announce Data Detectives at Macworld Boston."

Do you see that?
A. Yes.
Q. What is Macworld Boston?
A. Macworld was a large trade show around the mid-90s. There were generally two of those; one in January, and one in August. One typically on the east coast, and one typically on the west coast. And these were big trade shows where, you know, all parts of the Apple -- Apple ecosystem, I guess, would come and, you know, show what they were selling and encourage people to make use of their products. Apple would also use that as a forum for making product announcements.
Q. And do you recall that there were plans to announce the Apple Data Detectives at the 1996 Macworld Boston?
A. Yes.
Q. I notice the second bullet point for "August plan" says, "Internet release."

Do you know what that is referring to?
A. Yes. The product resulting from all of this for Apple Data -- Apple Data Detectors was not -- was not a shipping part of Mac OS 8. It was not on the \(C D\) that came in the box. And that in order to get it, you would have
to download it from the Internet and then install it on your computer.
Q. Sir, to the best of your recollection, am I correct the Apple Data Detective name eventually was changed?
A. Yes.
Q. What did it eventually become?
A. Well, the obvious translation was to Apple Data Detectors. And as we approached the shipping of the product, the marketing group began thinking about exactly what to call it. And what they settled on was that the initial product release would be called Internet Address Detectors. And that the contents of that would be focused on structures having something to do with the Internet --e-mail addresses, URLs, FTP sites, things like that.
Q. So if I understand correctly, am I correct that Apple Data Detectives, which you referred to in the May 1996 presentation, is the same thing as Apple Data Detectors?
A. Yes.
Q. And then eventually when that became part of the MAC OS 8, am I correct that the marketing people got involved and added another name, Internet Address Detectors, to the system?
A. Well, that referred to the specific product release. There was also a sense of -- of -- I'm not sure if this is explicitly written down anywhere, but a sense of

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Q. And how do you know that?
A. I was there.
Q. And who delivered the presentation about the Apple Data Detectors at that Macworld Boston 1996 conference?
A. Frank Casanova.
Q. Who was Frank Casanova?
A. He was -- he had multiple roles at -- I believe at that time he was a marketing representative focused on work going on in ATG, and he very frequently did public demos of work coming out of ATG.
Q. And you said you were at the Macworld Boston presentation in 1996.

Do you have any sense of how many people were there?
A. It was a large filled hall. It's easy to believe it was a couple thousand.
Q. Okay. And sir, to your recollection, when Mr. Casanova made the presentation of Apple Data Detectives at Macworld 1996, did he use any demonstration of Apple Data Detectors?
A. Yes.
Q. And the demonstration materials that he used, did you have any role in preparing those?
A. Yes.
Q. So I think we have a copy of a snippet of a video that I would like to show you and just make sure that I
A. Okay.
Q. If that's all right?
A. Yes.
Q. And for the record this is Arendi DEFS defendants, I think it's 0000001.
(Video plays as follows:)
MR. CASANOVA: Also our research labs. We are working upon the whole concept of knowledge systems. You know, what is knowledge? Knowledge is kind of bits of information that actually matters to me. We're surrounding with information. It comes from all places. So we've taken this general model -- we look at e-mail, ClarisWorks, Microsoft Works documents. It doesn't matter.

We have this new technology -- you're going to hear a lot more about it I'm sure -- called Apple Data Detectives. And what I'm going to do is write in this, you know, summarization window, another bit of pre-op code. I'm going to launch some other pre-op code. And really watch what it does. I'll select everything in this document. And watch the screen. Watch what happens when I hold down the magic keys.

You see that little flash? Well, Data
Detectives has just scanned the entire document and has

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presentation?
A. Yes.
Q. And was that, in fact, the presentation given at Macworld Boston 1996 that you attended?
A. Yes.
Q. And is that a fair and accurate videotape reflecting the presentation that was actually given on Apple Data Detectors in 1996 at Macworld Boston?
A. Yes.
Q. And am a correct, sir, that you actually participated in creating the demonstration that the gentleman in that video gave?
A. Yes.
Q. And who is the gentleman who actually gave the demonstration at the Macworld Boston 1996 presentation that we saw on the video?
A. That was Frank Casanova.
Q. And the other gentleman who was in the video, who was that?
A. That was Gil Amelio, the CEO of Apple at the time.
Q. Sir, in fact, and you said that there potentially more than a thousand people in the auditorium to listen to this presentation?
A. I believe so, yes.
Q. And to your understanding, did the people who

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pulled up the bits of information that are actually relevant for what I want to find. And in this document, it found some pretty cool things. I clicked the mouse down on it, and it says, "Oh, look, in this document -somewhere in this massive document, there is the website Wall Street Journal.com. Would you like to browse it?" No.

You know, Jim Manzi, Cambridge, would I like place that in contact? Well, perhaps, because normally I'm cutting and pasting in all my email. Would I like to send a letter to Jim Manzi? Send mail? Write a letter? Or have my computer dial him?

What this system will do is automatically invoke these applications. So, for example, if I say "write a letter to Jim Manzi," or "release on this," the system goes in, pulls out the information, launches now contact. It goes into the contact database, finds the apps -- the Jim Manzi location. If it's not there, it adds in, hold onto it for a second, and then it launches and inserts the document -- that information in the right place.

So we agree, Jim. So the thing here is --
(Video ends.)
BY MR. UNIKEL:
Q. Sir, am I correct -- do you recognize that

updated on December 30th, 1996?
A. Yes.
Q. And does this indicate that you would have been the person who did the last updating?
A. Yes.
Q. And it bears that a copyright date of 1997 from Apple

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attended that presentation of Macworld Boston 1996 have to sign any kind of confidentiality agreement?
A. No. That was a completely public presentation.
Q. Let me show you a document that I'm marking as Miller Exhibit 7, sir.

Sir, do you recognize Miller Exhibit 7?
A. Let me look through this. This is a printout of some web pages from the public Apple website describing the Data Detectives project.
Q. And, sir, can I ask you to look at the last page of this Miller Exhibit 7, please. Do you see that at the very last text it says, "This page last updated on December 30, 1996 by JRM, Version 3.0," unquote.

Do you see that?
A. Yes.
Q. Are you JRM?
A. Yes.
Q. And does this indicate that this page was last
Computer, correct?
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A. Yes.
Q. Do you recall actually editing this web page which appeared on Apple's public website?
A. To some level, yes. I know that I did put this web page together.
Q. And when you were editing the page, were you
attempting to make sure that the description of Apple Data
Detectors was accurate?
A. Yes.
Q. Do you recall ever including anything that was
inaccurate in any of the web page descriptions of Apple Data Detectors?
A. No.
Q. Looking at the first page of Miller Exhibit 7, right under the title "Apple Data Detectors," do you see there it's written, quote, "Apple Data Detectors intelligently find meaningful pieces of information in your documents and let you carry out otherwise time-consuming actions on them with a single click of your mouse. It's easily extendible to new kinds of information and to new actions that are important to you," unquote.

\section*{Do you see that?}
A. Yes.
Q. At a high level, is that a high level description of what Apple Data Detectors are and can do?

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A. Yes.
Q. If I can ask you to look at Page 2 of Miller Exhibit 7, about the middle of the -- about a third of the page down, it says, quote, "Apple Data Detectors make all of this possible with the selection and a click of the mouse. More specifically, you simply..." And do you see that text, sir?
A. Yes.
Q. And then am I correct what follows is, again, a general description of how Apple Data Detectors actually worked at the time?
A. Yes.
Q. So the first item listed says, "Select the region of text around the phone number, not worrying about whether you accidentally select a few extra characters on either end," unquote.

Do you see that?
A. Yes.
Q. Am I correct that as we saw on the demo, you could, in fact, select the entire document to have Data Detectors review it?
A. Yes.
Q. And am I correct that Data Detectors would work even if a user did not specifically designate, for example, the particular phone number that they were interested in

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any part of the e-mail address in order for the e-mail address to be detected?
A. That's correct.
Q. Now, in the figure you pointed me to, I see an e-mail there. Am I correct that the Data Detector could work in conjunction with an e-mail program?
A. Yes.
Q. And would it work on an e-mail that somebody was actually in the process of drafting?
A. Yes.
Q. Would it work on an e-mail that a user had actually received?
A. Yes.
Q. What sorts of applications or programs could the data detectors actually be used in conjunction with at this time?
A. There wasn't really any limitation to that. The applications needed to support AppleEvents, which is the technology that allows other applications to talk to that application, and it needed to provide AppleEvents support for the actions you wanted to carry out. So an e-mail program very likely would offer an AppleEvent to create a new e-mail message. Other applications would offer events that would support other kinds of actions.
Q. What about a word processing program? Could Apple

Data Detectors be used in conjunction with a word
processing program at the time?
A. Yes.
Q. What is an example of a word processing program available on Macintosh that Apple Data Detectors could work in conjunction with?
A. ClarisWorks was one.
Q. Looking again at Miller Exhibit 7, the next portion of Page 2 says, quote, "Use the new contextual menu feature on the Mac OS. Hold down the control key, and press the mouse button. Behind the scenes, Apple Data Detectors analyze the text you've selected and find meaningful bits of information in the selection, like e-mail addresses, URLs, phone numbers, and other useful things," unquote.

Do you see that?
A. Yes.
Q. When it says that "Apple Data Detectors analyze the text you've selected," what do you mean by that?
A. The system receives the text that the user has selected and then analyzes it with the various kinds of detectors that are installed in system looking for the kinds of information they are designed to identify --e-mail addresses or phone numbers or what have you.
Q. It then goes on to say in this document, Miller 7,
quote, "You are then presented with a menu of the things found by Apple Data Detectors. Point at one, and you'll see a hierarchical menu of the actions that you can carry out on that thing. For a phone number, one of these things would surely be to call that number," unquote. Do you see that?
A. Yes.
Q. When you say that "you're presented" with a menu of the things, who is the "you're"?
A. The user.
Q. And why was -- what was the point of presenting the user with a menu that would allow them to choose particular actions?
A. Well, that was how we were allowing the user to operate on the contents of their document.
Q. And so, for example, for a phone number here, it identifies that one of the actions that could be carried out would be to call that number?
A. Yes.
Q. How would that work with Apple Data Detectors? If a phone number was detected, how would a user be given the option to call that number?
A. At the time, there was third party product called
"Megaphone" that was a combination of a software
application and a physical box that would plug into your

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Mac and then also allow your phone to plug into it.
You could then have that application do simple
voicemail responses to phone calls. And it could also place outgoing phone calls from an address book. That application supported AppleEvents, and so we were able to send that AppleEvents message to the Megaphone application saying, "dial this phone number," and it would do it.
Q. And am I correct that you actually described that in this document, Miller Exhibit 7, in the next paragraph where it says, quote, "Apple Data Detectors then launches a small action program that passes the phone number to the telephony application and tells it to place the call. You've done what you wanted to do with much less effort and without disturbing the applications you've been working on," unquote.

Do you see that?
A. Yes.
Q. Am I correct that that's what you were just describing for me with regard to placing a phone call?
A. Yes.
Q. When you say that "you've done what you wanted to do" -- again, I am assuming the "you" is the user?
A. Yes.
Q. And what do you mean by saying "without disturbing the applications you've been working on"?

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A. Well, you are -- you are sitting in this e-mail program, and you find that, while you are working with the e-mail program, you want to make a phone call. So here, you can make that phone call, and you've never left the e-mail program. You're still in it, as opposed to having to leave the program, go out into the finder, search through folders trying to find your telephone number application, finally find it, launch it, find the part of the application that allows you to specify where you can enter a phone number, and finally end up making your phone call.
Q. And this particular web page, where was this posted?
A. This was on the public Apple website.
Q. And who could access the public Apple website that had this description of Apple Data Detectors?
A. Anyone.
Q. If you look at the next page, the third page of Miller Exhibit 7, do you see there is a section called "Key Features of Apple Data Detectors"?
A. Yes.
Q. You then say in the Key Features of Apple Data Detectors, two more down it says, "Open to new structures." Do you see that?
A. Yes.

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 address? What were some of the actions they could take?
A. We put together some actions, primarily creating new e-mail message. And we did this for a number of current e-mail programs at the time that were either shipped with the MAC or that were available for free. So Eudora was one that was commonly used. Cyberdog was an internal Apple project that could send e-mail. If we were to run one of the demos, we could easily come up with a final list of things that were put together. It would also save an e-mail address in an e-mail program's address book.
Q. So there's two Apple PowerBooks that you've brought here today; is that correct?
A. Yes.
Q. What is loaded on the Apple PowerBooks that are here today?
A. The original version of Apple Data Detectors, some other supporting applications. Claris e-mailer is on it. A few others. One of them has a research project called "LiveDoc." I think the other one has a subsequent product released by Apple called "Geographic Detectors."
Q. Okay. And, sir, did you -- were you personally responsible in any way for the -- for writing any part of the code that is actually on these computer?
A. I wrote many of the actions scripts, like the thing shown here on Bates 573. And I wrote some, but not all of

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the Detectors.
Q. The computer that I'm marking as Miller 8, do you happen to know which programs this had on it? That's very heavy, I know.
A. I believe this is running -- well, the Internet Address Detectors Product. It seems to have Claris E-mailer and LiveDoc.
Q. And, sir, have you personally booted up this computer and examined the operation of the code that's on that computer of the products you just mentioned?
A. Yes.
Q. And when did you do that?
A. Maybe six months to a year. Ago. I'm not sure of the exact time.
Q. And can you confirm here today your understanding that the programs that are on that computer operate as they operated at the time that they were launched?
A. Yes.
Q. And how did you confirm that?
A. By observing the behavior of the system.
Q. Okay. And so I'm just going to mark Miller Exhibit 8 as that PowerBook with the programs that you've just identified on that PowerBook.
\[
\text { I'm now marking as Miller Exhibit } 9 \text { another }
\]

PowerBook.

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Can you tell me what programs you understand to be on that particular PowerBook?
A. Again, I would --
Q. Without degrading the computer?
A. Yes, I would need to confirm it, but it is running the Internet Address Detecters product, the Geographic Detecters product, and as with Miller 8, other supporting applications. Both of them are probably running Eudora and Netscape and now Contact, Claris E-mailer, and probably ClarisWorks.
Q. Okay. And, sir, did do you anything to confirm that the programs that are on this computer worked in accord with how they would have worked back in the time period of 1996, 1997 that we're discussing?
A. Yes. I tested the machine yesterday, and the software is there and working as you've described. Q. Sir, let me show you a document that I'm marking as Miller Exhibit 11. And, again, was -- when did Apple Data Detectors first get incorporated into a publicly distributed Apple product to your recollection?
A. It was made available in September 1997 as a download off of the Apple website.
Q. Okay. At Macworld Boston 1996 --
A. Yes.
Q. -- when we saw the Apple Data Detectors disclosed --

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Q. -- were the people who attended that under any kin of nondisclosure agreement?
A. No. That was a completely -- completely public, completely open meeting; anyone could go to that.
Q. And we looked at the web page that was posted on

Apple's public website from December 1996, correct?
A. Yes.
Q. Was there any nondisclosure agreement that was
required for users to sign in order to access that web page?
A. No.
Q. So what is it exactly that launched in connection with Apple Data Detectors as part of OS 8?
A. It was the software package that was made available in September of 1997 on the public Apple website anyone could get to, no nondisclosure of any sort. They could take that and install it on a computer running OS 8 and get the functionality of Apple Data Detectors.
Q. Looking at the -- do you see there is a next section called "ADG tactics"? Do you see that, sir.
A. Yes.
Q. And it says, quote, "Apple Data Detectors have been publicly demonstrated at the keynote speeches of Macworld Boston August 96 and Macworld San Francisco January 97,"

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as seed request to be?
A. People asking for information on how they incorporate the technology into their products.
Q. If I can show you a document that has been marked as Miller Exhibit 12. Do you see that this is a web page entitled "Apple Data Detectors"?
A. Yes.
Q. And do you see there's a date on the bottom right-hand corner of this?
A. Uhmm.
Q. What is that date?
A. April 8, 1997.
Q. And, again, what is this -- I'm sorry.

If you look at the last page of this particular document, Miller Exhibit 12, please.
A. Yes.
Q. Do you see there's an indication "last modified JRM, 4 March, 1997"?
A. Yes.
Q. Again, are you JRM?
A. Yes.
Q. So am I correct you modified this page last on March 4, 1997, according to this?
A. Yes.
Q. What is this particular document, Miller Exhibit 12?
A. Yes.
Q. Again, is that accurate?
A. Yes.
Q. How do you know that's accurate?
A. I was at both of those keynote speeches.
Q. And you actually saw a disclosure and discussion of Apple Data Detectors at those MAC World conferences?
A. Yes.
Q. You then say, quote -- I'm sorry. This document then says, quote, "Web pages discussing Apple Data Detectors went live on Apple web site in December 1996. To date, this has generated over 150 seed requests," unquote.

Do you see that?
A. Yes.
Q. And, again, am I correct that we had looked at the web page from December 1996 which was Miller Exhibit 7?
A. Yes.
Q. And what was the purpose for Apple putting that web page on its publicly available website?
A. To provide information to users and developers about the soon-to-be-released technology.
Q. And when this document refers to that page having generated over 150 seed requests, what do you understand
A. I'm not certain. I believe it is a newer version of the public web page that we looked at previously as Miller 7 .
Q. And this would have been the web page that was live as of April 8, 1997?
A. I believe so, yes.
Q. And again, was there any restriction on who could access Apple's public web pages such as Miller Exhibit 12? A. No.
Q. Let me show you a document that I am marking as Miller Exhibit 13. To your recollection, were there publicly available website -- I'm sorry. Bless you -- web pages available on Apple's website with regard to Apple Data Detectors in April of 1997?
A. Yes.
Q. And how do you know that?
A. From this document.
Q. And do you personally recollect that there was web pages in 1997 available for anybody who signed on to Apple's public website concerning Apple Data Detectors?
A. Yes.
Q. And did you personally have a hand in writing and editing the web pages that actually were posted on Apple's website?
A. Yes.
Q. Sir, earlier today, you told me that you were at the Macworld 1997 presentation of Apple Data Detectors as well; is that right?
A. Which one?
Q. Macworld 1997?
A. In January?
Q. Yes.
A. Yes.
Q. And where did that take place, what city?
A. San Francisco.
Q. Sir, I'm going show you a document -- it's actually not a document. I'm going to show you a video clip from what has previously been produced in this case as Arendi DEFS, defendants, 00021315.

If you could play that please, sir, I think you hit --
(Video plays as follows:)
MR. CASANOVA: Wouldn't it be really nice to be able to have some software help you while you're remote, or even locally, manage the information on the knowledge that's in these documents. So we've come up with a technology in the research labs called Apple Data Detectors, which does just that.

So what I'm going to do is go back to this large document that we compressed earlier, and let's

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we think is relevant, looks for his information, it launches ClarisWorks, it brings it into the PC's stationery, inserts the date, titles it, and you're ready to go.

We're using it the performance of these computers to help us. This Apple Data Detectors doesn't just work on ClarisWorks and other things. It works on any type of document you have, anywhere, and you scan for things that matter to you, not just URLs and Internet addresses and such. If you're a doctor or a lawyer or something else, scan for -- for information that matters to you.

\section*{(Video ends.)}
Q. Is that, in fact, the presentation that was made at Macworld 1997 in San Francisco that you attended?
A. Yes.
Q. And is that video a fair and accurate representation of the presentation that was actually delivered at that conference?
A. Yes.
Q. Who is it that was delivering that demonstration?
A. Frank Casanova.
Q. And the demonstration materials that he was using, the screenshots and the program that he was using, did you have any hand in developing those?
 select the entire document.

Now, watch the screen and the flash. That little flash means we just scanned the entire document once again, but this time we've looked for data structures, things that matter to us. So what I can do is -- watch it at the cursor, Your Honor, I'll click the mouse down and up pops some information. It says, "I've found a URL called WallStreetJournal.com. Would you like me launch that?" Well, over the phone, that might be less than good experience, so we won't do that here in this example.

But imagine, instead, I found, you know,
somebody's address, "Would you like me to place that in your Contact Data Manager?" Yeah, if you're in the airport. I mean, it's updating your information on the fly. Do you want to send some mail to them? Do you want to call them?

I mean, could you actually initiate a phone call from a piece of e-mail that was read to you after being condensed over a phone? Yes, you should be able to do that.

But since we do have the benefit of these
screens, what I'd like to do is actually -- let's use Apple Data Detectors to write a letter. So it goes into "Now Contact Database," it pulls up the information that

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A. Yes, I helped him put together the script to run the "write a letter" demo. And I don't know that I had anything to do with the content of the document we were operating on.
Q. And, sir, am I correct that the Macworld 1997 presentation that we just looked at, that occurred in January of 1997? Is that right?
A. Yes.
Q. And approximately how many attendees do you think were there to hear that demonstration?
A. Certainly a thousand, probably more.
Q. And were the people who were there for that
demonstration under any kind of confidentiality agreement or nondisclosure agreement obligation?
A. No.
Q. Sir, to help go a little deeper into that, I have made some screenshots of the video that we just looked at, which I'm marking as Miller Exhibit 14.

Miller Exhibit 14 consists of four screenshots from that video. And though they are small, you can see the timestamps where they appeared in that video in the left next to the toolbar with the play button and the like. Sir, the first page, am I correct that that's showing a document -- a screenshot of a document?
A. An application contained in a document, yes.
Q. What is the application that contains the document that was used in the demonstration to your knowledge?
A. That is another ATG project. I don't recall the name of it, but it had to do with text summarization.
Q. Okay. And so Data Detectors in that demonstration, were they being applied to only particular text or to the entire document?
A. They were being applied to whatever part of the document had been selected. The yellow color here shows the text that has been selected by the user. I don't know exactly what selection took place, but it's certainly all of the text that is visible on the screen.
Q. So everything that would be selected, if it was the entire document that was selected, the entire document would be analyzed?
A. Yes.
Q. And did the -- does the user have to particularly designate somehow a particular piece of information like a telephone number that it wants to have detected?
A. Well, Data Detectors will come back with that pop-up menu showing all of the structures that it found in the selected text.
Q. So in order to do that, does the user have to actually sort of prompt the system by somehow clicking or somehow selecting the phone number that it wants to pick?
A. No.
Q. Could the user select the entire document and have the Data Detectors analyze the entire document?
A. Yes.
Q. If the user selected the entire document and then the Data Detectors were to analyze the entire document, would the Data Detectors be able to pick out all of the various structures that it was capable of detecting?
A. Yes.
Q. So if there ten different structures, phone numbers, e-mail addresses, addresses, the Data Detectors could pick out all ten?
A. Yes.
Q. Without the user specifying any particular phone number to be identified?
A. Yes.
Q. Or any particular e-mail address to be identified?
A. Yes.
Q. So looking at Page 2 of Miller 14, which are the screenshots from the Macworld '97 video, what are shown in the pop-up window?
A. Those are the structures that were found and the actions that can be carried out on them.
Q. So looking at that window, what structures did the Data Detectors find in the document that was analyzed?

So it could at least do that. It may also have been able to identify some aspects of people's names or addresses. Q. And this particular -- when it says "place," quote, it's identifying the name Jim Manzi and a mailing address that presumably goes along with Jim Manzi?
A. Yes.
Q. And when it says "place in" new contact -- "in Now Contact," sorry, what does that mean?
A. It's going to make a new entry in the Now Contact database for that person.
Q. So if the user clicks on that option, "place Jim Manzi" with his mailing address "in Now Contact," what would happen?
A. Now Contact would open and a new entry would be created in the database for that person.
Q. And would there be a display of the database with that entry?
A. You might have to select the address book section of that application to see it. But yes.
Q. But it would be there?
A. It would be there.
Q. The next in the menu says, "Send mail to
manzi@lotus.com." Do you see that?
A. Yes.
Q. What would happen if a user clicked on that option?
A. It would launch an e-mail program. The e-mail
program would open up a new message form, put
"manzi@lotus.com" into the to field and turn control back to the user.
Q. The next option -- sorry, the last option before I get to the next one which is highlighted, the last option says, "Dial (617)555-1212."

\section*{Do you see that?}
A. Yes.
Q. What would happen if a user clicked on that option?
A. That would launch a third-party telephony
application, probably the Megaphone application I referred to previously, and dial that number and actually place a call to that phone number.
Q. Now, the fourth option in this menu says, "Write letter to manzi@lotus.com."

\section*{Correct?}
A. Yes.
Q. What is that function used for?
A. That was primarily an action that we put together to demonstrate the capabilities of the system.
Q. And, in fact, I believe in the video Mr. Casanova actually clicks on this and then we see certain steps happening quite fast on the video.

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Q. So tell me how it is that clicking on "write a letter to manzi@lotus.com" results in the finding of a mailing address.
A. Right. That mailing address is in the user's Now Contact address book. So the first thing that the Data Detector script does is to ask Now Contact for the mailing address of the person whose email address is manzi@lotus.com and --
Q. So I assume you do that, it has to search for manzi@lotus.com?
A. Yes.
Q. How does it find out whether or not there is a contact with manzi@lotus.com in the Now Contact database? A. That's an internal service that Now Contact provides through AppleEvent support.
Q. What is that service?
A. You can give it search parameters, in this case an e-mail address, and say, give me back the information that you have about this person. We happened to use e-mail address. I believe it would also operate off of a phone number.
Q. Okay. So in this case, the search parameter was what?
A. The e-mail address, manzi@lotus.com.
Q. And so Now Contact was given that search parameter,
A. Yes.
Q. So I've taken some screenshots of what was shown in the video. So Mr. Casanova clicked on "write letter to manzi@lotus.com." Correct?
A. Yes.
Q. And then what we see is in Page 3 of this exhibit, Miller 14?
A. Yes.
Q. And what is shown happening in that screenshot?
A. This is -- well, Now Contact, this contact manager program has been opened. And it has been opened so that the Data Detector action can receive information about Jim Manzi or about the person who's -- let's see.
Q. Let's do it this way. Let's take me through the steps. So we start with manzi@lotus.com.
A. Yes.
Q. Correct?
A. Yes.
Q. The user clicks "write a letter to manzi@lotus.com"?
A. Yes.
Q. But manzi@lotus.com is not a mailing address, it's an e-mail address?
A. Yes.
Q. So to write a letter, I need a mailing address?
A. Yes.

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and what would happen next?
A. And it would -- Now Contact would look for an entry whose e-mail address is manzi@lotus.com. If it found it, it would gather up mailing address information and return it to the calling bit of code.
Q. And then would it do anything with that information -- that address information that was returned? A. Now Contact would not. Now Contact's work is done. But the script would now receive that information and then start to talk to ClarisWorks, which is a word processor. It would open up a new document -- or the script would then open a new document in ClarisWorks and paste the information it had gotten from Now Contact into that new document.
Q. Is that what we see then in the screenshot that is Page 4 of Miller Exhibit 14, the pasted information?
A. Yes.
Q. So am I correct what's shown in the screenshot of Page 4 is an open ClarisWorks word processing document; is that right?
A. Yes.
Q. And you put inserted into that document is now a name, Jim Manzi; correct?
A. Yes.
Q. And then a mailing address, Lotus Corporation, One

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Charles Park, Cambridge, Massachusetts 02142; correct?
A. Yes.
Q. But what we started with was manzi@lotus.com?
A. Yes.
Q. And am I correct that this is information that is somehow associated in the Now Contact database with manzi@lotus.com?
A. Yes. If you look back to Page 3, about two-thirds of the way down, you can see in sort of a reddish tone that there is an entry there for Jim Manzi.

There are more columns to this table that are not visible in the way this window is configured. But if you were to further inspect that entry one way or another, you would find that there is the address information for that person.
Q. And so looking back at the screenshot that is

Number 2 in this Miller Exhibit 14, am I correct that when
Lotus -- I'm sorry, when Apple Data Detectors are invoked on this document, the user is given, for this particular document, five different options of things that he or she can do?
A. Yes.
Q. One of them is open a web pages; correct?
A. Yes.
Q. One of them is to add a mailing address to a contact
A. Yes.
Q. One of them is to write a letter by using the e-mail address to find mailing address and insert the mailing address into a document?
A. Yes.
Q. And one of them is to actually dial a phone number using the telephony program?
A. Yes.
Q. And the user can click any of these with a single click of the mouse?
A. Yes.
Q. Sir, if I can show you a document that I'm marking as Miller Exhibit 15.

Sir, do you see that Miller Exhibit 15 has at the top the words "write a letter W.emailADDR, A-D-D-R."

Do you see this?
A. At the very top, yes.
Q. Very top.
A. Yes.
Q. Underneath that it says, "Apple, colon, colon, e-mail address. Write a letter, get the mailing address of the
A. Yes.
Q. Sir, let me show you a document that I am marking as Miller Exhibit 16.

Sir, do you see that Miller Exhibit 16 is a press release from Apple?
A. Yes.
Q. And the press release is entitled "Apple Introduces Internet Address Detectors, technology makes it easier to manage and perform actions with internet addresses, extends innovative internet capabilities delivered with MAC OS \(8, "\) unquote.

Do you see that?
A. Yes.
Q. Am I correct that "Internet Address Detectors" was the name of a product that Apple actually released?
A. Yes.
Q. Am I correct -- is there a relationship between Internet Address Detectors and Apple Data Detectors?
A. Yes.
Q. What is that relationship?
A. It's a little difficult to refer to "Apple Data Detectors" because that term can refer to different things. It certainly referred to the project that we were running in ATG.

In the context of this press release, as it says down
at the bottom of the page, "IAD is the first product to use Apple Data Detector's technology." So I guess I would say what we're seeing here is a marketing attempt to distinguish the core Data Detector technology from the capabilities of this particular product which were focused on the handling internet related information, e-mail addresses and web pages and such. There's discussion of them further on in this release.

In that way, Apple would be able to release other products with other names, but still be able to point back and say, these are also based on Apple Data Detector's technology.
Q. This particular press release was issued on

September 8th, 1997; correct? We can see it at the top of the first page.
A. Oh, yes. Sorry.
Q. And after that date, September 8th, 1997, the press release states, quote, "Extending the innovative internet technologies delivered with MAC OS 8, the highly successful operating system software released for Macintosh and MAC OS based computers, Apple Computer Inc. today announced the availability of Internet Address Detectors, IAD," unquote.

Do you see that?
A. Yes.
to user's Claris Emailer address book," unquote.
Do you see that?
A. Yes.
Q. Is that another action that could be taken with a detected e-mail address?
A. Yes.
Q. And again, can you please describe how in IAD would an e-mail address be added to a user's Claris Emailer address book?
A. The overall process would be the same as adding it to Now Contact, the Claris Emailer was able to receive an AppleEvent saying, add this entry to the address book. And so we would have script that would open communication with Claris Emailer and send it -- the information with the instruction to add this information to the address book.
Q. And I wanted to clarify a few things that you discussed with Google's counsel earlier today. In particular, relating to these two devices that we see in front of us marked Miller 8 and Miller 9.

What types of devices are Miller 8 and Miller 9 ?
A. These are Macintosh PowerBooks of original vintage.

Miller 8 is a PowerBook 3400 c and Miller 9 is a Power Book 1400 cs .
Q. Do you happen to know where these PowerBooks came
Q. Did you have any role personally in helping to create Internet Addresses Detectors as part of MAC OS 8?
A. Yes.
Q. What was your role in that process?
A. I had written a number of the action scripts and some of the detectors that were ultimately in the shipping product. I had also been working in a project management capability along with people in the product group.
Q. I notice -- if you look at Page 2 of this press release, do you see that there's -- it says, "IAD detectors and actions include," and then there is a bullet point list?
A. Yes.
Q. The first bullet point says, "E-mail," quote, "Send an e-mail message to the selected address using America Online, Claris Emailer, Cyberdog, Qualcomm's Eudora, Microsoft Internet Explorer, Netscape Navigator or Internet Config default."

Do you see that?
A. Yes.
Q. So one of things that the IAD in OS 8 could do is detect an e-mail address and then send an e-mail using that address; is that right?
A. Yes.
Q. This then says, quote, "The address may also be added

\section*{from?}
A. I believe I found and purchased them.
Q. I believe you also testified in response to Google's attorney's questions that there are certain software loaded on each of these PowerBook devices.

Did I get that right?
A. Yes.
Q. Do you know where that software came from?
A. I had copies of that -- both the Apple system software and some of the applications just in my personal records.
Q. Let me ask a more specific question.

Who loaded the software that you testified about earlier on to the PowerBook devices, Miller 8 and Miller 9?
A. I did.
Q. Do you recall when you did that?
A. Sometime in probably the past five years.

MR. UNIKEL: That's all of the testimony, Your Honor.

THE COURT: All right. Thank you very much. Ladies and gentlemen of the jury, it is exactly 4:29 p.m. It's time to recess. For the evening because I understand that at least one of you needs to get out of here exactly at \(4: 30\). So we are going to recess.

We will be resuming on Monday morning. We've lost a little bit of time dealing with certain of the legal matters that the attorneys and I had to deal with, so I would request that you are here and ready to finish the last day of trial, which we hope will be Monday, at 8:30 on the Monday morning. That will enable us to get through the evidence as soon as possible.

It's my great hope that we don't have to keep you into Tuesday to present evidence. But, of course, even if we finish Monday, your deliberations could take you into Tuesday. So you should expect that being here Tuesday is a possibility as well.

Okay. Remember, don't talk about the case. Don't try to do any research on the case. And have a great weekend.
(The jury exits the courtroom at 4:30 p.m.) THE COURT: Please have a seat

I thought, Counsel, we'd be able to make up a little time tonight. We do have a juror that indicated to my courtroom deputy, as I stated, that they have a child care issue and needed to leave exactly at 4:30. So we need to recess for this evening pursuant to the schedule, like I gave the jurors at the beginning of the case.

Is there anything we need to address tonight before we reconvene tomorrow at \(8: 30\) ?

CERTIFICATE OF COURT REPORTER

I hereby certify that the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.

\author{
/s/ Bonnie R. Archer Bonnie R. Archer \\ Official Court Reporter \\ U.S. District Court
}

MR. UNIKEL: I am happy to report, no, Your

\section*{Honor.}

THE COURT: All right.
MS. SRINIVASAN: Not for Arendi.
THE COURT: Okay. And we can let the record
reflect that the expression on my face suggested to
counsel that there should not be anything we needed to address tonight before we reconvene tomorrow morning.

So everyone, we'll see you tonight. We'll
expect to get the updated version of the joint proposed
jury instructions and the competing versions of the
verdict forms. We'll take up what we can take up tomorrow and get as far as we can get. All right?

We'll be in recess.
(The proceedings concluded at 4:31 p.m.)

Case 1:13-cV-00919-JLBY MR. KAMBER: [8] 904/13 910/15 929/20 930/18 937/18 993/9 994/11 999/22
BY MR. LAHAD: [29] 797/17 798/1 799/11 805/10 806/16 811/25 813/24 814/5 821/3 822/13 828/13 869/9 948/12 948/21 953/1 953/16 962/16 965/7 965/21 977/3 981/7 985/4 985/21 986/25 988/1 989/16 990/7 990/10 991/18 BY MR. UNIKEL: [9] 778/11 784/16 787/8 788/5 788/18 789/4 790/17 830/12 1020/24 MR. ARD: [3] 868/9 868/18 868/25
MR. CASANOVA: [2] 1019/8 1039/18
MR. DIEHL: [1] 824/17
MR. KAMBER: [11] 903/22
904/3 910/9 929/16 930/16
932/2 937/17 993/4 994/9 996/3 996/6
MR. LAHAD: [49] 797/13
797/24 805/8 806/10 806/14
811/23 812/20 812/23 813/4 813/17 820/25 822/11 824/3 824/9 825/3 825/8 825/14 826/9 827/6 828/1 828/5 828/12 828/19 829/15 910/13 937/6 937/8 948/8 948/10 948/19 952/24 953/14 962/14 965/5 965/19 976/25 981/5 985/2 985/19 986/23 987/25 989/14 990/3 990/6 990/9 991/16 992/25 998/24 999/3 MR. UNIKEL: [65] 772/15 773/12 773/22 773/24 774/18 774/21 775/4 775/11 775/23 776/2 776/13 776/20 776/25 777/4 777/10 777/12 777/16 777/24 784/14 787/7 788/4 788/16 789/2 790/15 799/6 806/7 812/21 813/5 813/18 824/13 825/18 826/15 827/12 827/22 827/25 828/4 828/22 829/3 829/11 829/19 830/9 868/11 868/21 903/17 903/21 932/16 933/8 933/14 934/5 935/6 936/13 936/18 936/21 936/25 937/4 937/7 996/9 996/16 997/3 997/15 997/22 998/13 999/19 1058/19 1060/1
MS. SRINIVASAN: [15] 772/2 772/25 773/9 774/11 775/1 775/6 776/6 776/21 776/24 777/9 932/21 997/17 997/24 998/9 1060/4
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THE COURT: [117] 770/6 772/10 772/20 773/8 773/11 773/20 773/23 774/6 774/12 774/20 774/24 775/2 775/5 775/7 775/19 776/1 776/5 776/10 776/16 776/22 777/1 777/6 777/11 777/14 777/17

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\section*{EXHIBIT D}

of law right now on any issue pertaining to damages. What I'm thinking about, though, is that we've got this issue that it seemed to me that both sides are agreeing that Arendi's damages number with respect to the Chrome downloads is not correct. I think everybody agrees about that.

And so I don't think that's a basis to say that Arendi can't get any damages for the Chrome downloads. The statute says that the plaintiff is entitled to a reasonable royalty. And there's evidence that there were some downloads that would be infringing. Some portion of those would infringe. I think it's reasonable to infer that some of the downloads accused operating system versions. So I think there's sufficient evidence to go to the jury on damages.

But I think there's also no dispute that are some downloads in there that are not infringing. So I guess the question for you all is how should we deal with this, if at all.

Let's hear from Arendi. Do you disagree with anything that I've said?

MS. SRINIVASAN: Yeah. I don't think there is an agreement as to the Chrome issue. And I'm not -- I mean, we don't we do contest that issue that there's been -- there's not agreement that the Chrome downloads
date, doesn't mean that even as of that date, apps would be downloaded to a device that would have the correct operating system.

So we have a situation where their expert acknowledged that there was a problem with the correlation. And we now have evidence that there is this rollout time, which makes it very difficult.

As to the question as to how to deal with it, I agree it's a difficult question. At a minimum we, I think what we would suggest is that there needs to be some sort of indication to the jury that Mr. Weinstein's numbers as to that are not a proper basis for consideration for the damages.

The only other thing I will add, Your Honor, and I mentioned this yesterday in open court, is that same issue does impact all the different apps. Because Mr. Weinstein had assumed on the stand that the numbers he had were only for Android 8 or 9. We know for a fact that's not true. Those numbers that we provided were for just all daily downloads and installs regardless of operating system. And because Linkify had previously been in the case, that meant there was no correlation of downloads of any apps to any operating systems. And Smart Text Selection on all the apps, which is the only accused functionality, could only have started working as of
overstate or don't represent or include noninfringing installation. And so, I mean, it may be best for us to respond to the way it's been posed in the JMOL. But I think that it certainly is an issue that should go to the jury. And we obviously are going to have the opportunity to cross-examine Google's expert.

But it was not our position that the Chrome downloads include non-infringing installations such that there's some agreement on that position between the parties.

THE COURT: All right. Well, maybe it might be helpful to pull up some of the trial transcripts.

Let me hear from Google on this.
MR. UNIKEL: Your Honor, first, on the Chrome issue, there may not be agreement between the parties, but there was agreement by the expert on the stand where he said that he didn't think that the Chrome numbers necessarily were accurate because there was this installation issue and he did not have any way to correlate the downloads to the operating systems. And we have the testimony now of multiple witnesses that, not only were there -- was there no possible -- that because of the delay in the rollout of particular operating systems, which could last for three to six months, that just because the operating system released on a particular 1068

O-MR1, and then only if the carriers and the OEMs, for example, had pushed it out to their devices, which we know took three to six months.

So at the end of the day, we're left with an opinion which is fundamentally based on a number of downloads by day, but we have no way to figure out for the infringing period which of those downloads went to devices with Android 7, Android 6, Android 8, Android 8 MR1, or then later 9. And that's really the challenge of trying to parse through these opinions from Dr. Weinstein.

THE COURT: All right. Everybody have a seat for just a second. Let me just pull up a trial transcript.

MS. SRINIVASAN: I would like to respond to the additional argument counsel has made characterizing the evidence in a way that there's no record of: You can raise questions about what was your basis for relying on something that Google provided you that was subject to a stipulation of the parties. You can raise questions about it, but there's not been any witness, and Google has concluded its testimony of its fact witnesses who have come out and said, Well, this reflects \(X\) or \(Y\), the downloads that we provided to Arendi.

So now what counsel asserted are not facts and evidence in the record, and there's not going to be

Filed 08 \(21 / 23\) Page 522 of 775 PageID \#: 61101 says, "Well, this list actually included the x or Y." Nobody has been able to attest to that on the Google side. It's been an inference that's raised by questioning. It is not a fact issue in the record. Counsel asking questions that says, "How do you know this includes other Android operating systems?" or "Do you know if it might?" does not constitute evidence. And the record is clear that Google provided the evidence that was relied on by both experts, that they're entitled to rely on reasonable estimates provided by the defendant who has exclusive control over this information.

But I want to be very clear, asking questions about the bases for an expert relying on something does not make it as though there is factual evidence to show that those installation numbers are over-inclusive. It's been raised as a question, but where is the representation made by Google ever? There is no trial evidence of that, even when their own fact witnesses could have so testified.

THE COURT: Okay. I understand your argument. Everybody have a seat. I don't want to talk about the 12 apps. I want to talk about Google Chrome right now. And I'm pull up the trial transcript, and I'm looking at it now from Mr. Weinstein.

So -- what basis did Dr. Weinstein have to
assert that the Google Chrome downloads only included downloads under the Android 8 or 9 operating system?

MS. SRINIVASAN: He's relying on the
installation data that's provided by Google in response to the discovery request in this case, in addition to the stipulation that Google also provided as to representative products in this case to avoid having to do discovery across many different products, the stipulation they offered. So taking those together. And the installation data that comes from Google, that is his basis for using and arriving at his installation number, just as their expert is going to opine the same way.
the Court: Okay. Did he rely on the
stipulation as part of his testimony? Is that in his expert report.

MS. SRINIVASAN: I believe, Your Honor, that it's in his expert report, but I'll confirm that.
the court: Okay. And I guess, do you dispute at the time he rendered this opinion, that there were other accused functionalities that had to do with Google Chrome that were at issue in the case?

MS. SRINIVASAN: We don't dispute that, but as to the downloads that were provided and the issues -- the issues that Google are raising now about there being some kind of apportionment issue or something, that is not the
so -- by date. And they also wanted to know daily downloads or annual installs.

And they didn't care about correlating which apps went with which operating systems on devices, because at all times up until summary judgment and then up until Friday night, there were other accused functionalities that it didn't really matter. There was never a question posed to us: Do you have data that could say which of the downloads went to which devices with versions of Android?

And that's the part, now, given the new theory that they're going to trial on, that is required, because Smart Text Selection, as we all know, requires a certain version of the operating system in 8 and/or 9 . And if you don't have a correlation that these apps got put onto a device with one of those, there can't be infringement. And during the infringement period, we know there's a huge number of devices. As we heard from one of the witnesses, it may be overcounting by as much as 95 percent given the time lag that it takes to push out these operating systems.

They could have asked. They didn't ask. And maybe they didn't think they needed to ask because they had these other functionalities at the time.

THE COURT: You're talking about Chrome and other stuff, though, right now, too, right?
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MR. UNIKEL: Well, it's the same for all, but it's definitely the same for Chrome.
THE COURT: Okay. So putting aside Chrome damage for a second, the other accused functionalities were Linkify, Smart Linkify, Content Detectors, and Contextual Search Quick Actions; is that right?
MR. UNIKEL: Yes.
THE COURT: All of these other functionalities
have to do with Chrome?
MR. UNIKEL: Linkify did not work on Chrome;
Linkify worked on the other functionalities.
THE COURT: Okay. So that's out. Smart
Linkify -- and those have only been out for a year?
MR. UNIKEL: Correct. We have known they've been out a year.
THE COURT: So until this weekend, we thought Content Detectors and Contextual Search Quick Actions were going to get tried?
MR. UNIKEL: Correct, until Friday.
THE COURT: $C D$ and $Q A$, which apps do those work
on?
MR. UNIKEL: They only work on Chrome.
THE COURT: Chrome. Okay.
MR. UNIKEL: Correct.
THE COURT: All right. Have a seat, please.

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MS. SRINIVASAN: For the devices.
THE COURT: Any thoughts on that, or do you want to take time to think about it?

MS. SRINIVASAN: I would like a little time to think about it, and I understand where the court is focusing its attention. And I'll be -- not respond about the non-Chrome piece of it, but that's always been true. The issue --
the court: I understand. I get it. Yep.
MS. SRINIVASAN: But I think it would be
helpful if we had a little opportunity to go back and look and try to come up with a way to address the Court's question. But I think, in principle, we don't -- sounds like one option would be to put in the reasonable royalty for the applications.

THE COURT: Okay. It would be, you know, only if the jury found that there was infringement, obviously.

Mr. Unikel, any ideas about that?
MR. UNIKEL: I think, well, candidly, I don't mean to bring up another issue but one that concerns me about that is we also have this four times multiplier problem. And that is supported only by the conversations with Mr. Hedloy, which seems inappropriate as a basis for expert opinion.

My concern is if we ask them for the royalty

So here's what I'm wondering, I don't want to end up in a situation where this case goes up on appeal and the Federal Circuit says that we've got this damages number and there's not evidence that all of the asserted Chrome downloads are infringing, and, notwithstanding the position that the District Court judge was put in, there should be a new trial on damages.

And so what do you say we put something in the verdict form about if there should be a reasonable
royalty, what it should be, and so we've got a number to try to avoid any downstream issues?

You don't have to give me an answer on that right now. But that's something that I'm thinking about. And by the way, I haven't looked at the verdict forms you guys all filed. Maybe that has it in there.

MS. SRINIVASAN: You mean a rate for --
the court: Yes.
MS. SRINIVASAN: -- so they would have the per app rate and the per device rate in the verdict form?
the court: Well, I think you've only given them one rate, right?

MS. SRINIVASAN: Yes. For the apps, yes. For the apps, yes. There's a different rate for the Pixel devices themselves.

> THE COURT: Okay.
rate and they come up with a royalty rate that includes four times multiplier in it that now that's going to create a question even as to the rate itself as to the extent to which they included the four times multiplier, and how do we sort of deal with that issue if that itself, then, has to become an issue for appeal.

Because as of right now, as you know, we've suggested that that's not a proper basis that has any actual evidentiary support.
the court: Right. It seems like -- please, have a seat. It seems like we ought to be able to think of a way to ensure that we at least know what number the jury is giving us. Maybe you disagree with the four times multiplier. Judge Stark's already ruled that it's appropriate, so I'm not inclined to revisit that. But if there's a way we can make sure that we instruct the jury on -- about what to fill in that blank, so at least we know what we're getting from them, right?
That's sort of what I'm thinking, so why doesn't everybody go back and think about that. And I think you know why I'm asking all of this. Because I don't think we can grant JMOL with no damages on Chrome. I think there's evidence of that. The Federal Circuit has been clear you get to have a royalty if there's evidence of infringement. The Federal Circuit has been clear that
you don't get to have a damages number if it's not tied to accused infringing devices. So what is one to do with this? And this is one solution that I can think of.

MS. SRINIVASAN: All right. Thank you, Your Honor. We'll take that back and discuss some options to address the Court's concern.

THE COURT: All right.
MR. UNIKEL: May \(I\) ask one question on that
particular thing as we consider it?
the court: Yes.
MR. UNIKEL: Would it be possible if we did the royalty rate questions that would say what would be the royalty rate should a multiplier be applied to the royalty rate that is.

THE COURT: That's a possibility. Can think off the top of my head why that wouldn't be a great idea why don't you all think about it and talk with each other about that.

MS. SRINIVASAN: Yeah. I mean we obviously don't think -- we understand the court is trying to address what might be disputed factual issue, but I don't think it's a place to insert a myriad number of issues over legal questions, at least one of which was resolved on Daubert, and I understand they can reargue it. But what I don't want is a verdict form that's so complex that not serve us either.

THE COURT: Right. Understood. I think we all are on the same page about the issue is here at least, even though we might disagree as to how it should be resolved.

All right. So we can start going through the jury instructions now. I can tell you this, we printed them out before we took the bench, but we haven't -- I wanted to at least lay eyes on the judgment as a matter of law motion, so we haven't looked at them in great detail. So I think we're just going to take them one by one so everybody can -- it's going to be a slog, so everybody can dig in. There's no need to stand when addressing the Court. Let's work on these.

So I've got them printed out in front of me. I'm looking at the final jury instructions filed by the parties at seven this morning. So it looks like we're in agreement on \(1.1,1.2,1.3,1.4,1.5,1.6,1.7,1.8,1.9\), 1.10, and then we've got stipulated facts.

MR. UNIKEL: We have opposed this altogether, Your Honor.

THE COURT: Yeah. So let's hear from Arendi on this. Normally, we wouldn't have stipulated facts in the jury instructions.

\section*{review this.}

I see. So the only dispute is the second paragraph. And Arendi wants to include an instruction about indirect infringement, and Google only wants an instruction on direct infringement.

And so I take it this has to do with Google's pending judgment as a matter of law of no indirect infringement?

MR. LING: Vincent ling. That's right, Your Honor.
the court: You can have a seat, sir. It's going to be a long morning.

MR. LING: That's right, Your Honor. This is our judgment as a matter of law motion that we do not think there's substantial evidence to support the indirect infringement claims. There's no record evidence. We're frankly at a loss as to what their theory could be as to indirect infringement. We do not think it should go to the jury.

THE COURT: Counsel?
MR. LAHAD: Yes, Your Honor.
THE COURT: Please have a seat.
MR. LAHAD: Sorry. It's a reflex. I
apologize.
We included the indirect infringement claims because there was some chatter before trial about some potential non-infringement argument involving the computer readable medium claim or portion of the claim. I did not hear any kind of defense to infringement based on the fact that this is a CRM claim. If Google will represent that they're not asserting such non-infringement positions -and I didn't hear it from Dr. Rinard yesterday, then I think we can reach agreement, we can withdraw our indirect infringement claim mooting the JMOL, also mooting this dispute about indirect infringement in the jury instructions.

THE COURT: Counsel?
MR. UNIKEL: Your Honor, if I may. We have mentioned in the JMOL our defense based on the failure to prove the computer readable medium claim. The problem is this, what they have to show is that users actually downloaded this to create -- to cause infringement and used it to cause infringement. What they've shown -- what they've said constantly through the case is Google did this, Google used, Google sold. There's been no identification of third party infringement of -- by any specific users at any specific times. And then that has to be tied to inducement where we would have to have affirmative acts that we take to try and cause those infringing acts by instruction to use it in an infringing

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matter, or on contributory, that there would be, for example, there wouldn't be substantial non-infringing uses like cut, copy, paste in a tool bar.

So the problem is, their case is closed. They have not put on any evidence, let alone substantial evidence, of any infringement by any third parties, and they haven't tied in any way that infringement to potential active inducement or contributory. And so to introduce this to the jury now in the instructions to say, now there's this inducement claim by somebody else that you haven't heard about, I think is going to create immense confusion on the party of the jury.
the court: So I have two questions. The first one is, it's Google's position that there's no evidence that a user actually used these apps in the way that they were designed to be used?

MR. UNIKEL: No. That -- we believe that that's the case, Your Honor. The issue is that, in order to have the inducement, in order to make out an inducement claim, they would have to first identify who is the category. So if it's specific users at specific time period, we need to know what that was. And then you have to tie the users at a specific time period to some sort of actions on our part that would have actually potentially induced them to do something.
agree to something. It sounds like the answer to that is, no.

MR. UNIKEL: I believe --
THE COURT: I'm is or sure I understand exactly what they're asking for. Do you?

MR. UNIKEL: I'm not sure. I'm happy to talk with them about that. But since that's the first I've heard of this issue, I'm happy to explore that with the other side and see if we can't come to resolution.
the court: Okay. Why don't you all talk about this and see if you can get it worked out. Because if you all are not going to argue at closing argument that Google is inducing people to infringe, you're not going to say that, I don't completely understand why we have to have that instruction in there.

Does that make sense?
MR. LAHAD: Yes, Your Honor.
THE COURT: All right.
So that's the only dispute on 1.13 .
Moving onto 2.1 , there is agreement on that.
2.2, we've got a dispute about the summary of the issues. Let me just take a minute and read that.

So you all agree on Number 1 it looks like. So looks like the first dispute has to do with the order in which you ask about invalidity and willfulness. And I --
that's right. I agree with Google that we should ask about invalidity before we ask about willfulness.

And then with respect to this indirect infringement thing, I think we can meet and confer on that, like we said, on the last one. And that's Arendi's Number 3 and Number 4 paragraph and 5 .

And then what's the difference between Arendi's 5 and Google's 4?

MR. LING: Your Honor, our four is contingent. There's a phrase in there that we would like to pose to the jury that says: "If you decide that any claim of the ' 843 patent has been infringed by Google and is not invalid, then" -- and so that's just a point of clarity for the jury.

THE COURT: Okay. Do you disagree with that statement of the law?

MS. SRINIVASAN: Well, I don't disagree with that, but I'm not sure it's necessary given the way the verdict form is going to be set up. They're not going to reach that question in the absence of a finding of infringement and determining that the patent is valid or not invalid. So I don't know for purposes of the summary of the issue if that's really necessary. I think it's a little bit convoluted that way. I mean, it is how the verdict form is going to read.
3.2, got a discussion about claims, and then there's a dispute at the end about some additional language. So let me look at that now.

Counsel, for Arendi, do you disagree with
Google's statement of the law on Page 24?
MS. SRINIVASAN: We don't disagree with it, but the model instruction, of course, just doesn't add all of this other detail about how we are trying to direct the jury on what constitutes plain and ordinary meaning, which is -- comes from case law, but the model instruction from the model patent jury instructions just says that, "If there is not an affirmative construction from the Court, they should apply the plain and ordinary meaning in the field for the patent."

And the last sentence about the meaning of the words that "the patent claims" must be the same, when deciding both issues of infringement and validity, it introduces a lot of issues that have not been before the jury about claim construction. So I'm not -- again, there's a reason the model instruction doesn't include all of that. Not that it's a wrong statement of the law, but the jurors certainly haven't been instructed as how to claim construction applies in the first instance like that.

THE COURT: Well, I haven't heard their
to go with Google's proposal because I do think it's more accurate and it's longer, but I think it's less confusing.

MR. LING: Your Honor, may I add one thing? I just want to note for the record that on issue 4, where we talk about damages, we do on the verdict form break out a couple of additional questions that are factual
disputes -- or sorry. Let me scratch that -- that are potential disputes that could go to the jury, and so when we phrase these issues, we reframe them at a high level. And so we would be opening, Your Honor, to including those more specific issues that are on the verdict form and propose. I just wanted to clarify, these were not meant to necessarily match up one to one.

THE COURT: All right. But you're currently okay with what you proposed for Number 4?

MR. LING: Yes, Your Honor.
THE COURT: All right. I think that addresses all of the issues in 2.2 ; is that right?

MR. UNIKEL: Yes, Your Honor.
MR. LING: Yes.
THE COURT: Arendi, is there any issue with
2.2?

MS. SRINIVASAN: Oh, yes, Your Honor.
THE COURT: 3.1, we have agreement on.
invalidity case yet. But given what's occurred so far in the trial, I can imagine the types of things that might come up. And it seems like this might be something that the jury has a question about. And so given that there's no argument by Arendi that this is an incorrect statement of the law, I'm inclined to go with Google's proposal.

That said, I'd be open to an application from Google -- or from Arendi at the close of the evidence if you think that this is going to be confusing in some way. At this point, I'm not thinking it is. And I actually think it might be an important thing that we may need to tell them. So we're going to go with Google's proposal.

MR. LING: Before we move on, Your Honor.
There are a couple of housekeeping matters on this one as well in addition to that.

There's another difference between our proposals, which is where we say, "plain and ordinary, meaning as understood by one of ordinary skill in the field of technology of the ' 843 patent at the time of the alleged invention." That phrase is missing from Arendi's proposal, so we would like to have that phrase included to help the jury understand what plain and ordinary meaning.

THE COURT: Yeah. Didn't I say I was going to go with your proposal?

MR. LING: Sorry.
    MR. LING: And then there's one -- it's got a
    typo on Page 22. Since the method claims have dropped
    out, I think the word "process" can be dropped in the
    third paragraph.
    THE COURT: Where?
    MR. LING: Starts: "When a thing such as a
    product or a process meets all the requirements."
    the court: And where's the typo.
    MR. LING: Just the words "or a process"
because the method claims are no longer at issue.
    THE COURT: Oh, okay.
    Any dispute to get rid of "or a process"?
    MS. SRINIVASAN: No, Your Honor.
    THE COURT: Okay. We'll get rid of that.
    MR. LING: Thank you.
    MS. SRINIVASAN: And, Your Honor, we'll check
on the phrasing "one of ordinary skill in the field of the
technology of the ' 843 patent at the time of the alleged
invention." I am not sure that the term "alleged
invention" is used elsewhere in the construction, so we'll
check the cases on that.
    The language as to "plain and ordinary meaning
as understood by one of ordinary skill in the field of the
technology of the '843 patent," I don't -- I'm sure it's

MR. LING: And then there's one -- it's got a typo on Page 22. Since the method claims have dropped third paragraph.

THE COURT: Where?
MR. LING: Starts: "When a thing such as a
product or a process meets all the requirements."
the court: And where's the typo.
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because the method claims are no longer at issue.
THE COURT: Oh, okay.
Any dispute to get rid of "or a process"?
MS. SRINIVASAN: No, Your Honor.
the Court: Okay. We'll get rid of that.
MR. LING: Thank you.
MS. SRINIVASAN: And, Your Honor, we'll check on the phrasing "one of ordinary skill in the field of the technology of the ' 843 patent at the time of the alleged invention." I am not sure that the term "alleged invention" is used elsewhere in the construction, so we'll check the cases on that.

The language as to "plain and ordinary meaning as understood by one of ordinary skill in the field of the technology of the '843 patent," I don't -- I'm sure it's
instructing them if they are unable to find infringement on a dependent claim because they didn't find it for an independent claim, does not require or called for. They've already been instructed that they have to find infringement on a claim-by-claim basis.

This additional language Google has added, the last two paragraphs there, is not found in any model instruction, and is not proper given that they've already been instructed what their role is to find infringement claim-by-claim under the appropriate standard, as opposed to telling them all the reasons they may not be able to find infringement of one claim over another or of a dependent claim depending on what they've reached on the independent claim. I think it's very likely to confuse jurors. And of course it's not -- doesn't come from any standard jury instruction to do that.

THE COURT: But you agree that they can't find infringement of Claim 30 if they don't find infringement of --

MS. SRINIVASAN: Of course, but they're already being asked to do that. And to tell them that in this case you can't find infringement of one claim over the other or that you can have infringement of one claim but no infringement of another is unnecessary and confusing to the jury. They already have a verdict form that requires

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there. That doesn't seem objectionable. But I'm not sure about the characterization of it as an alleged invention.

THE COURT: Okay. Well, for now we'll include it, and then if you -- once you've had a chance to do the legal research on that, if you want to make another application, we'll take that under advisement.
okay. I think that takes care of 3.2.
Let's turn to 3.3. Give me a second to review.
All right. Well, skimming this over, it
doesn't seem like there's any real dispute about the law of infringement. I see that there's an issue here about process that we just discussed with respect to the last instruction that we can get rid of the reference to process. And whichever one we pick.

MR. LING: Your Honor --
MS. SRINIVASAN: Yes, Your Honor. I think, as to the instruction that -- on the Page 26 , the additional instruction said, "You can have infringement of one claim but not another. If you find an independent claim does not infringe, then you can't find infringement of a dependent claim." I don't -- I mean, there's no citation from where that comes from, and I don't think that's proper.

They're obviously going to be asked on the verdict form to find infringement of each claim. And
them to say on a claim-by-claim basis whether they found infringement.

THE COURT: Yeah. Yeah. So I just disagree. I think, actually, we should give this instruction because the verdict form doesn't say -- I mean, if the verdict form that you proposed sort of said you can only find verdict of 30 if you find 23, but it doesn't say that. I think this is a correct -- do you disagree that this is a correct statement of the law?

MS. SRINIVASAN: I mean, it's not cited to anything.

THE COURT: Is it a correct statement of the law?

MS. SRINIVASAN: Sure. You can't find infringement of a dependent claim, but I don't think we should be having instructions that from, frankly, not rooted in any case law in the case law or in the model instructions that are meant to, I think, to, I mean, basically, if you look at the paragraph, they are being instructed on additional -- you must still separately decide this. You must still do this. Where does that language come from?

And I don't think we should be inserting directions to jurors that aren't rooted in at least the model instructions or something that we can point to as

Filed proper because the risk is that the language that's in here now might tip the way they view their job on determining infringement, which they've already been instructed on.

THE COURT: Where have they been instructed that they have to find all of the elements of 23 to find infringement of 30 ?

MS. SRINIVASAN: They've been instructed that they need to -- infringement is assessed on a claim-by-claim basis. And that you see at the top of 3.3: "There may be infringement of one claim, but no infringement of another."

THE COURT: All right. Counsel.
MR. UNIKEL: Yeah. First, I apologize that we didn't put the cite in here given the speed that we were doing this last night. This is from model instructions, and this is from, in particular, the FCBA Model Patent Jury Instructions. It's 3.1a.

More importantly, however, the point of the instructions is to make things clearer for the jury as to what their roles are, what kinds of questions they have to answer. The verdict form just asks them to look at them independently, but it doesn't tell them how to relate the dependent claims to the independent claim. This will, I think, provide clarity, not confusion. It's an accurate

\section*{meet and confer about.}

And then the rest of it kind of looks the same to me. So it sounds like we've got to be able to work the rest of this out given what I've said so far. And so I'll just await from you all how it comes out with respect to the contributory and induced infringement.

All right. Let's turn to -- I'm sorry. So that was 3.3 and 3.4 that we talked about. Oh, I see.

MR. UNIKEL: If I may, Your Honor, part of the issue was if inducement and contributory was going to be in the case, then that might affect how you instructed.

THE COURT: Right.
MR. UNIKEL: And then sort of infects the next two to three...

THE COURT: Right. Okay. So let me just review what goes on here in the next couple of pages. And then we've got -- flipping forward, you've got an agreement by Google that you're prepared to agree to the bulk of the proposed language subject to highlighted revisions. This sounds like something you all ought to be able to meet and confer about.

I don't know that it makes sense to spend time any more time on this today we don't know what you all are going to agree on.

MS. SRINIVASAN: I agree, Your Honor. And instruction to give because it will help the jury in their task.

MR. LAHAD: All this is covered at the top of
Page 23 under claim construction, Your Honor, in great detail, and it's actually a lot clearer. In Section 3.2, bottom of Page 22, talks about an independent claim, and then top of Page 23 talks about a dependent claim with reference to Claim 30 of the 843 patent.

So not only is this -- well, it's redundant at the very least. It's an additional paragraph but...

THE COURT: I understand your position. So I see that on Page 23. I think it's important to give this additional instruction. Why don't we take out the language "there is one exception," and we'll just say, "If you find that any independent claim is not infringing, there cannot be infringement of any dependent claim," and then go on from there.

So that's one issue. So we're going to include that. Arendi's got an extra line at the top that says, "I will now instruct you as to the rules you must follow when deciding whether Plaintiff Arendi has proved that Google infringed the ' 843 patent." That's okay to include.

Then we've got this issue about direct
inducement and contributory, which you all are going to
it's -- until we get to 3.8 , they're all tied up in this open question we have as to the inducement and indirect infringement argument.

THE COURT: Okay. So let's skip to 3.8, then.
Willfulness. I'm reading that now.
Okay. So Arendi's request that the jury be instructed about the IPR is going to be denied. I don't need to hear argument on that.

MS. SRINIVASAN: And, Your Honor, that was responsive to the proposed additional language that Google has offered on subjective knowledge, which is, I guess, they've cited to some case, but I think that if they're going to have an instruction that puts front and center some question about subjective knowledge beyond what's in the standard instruction, then that is the reason that we included that as an alternative additional proposal.

THE COURT: Okay. Do you disagree with their statement of the law. It says here that you just got this language for the first time this morning, so maybe you haven't had time to take a look at it yet?

MS. SRINIVASAN: Yeah. I don't -- well, one, I mean, the language as to what you need to show willfulness we think is clear from the instruction. And now we do object to their adding additional citations of case law specifically calling out the issue of their subjective
            knowledge. It's already part of the instruction, and I think if that's going to happen, and what they're trying to highlight, and certainly by their JMOL, they want to focus on their lack of notice as to a specific functionality. And we, you know, frankly, think that that's objectionable for them to do that in the light of their objection to us being able to put on evidence about the fact that they had knowledge and engaged in the effort to invalidate the patent from 2013 to 2016, right before this product's functionality was released.

So we don't think it's appropriate to add it. The language is already there, the factors are already there. For them to pull additional case law language because they want to focus on the issue of their subjective intent beyond what's already in the instruction, we don't think is appropriate.

MR. UNIKEL: Your Honor, may \(I\) be heard
quickly?
THE COURT: Let me just finish reading this.
MR. UNIKEL: Sorry.
THE COURT: Sounds like -- so do we have
multiple disputes here? So we've got Google's proposed additional language, and then we've got Arendi's additional proposal. So I'm not clear, is Google --

MS. SRINIVASAN: The Google proposal is
stick with the model instruction.
But if they're going to start introducing things from the case law to focus on this issue and to argue what I didn't really think was going to be argued, but I think we would want a counter-instruction to address that.

THE COURT: Counsel?
MR. UNIKEL: Yeah. First, we sent these at
11:30 last night. Second of all, this language was in our original instruction at all times. This is not new language. The only thing we tried to do to compromise is to identify by putting it into their instruction where we thought this particular thing was important and we should be -- we could accept most of theirs, but we needed to isolate this.

THE COURT: It sounds like we haven't reached an impasse yet on this instruction. Is that fair to say?

MR. UNIKEL: I think I -- I'll say the one thing that is important for everybody to understand is this says about "the actions that constituted infringement." We didn't receive our infringement notice from them until after the patent had expired. On Smart Text Selection.

They're trying to now bring into issues about what did we think about validity from the IPR proceedings.

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primarily in response to this additional language we got this morning that Google proposed. And we have made an additional proposal that's really in response to this.

If that's going to come in, they're going to be
able to put in some language that tries to emphasize their subjective intent, which is already covered in the instruction, then we don't think it's appropriate in the absence of the jury knowing that they had knowledge and were aware leading up to the release of their product.

And actively, we're trying to engage in the validation of the patent. We don't have it written that way. But, again, I think the instruction, the model instruction already gives the jury guidance on what the requirements are. They're adding additional language from the case law. We got it this morning. We can add additional counter-language from the case law. I don't think that's productive to do. But they want to call out their own subjective knowledge by adding an additional paragraph that's not in the model instructions.

And you can also tell from the briefing we got last night that their argument, the focus is going to be on their lack of notice and how that impacted their
subjective intent. And so I think that, given where we are and where we landed on certain issues with represent to our ability to introduce evidence of the IPR, we should 1100 But validity questions, we've already resolved that in the case. This is focused on what would we have believed as to -- or known as to their allegations of infringement. And because we never received any notice from them of possible infringement by Smart Text Selection until after the patent had expired, we had no reason to believe that we were infringing.

That is something we plan to say as part of our willfulness defense, but that's not because of -- the invalidity issue is different. The question of did we ever think that Smart Text Selection was actually infringing is related to when did they ever tell us that they thought Smart Text Selection might be implicated by the patent.

They didn't send us a letter or anything else even during the stay period after it was launched, and we're pointing out that we never had any reason to believe that Smart Text Selection was implicated by the patent during the patent term.

MS. SRINIVASAN: Your Honor, if I may.
THE COURT: Yes.
MS. SRINIVASAN: We expressly discussed this on Monday morning when we had argument about it. If they're going to use the stay as a source, a shield to say, we didn't know because there was a pending stay and we didn't

THE COURT: That's not what I'm hearing,
actually, at all. I'm hearing they're going to say that, regardless of whether there was a stay.

MS. SRINIVASAN: But their reason that there were not amended contentions or an amended complaint is that there was a stay in the case. If they're going to say, well, we didn't get anything until 2019, this is expressly the issue we discussed on Monday morning.

They are going to say, well, we didn't know because she didn't serve us with contentions until after the expiry of the patent. That's the argument they want to make. And what we discussed is that that was one reason to have evidence of the IPRs come in because that is the -- that's what precipitated a stay in this case. But we certainly discussed, at a minimum, if they're going to raise that, that the jury should know the case was stayed. And that -- as I understood our discussion on Monday morning, they weren't going to make that argument. The reason they got amended contentions in 2019 was because there was a stay of this litigation and there was a stay of this litigation because they chose to initiate inter partes review proceedings.

THE COURT: All right. So I want you to meet and confer about this and we'll get competing proposals.

MR. UNIKEL: I think the two issues for us, Your Honor, if I may isolate that --
the court: Yes.
MR. UNIKEL: -- is, Number 1, providing the
jury some context about the fact that they have ultimate responsibility for deciding whether the claims are valid or invalid so they understand what their actual authority is. And second, the last sentence, second to last sentence, I guess, of our proposal is the fact that any particular reference was or was not considered by the Patent Office does not change Google's burden of proof.

MS. SRINIVASAN: Well, Your Honor, we absolutely object to an instruction that says the Patent Office sometimes issues invalid patent claims.

THE COURT: Yeah. That clause is going to come out.

MS. SRINIVASAN: And, frankly, they have already been instructed on their burden. It's an issue that they've been asked to address as jurors in this case. And this is basically telling them to disregard anything -- they are allowed to give whatever weight they want to the fact that there was patent art considered in the prosecution. They still have to meet their burden. But, I mean, this instruction asks them to basically disregard that the patent owner might have looked at any

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I've got contingent proposals based on -- well, we will leave it at that.

MS. SRINIVASAN: We can do that, Your Honor. The other thing on Page 36 is that they proposed dropping a factor as no longer being relevant as to their good-faith efforts to avoiding infringing the patent. We don't see any reason to drop a factor. There hasn't been any determination as a matter of law.

THE COURT: I understand your position on that. Why don't you all meet and confer and then just make sure if there's still a dispute, that you leave in your competing proposals and footnotes so we can go to the law and figure out what we want to do.

Okay. Let's turn to 4.1. Look at those competing proposals. So the first line is just an introductory statement that Arendi includes, so that's fine.

So we've got an issue about prior art, but then there's a later instruction about prior art. So it looks like Google wants to include the discussion of prior art in the invalidity instruction. Is that...

MR. UNIKEL: I think we can defer that to the prior art section, that particular one.
the court: All right. So we can take that out.
art in the course of prosecution of the patents.
the court: Yeah. I don't see that at all. But I do agree that that sentence that says about the Patent Office sometimes issues invalid claims, issued claims can be found invalid. I don't think that's a misstatement of the law or the circumstances, but I agree that that should come out. But I'm okay with saying, as Google proposes, the issuance of a patent by the Patent Office provides a presumption that the patent is valid. That's okay to say. I think that's important to include. And then it says, "In this case, you have the ultimate responsibility for deciding whether the claims in the patent are valid or invalid." I think that's appropriate as well, so that should be included.

And then it says "consider the claims individually." I think that's appropriate as well.

I think it's fine to say, as Arendi does, that Google has the burden of proving that the asserted claims are invalidity by clear and convincing. And we can discuss the amount of evidence again because I think we had a similar sentence for the infringement instruction, unless I'm mistaken, so I do think it's appropriate to include that here, if that's the case.

And then Arendi basically has the language about claim construction that we've already included

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earlier, so that can probably come out. So that's a Frankenstein ruling, but \(I\) think if you look at the transcript, it will all come together.

Does anyone disagree?
MS. SRINIVASAN: No, Your Honor.
MR. UNIKEL: What about that last sentence for
us, Your Honor, the fact that any particular reference was or is not considered by the Patent Office does not change Google's burden of proof?

THE COURT: Do you disagree?
MS. SRINIVASAN: I don't know why we need that
in there given what's already in the rest of the instruction, but...
the court: I don't know that it helps or hurts either side, to be honest with you, so I'm inclined to -I'm inclined to include it. I can see how you both might make use of it in your closing arguments.

MS. SRINIVASAN: Sure.
THE COURT: All right. Okay.
And then we've got person of ordinary skill in the art in the field of the asserted invention as of the time of the invention.

MR. UNIKEL: I think we're agreed on that.
the court: You are agreed on that? Okay.
Good to go. 4.2, we're good.
Google that we're going to defer the discussion of the prior art to a separate prior art instruction. And so do we have a dispute about the language in this instruction?

MR. UNIKEL: So the issue then, I guess, would
be to take that paragraph that you indicated before --
the court: Move it here?
MR. UNIKEL: -- move it here, if you would
consider that, please.
THE COURT: I'm not inclined to refer to -- or to include Google's first sentence about "During the course of this trial, Google had presented you with several prior art references." You can say that in your closing.

MR. UNIKEL: Your Honor, I think that, and now
that it's going to be put in the prior art section, I don't think that our particular paragraph here really does contradict with anything --

THE COURT: No.
MR. UNIKEL: -- proposal from Arendi. So I
think we can accept Arendi's proposal on prior art in 4.3.
the court: Okay. Great. All right.
Anticipation.
Let me read the dispute. So the paragraph that Google talks about prior art not considered by the PTO

\section*{asserted claims of the ' 843 patent."}

It's redundant of the prior sentence but framed in a more misleading and overbroad way.

THE COURT: Okay. So I'm going to take out the "specifically" paragraph. That's what you would propose?

MR. LING: We are fine with the first sentence.
THE COURT: "Google contends only that the" -Yeah. Okay. The second sentence comes out. I agree with that.

MR. LING: And the first sentence, Your Honor, if we can clarify that, "contends" in this case.

THE COURT: "Contends that the alleged" -- yes. So get rid of the "only." "Specifically, Google contends that the alleged CyberDesk system anticipates the Asserted Claims of the ' 843 patent." That's all that paragraph should say.

Does Arendi want to make an argument about that?

MS. SRINIVASAN: Yeah. I mean, it's just for clarity because there's only one. And --

THE COURT: Yeah. You can make that argument at closing. Okay. And then we've got paragraphs about anticipation. Are there actually competing proposals here?
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MR. LING: There are not.

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the court: Okay. Great.
All right. Then we have the next page, and
then it says -- whose paragraph is this at the top of 43?
MR. LING: This is Arendi's.
THE COURT: Okay. Do you agree with it?
MR. LING: We have an issue with the paragraph
just below that. Let me read the one above it, Your Honor.

Your Honor, we are okay with that paragraph.
THE COURT: You're okay with that?
MS. SRINIVASAN: Yeah. I know Your Honor
raised a question about this paragraph when we started. We are fine taking it out if the Court finds it confusing.

THE COURT: If everybody -- you are fine taking
it out?
MS. SRINIVASAN: We will take it out.
THE COURT: Now you want to take it out?
MR. LAHAD: Let's keep in.
THE COURT: Let's keep it in. All right. We
will keep it in. We've agreement to take it in.
MS. SRINIVASAN: There may be an edit. We will meet and confer with the other side.

THE COURT: All right. We're going to keep it in because the parties agree. Let me just read it again.

I am not seeing that it's plain error and if

\section*{fine.}

MR. LING: Your Honor, we've proposed language to clarify that the ultimate question of invalidity is a question of law.

THE COURT: What's the jury going to do with that?

MR. LING: It's --
THE COURT: I'm confused by that, so I don't know what the jury is going to do with it, and I went to law school.

MR. LING: Your Honor, we wanted to preserve this issue so...

THE COURT: I think the Federal Circuit will consider a question of law regardless of whether we send that question to the jury.

Do you understand that Google will have preserved this issue preserve the question of whether or not this is a question of law even if we don't have it in the jury instructions?

MS. SRINIVASAN: We do understand that. And we object to the jury being instructed.

THE COURT: Yes, so let's take that out.
And then the first sentence about "clear and convincing evidence," I think that's a correct statement of the law. Sounds like there's not much difference
everybody agrees, we will keep it in.
MR. ARD: Your Honor, we would like to meet and
confer on that issue because --
THE COURT: It's your proposal.
MR. ARD: Exactly.
THE COURT: Okay.
MR. ARD: I think we want to perhaps withdraw
it. So we will meet and confer with them and we'll tell you what we want to do with it.

THE COURT: All right. Okay.
MR. UNIKEL: On the last paragraph, we do have
a dispute, Your Honor, the "Finally, Google does not
allege..."
THE COURT: "Finally, Google does not
allege..." That comes out because you're not going to argue that other prior art reference anticipated at closing, right?

MR. UNIKEL: Correct.
THE COURT: Okay. All right. Seems like the
rest of this can get worked out; is that right?
MR. UNIKEL: Yes, Your Honor.
MR. LING: Yes, Your Honor.
MS. SRINIVASAN: Yes, Your Honor.
THE COURT: All right. 4.5. So what's the
issue here, and if you need a minute to read it, that's

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between the two. And then the section about "accordingly, you should apply the clear and convincing standard about the factual disputes," that, I think, doesn't really add anything that related to the sentence about obviousness being a question of law.

Okay. So I think that resolves that part.
MR. UNIKEL: Up until the last paragraph, I
think we're otherwise in agreement on this, Your Honor.
the court: Okay.
MR. UNIKEL: I think it's the last paragraph that has the same language that was in the last instruction.

THE COURT: What page is that on?
MR. UNIKEL: Page 47, Your Honor. Starting with, "finally."

THE COURT: Yeah, that comes out.
Does that take care of the rest of the obviousness instruction?

MR. UNIKEL: I believe, yes, Your Honor.
THE COURT: Okay. Let's move on to damages.
Give me one second.
It doesn't seem like there's a dispute. It's just about how and whether the jury should reach the damages issue, just seems like there's just -- it's the wording. Is that fair to say?

MS. SRINIVASAN: That's my understanding on this. We obviously followed the model instruction, and Google's proposal has some additional wording.

THE COURT: So I'm okay with Arendi's,
especially since we're going to have an additional
statement on the verdict form that says to stop before they reach the damages issue if there's no infringement.

MR. LING: Your Honor, if I may?
the court: Yes.
MR. LING: We disagree with the language where Arendi has proposed "a valid claim of the 843 patent." And it also does not address the instance of if the jury finds differently, that it should not reach damages. So that's why we believe our instruction is more accurate and clear.

And we've --
THE COURT: Well, that's fine. We can parse out and say, "If you find that Google infringed an asserted claims of the ' 843 patent and that the claim is not invalid, you must consider what amount of damages to award Arendi for its infringement." That's fine. We can add that clause to their first sentence.

MS. SRINIVASAN: Your Honor, that's fine. I don't think the other part about "on the other hand" is needed. They're being instructed to --

THE COURT: I agree.
MS. SRINIVASAN: It is not even a list.
They've added --
THE COURT: I agree, yes. I agree.
So why don't you meet and confer with them about how we can generally refer to what the accused apps are. To the extent you say, you know, talk about what's not accused, that should come out. We're not going to have a list of what's not accused. And we're not going to say no other apps or devices are accused being's that's what I ruled on with respect to the invalidity instruction.

So it sounds like some of this can be worked out.

MS. SRINIVASAN: Yeah, we can confer on that, Your Honor. I just don't -- I think this list is arguing facts rather --

THE COURT: I agree that it is. So let's work to get it narrowed down and make it consistent with what we permitted in the invalidity instruction.

All right. I'm just seeing how much more we've got disputes on. Well, just skipping to the end, it looks like the general instructions under six -- Section 6, are all okay. So, basically, we're down to just the remainder of the damages instructions.
we're just going to add their clause.
MS. SRINIVASAN: Okay.
THE COURT: I agree that's redundant.
And then Google wants to add in talking about the particular accused apps.

Does Arendi dispute that?
MS. SRINIVASAN: Well, Your Honor, if we're going to start doing that, I do think we need -- this is connected to an issue that's going to come up about how they instructed the verdict form. We don't think that -if we're going to do this, I also think that we obviously took out our stipulation with respect to the accused products and the representative products agreement.

If they're going to ask that we include a list of all the accused apps and products, we would like some statement about how those were treated for purposes of infringement. And I know that was some instructions ago, but...

THE COURT: Well, we had an instruction -- in the invalidity instruction, we talked about exactly what the anticipation reference was. So I don't think it would be inappropriate here to be consistent to have a list.

MS. SRINIVASAN: Yeah, but what they've added here is, they've --

MS. SRINIVASAN: That's right, Your Honor. And there is an addition of a couple instructions that we didn't have before from Google. One is with respect to the Samsung agreement, and the other is an instruction on the date of commencement of damages. These are new instructions that we got from Google.

THE COURT: This morning?
MS. SRINIVASAN: Yeah. At midnight or -- we got one version at midnight and one at 3 a.m.

THE COURT: Do you think it would be helpful to take some time to meet and confer on these?

THE COURT: Counsel?
MR. UNIKEL: Yes, Your Honor.
THE COURT: It sounds like -- okay, great. We agree.

And then, obviously, with respect to the verdict form, you're going to talk about that, and that may be indicated as well.

Let me just briefly -- and I apologize. I do have to leave the bench at ten for another matter.

So we've got a dispute about whether the accused products should be listed on the verdict form? That's sort of opposite what we just had in the instructions.

MS. SRINIVASAN: That is the proposal that

\section*{on this.}

Google has put in, in the instruction and in their verdict form.

THE COURT: Oh, do I have them labeled the wrong way?

All right. Who's got the Number 4 on the cover page?

MS. SRINIVASAN: That is ours, Your Honor. So we have a list, but then in the cover. I just meant with respect to the actual --
the court: I see. All right. Why don't you talk about this. I'm not sure, is there a reason you don't want the accused product on the verdict form?

MR. UNIKEL: No. I think we're okay with having the accused products. I think our issue was that it's actually not just the accused products, it's the accused products with specific versions of Android, otherwise, they don't actually infringe.

THE COURT: I see.
MS. SRINIVASAN: Yeah, I don't think that
changes whether or not they are the accused products in the case. And obviously, there's a disputed fact issue about -- to the extent Google wants to raise. But if the Court prefers we take that out, I think that's fine too.

THE COURT: Sounds like we can meet and confer
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the willful question should come. I agree with Google that should come after the invalidity questions.

So we've got a dispute as to whether or not we should have separate Interrogatories to the jury about anticipation and obviousness. Google wants separate questions, and Arendi does not.

MS. SRINIVASAN: Your Honor, I think that it's specified in the instructions that there are different ways in which they can -- Google can meet its burden as to showing the patent is invalid. We don't think that they should be able to separate that out in the verdict form, which, likewise, for infringement, you could talk about the all the paths to infringement, but their burden -- I think they've already said in the instruction, and they'll be able to argue that here are the different ways you can get there by finding clear and convincing evidence of either anticipation or obviousness of the different combinations. But we think this severely complicates the verdict form in a way that emphasizes their invalidity positions.
the court: Well, we have separate instructions for anticipation and obviousness. So that makes it more complicated, obviously. But that's what the law says. I mean, I guess I'm wondering --

Let me hear from Google on this.

First question seems pretty much the same. The second question seems pretty much the same.

MR. LING: Your Honor, on Question 1, our verdict form specifies "direct infringement." That's the material difference. They've kept their "induced and contributory infringement" questions in their form.
the court: I see.
So accused products don't infringe Google. My recollection of the statute is whether makes it's an entity that infringes. So we should specify that.

So I think, given how we separated this out, it seems to me that we should say, "direct." If we're going to have separate questions, we should have "direct," and it should say, "Google directly infringed," and then we can have the question on inducing. That seems consistent.

Do you disagree?
MS. SRINIVASAN: No, we don't, Your Honor, and obviously, we are conferring about the inducement issue, so if that falls out, then \(I\) think we can take out "direct."

THE COURT: Of course.
And then we've got the contributory issue. And
then, consistent with what \(I\) said in the jury
instructions, it looks like we have a dispute about where

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MR. UNIKEL: Your Honor, I will say one issue that has come up on -- as a result of IPR estoppel issues is whether or not CyberDesk can be used and can it be used in combination with nonestopped references, for example. So I think it's important that we have an anticipation question and an obviousness question in case there's any issue about the basis that the jury actually found invalidity.

THE COURT: Right. Right. So what your point is, is -- and I'm thinking out loud. Your point is that if they appeal the Court's ruling about prior art estoppel and find that there's a -- that CyberDesk cannot have been used as a reference --

MR. UNIKEL: Right.
THE COURT: -- that we ought to know the basis on which the jury found invalidity, essentially.

MR. UNIKEL: Correct, Your Honor.
MS. SRINIVASAN: I understand that position, Your Honor. I think there's a -- you know, there were instructions that we had included that addressed issues that would have isolated what their finding is with respect to -- especially to obviousness, which are now no longer in the instruction.
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So if their position is because it's

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anticipation as to CyberDesk, that they are able to --
they want to segregate that out, I think we can consider that and talk about it.

THE COURT: Okay, great.
And then we've got a clarifying instruction, and it says, "if you answered yes and answered no" and "do not answer the rest of this."

As long as that's correct in terms of the law what they should apply, I don't want them filling out the damages portion if they found non-infringement or invalidity. So if you want to discuss what the precise wording of that should be, that's fine. But I agree that it would be appropriate.

Oh, you've got the same type of caution. Well, work on it in light of what we've just been discussing about separate question for the jury about anticipation and obviousness. If we could trim it down a little bit to make it shorter, I think that would be better. So something in between Arendi's and Google's proposal on that.

Oh, boy.
MS. SRINIVASAN: Yeah. Your Honor, obviously, we object to these additional questions. I think that they want to argue there should be some start date or disputed --

THE COURT: Yeah. I'm not inclined to ask

Question C3. Question 4 of Google's and Question 6 of Arendi's seems to be the same thing. I'm not inclined to ask Question 5 either, but maybe some of this can get sorted out when you all discuss if we should ask the question about a royalty rate. Maybe that will satisfy everybody's need to have a record about exactly what the jury found. Yes.

MR. LING: Understood, Your Honor. If I could just make a couple objections for the record?
the court: Yes.
MR. LING: On Question 3, there's clearly a
factual dispute about the start -- potential earliest start date of infringement that we do believe the jury needs to consider and that we need a ruling on.

On Question 5, this is the Samsung license
issue that we've raised with the Court and that the Court, we understood, would take up on jury instruction/verdict form. So that's why we have proposed a question for the jury to determine whether their damages include damages for Google apps

THE COURT: Okay. Understood. Noted for the record.

And why don't you talk with each other about putting on a question about the royalty rate. We can see if some of this gets worked out. Because maybe that
"You heard the judge. This is what the other side is arguing, note that" -- you know, but they aren't arguing \(\mathrm{X}, \mathrm{Y}\), and Z , right?

MR. ARD: Right. And so we could revise it and meet and confer with them. But \(I\) just want to flag for the Court that, I mean, it could say, "they could not argue" is what we would say. But we understand the Court's ruling on Monday morning sort of departed from Judge Stark had held two years ago in this case on this issue. And I just wanted to flag for the Court --

THE COURT: Well, to be clear for the record, I don't think it departed from what he held. I think it continued -- he left it as an open question, and I started to close the door on that open question.

MR. ARD: Right. I understand that the Court has said that. Maybe we'll just submit a letter to the Court on this, if it's okay.
the court: That's fine.
MS. SRINIVASAN: We may be able to compose language that is more affirmative than what they're not alleging, to your point, Your Honor, and see if we can reach agreement on that.

THE COURT: All right. Anything else?
MR. UNIKEL: One last timing question, Your Honor.

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MR. UNIKEL: Given the amount of time that's left for the case, we were kind of assuming that closings are going to have to happen on Tuesday morning, and we have to just make arrangements if that's likely to be the case.

THE COURT: I think you should make
arrangements, but we're going to start closings at the time that we start closings. And so I have no idea what else might drop out over the weekend. And we are not going to be in a situation -- well, we might be a situation where the evidence is over by midday on Monday for whatever reason and everybody needs to go forward with closings at that point.

So if we have to have closings Tuesday, we will. And so you should make arrangements for that. But we're not going to send everybody home and bring them back another day if we have time left on the clock.

MR. UNIKEL: And my only request on that is, can we both close on the same day?
the court: yes.
MR. UNIKEL: Thank you.
THE COURT: Yes.
How long do you anticipate closing to be?
MS. SRINIVASAN: An hour or less. An hour,

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plus or minus. Given our time constructions, we have to balance using our time for evidence versus closing. I don't expect it to be in excessive of an hour.

THE COURT: Okay.
MR. UNIKEL: Forty-five minutes to an hour.
THE COURT: Fantastic. So I could see a world
where we do actually go on Monday. So you should be ready to go.

MR. UNIKEL: My biggest concern was having one side go, and then be overnight and have the other side go.

THE COURT: So we're not going to have that.
Well, think about how it might play out. And if you want to, discuss it amongst yourselves. But if we're in a situation where we're ready to start closings at \(3: 30\), we're going to go ahead and start closings at \(3: 30\) and keep everybody here.

MS. SRINIVASAN: All right, Your Honor.
THE COURT: So on the jury instructions, if we can get an updated -- I want to make sure we make as much progress as possible before \(I\) have to make a decision about something. So what amount of time do you think that could be? And that time could include filing something tomorrow morning as opposed to tonight. I can assure you -- I hope that nobody has to look at these tonight, but I know that that's not the case.
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\section*{EXHIBIT E}


MR. PEterman: They are trying to prevent
Mr. Kidder from responding to that new theory that --
the court: I am on the same page. Let me just see what slides -- do you want to confer with the other side about which slides are -- should be handed up?

MR. PETERMAN: I have a copy of everything that they objected to.

May I approach?
THE COURT: Yes. Thank you. All right. Just give me a minute to take a look at these.

This is everything -- these are just the ones that are objected to?

MR. Peterman: Those are the ones that are objected to, Your Honor. And then also, there's an exhibit that we would like to introduce, same issue, that they -- that they've objected to as well.

THE COURT: An exhibit that you want to
introduce into evidence?
MR. PEterman: Yes.
THE COURT: Okay. All right. Why don't you hand that up as well.

So they're objecting to like 40 of your slides?
MR. PETERMAN: Yes.
THE COURT: All right. Well, okay, we're not going to get this done in the next five minutes.
calculate it this way in his report.
THE COURT: Okay. Do you dispute the
calculations, or do you just dispute the way that it is being presented to the jury?

MS. SRINIVASAN: Well, the methodology is just not what he did in his report.

THE COURT: It's a different methodology.
MS. SRINIVASAN: Right.
the court: Okay.
Counsel.
MR. PETERMAN: Your Honor, we disagree. This is a methodology based off of revenues. Clearly, it's a question of, if you apply the revenues versus the settlement agreement first, or if you apply it versus the revenues for Apple. So now we're thinking that, A plus B equals C, is what Mr. Kidder initially presented in his expert report.

We think for a jury -- in order to not confuse the jury, we want to essentially put in front of them \(B\) plus A equals C. So it's the same result, it's just a slightly different way of getting presentation -- way of getting to the result.

> And this is a result of the change that plaintiffs made with respect to the damages theory. We think it's clearer now, the way that Mr. Kidder wants to

MS. SRINIVASAN: Well, Your Honor, if I may.
Some of these, I understood, that they replaced last night, so...

MR. PETERMAN: Well, no, that's not correct.
MS. SRINIVASAN: Pursuant to our meet and
confer.
THE COURT: Okay. Everybody, let's slow down because we're going to -- I don't want to get off with a start this morning where we're muddling up the record. So let's, everybody, sit down. We'll just go and we can talk about it while everybody is having a seat.

All right. The first page is DDX-10.018. What's plaintiff's objection to this?

MS. SRINIVASAN: Your Honor, for these and the next few slides, the calculation that's performed here was not done by Mr. Kidder in his report. He did a different extended views calculation comparing revenues basis between the different entities without doing it as a function of each license amount.

And when we conferred about this last night, Google sent replacement slides doing it with a manner in which Mr. Kidder had actually disclosed in his report. We said that we didn't object to those.

So I don't know if they're insisting on doing it this way, but this isn't the way in which -- he didn't
present it in the slides that are in front of you, versus the way that he presented it in his expert report.

THE COURT: Okay. Where in the record is his report that opines on this issue that we're talking about right now? What page so we can take a look at it on a break?

MR. PETERMAN: Yes, Your Honor. So do you have his reports there?

THE COURT: No. No one has ever presented them to us, the slides. We have hunted and found most of them on the docket.

MR. Peterman: Okay. Give me a moment, Your Honor.

MS. SRINIVASAN: I have a copy for the Court, Your Honor.

MR. PETERMAN: Your Honor, I have one copy of both of his reports. I can get a second copy.

THE COURT: Okay. Great. That's great.
So counsel just handed up the expert report of Douglas Kidder, October 20, 2020, and a supplemental expert report of Mr. Kidder, August 26, 2022.

What pages should I look at to see if this has been previously disclosed?

MR. PETERMAN: Yeah. So, Your Honor, in the second report, the 2022 report, paragraphs 152 to 160 is

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where Mr. Kidder goes through the revenue-based comparison.
the court: Okay. And then -- so we'll look at that on a break. And then what -- is it the same argument for how many of these slides?

MS. SRINIVASAN: Through the first testimonial slide. So the next eight slides, through 10.026. They're all the same issue.

THE COURT: Okay.
MR. Peterman: And, Your Honor, I will state
that it doesn't appear that Arendi disagrees that Mr. Kidder came up with the scale revenue number. So for that we'll look at the top of Slide 25 . There's a scale revenue number for Apple, Samsung, Microsoft, and InNova.

Doesn't appear that Arendi disagrees with those numbers, because I think no matter which way you do the calculation, you wind up with those same numbers. It's really just a question of presentation.

THE COURT: Okay. All right. We will take a look at that. All right. It's 8:30 now. So we'll bring the jury out and then we'll deal with this. I want to make sure we get started on time because we told them all to get here early today.

MR. PETERMAN: Thank you, Your Honor.
THE COURT: All right. Ms. Garfinkel, can we
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check and see if everybody is here.
Sounds like we are missing one juror. So let's continue on.

Okay. Then we've got objection to 10.032 ?
MS. SRINIVASAN: That's right, Your Honor. As to the next three slides, 32, 33, 34, those are undisclosed opinions from Mr. Kidder's report. He does disclose December 2017. And I think he was instructed to use that date. There's nothing in his report about maintenance releases or source code being published around that time. He just said he was instructed to use that date.

And now they're using testimony -- he had the opportunity to ask why that was, but now they're using testimony as to the basis for using that date, which Mr. Kidder didn't disclose in his report.

He has one line in his report that says he was instructed to use December 2017 as the date when STS was enabled, that's it. There's no reference to maintenance releases, source code, any of the things that are being added here.

So we don't object to him obviously relying on the December 2017 date, which has always been part of his analysis for the other apps, and then for Google Chrome. But for him to be utilizing the reason that they selected
that we've heard at trial. So is there any particular reason why we can't put this up on the screen?

MS. SRINIVASAN: Well, for Mr. -- I mean, if Mr. Kidder is going to say he has understanding about why STS -- why he's using that December 2017 date, that is not in his opinion. He did -- in his report, paragraph 175, he said he was asked to consider a date of December 2017 as the date of first infringement when STS was enabled Android 8. That's all he says.

So our objection is that if he's going to get up there and say, I understand it was released on that date because that's when the maintenance release was, that's when the source code was published -- he doesn't have any basis for that. He was instructed to use the date. We understand that.

But now they're trying to use, you know, things that he didn't develop. He didn't ask why that date was chosen. And it's not correct that he didn't analyze an STS-only world. That's the subject of his supplemental report from 2022. He specifically considered a scenario in which only STS was accused. He opined on a damages number, that's the damages number he's presenting today.

So he had the opportunity to ask why that date, and he didn't. And so we object to him using testimony from the proceeding to try to add detail, well, as to why

the Court: Give me a minute.
So Counsel, did or did he not analyze what the royalty would be -- or respond to Mr. Weinstein's calculation? You know what I'm asking.

MR. PETERMAN: Yes, yes.
THE COURT: Tell me what I'm asking, and then tell me the answer.

MR. PETERMAN: There's two issues here.
Mr. Kidder did put forth an STS calculation under
Mr. Kidder's own model. And Mr. Kidder's own model is really not dependent on the number of units. He did not have the opportunity to present an STS under

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Mr. Weinstein's new model. And that's really the distinction here.

Mr. Weinstein's new model depends totally on units. On cross-examination he admitted if the units were wrong, the numbers were wrong. And that was squarely not in front of Mr. Kidder in his 2022 report.

THE COURT: Okay. That was what I was asking, and I appreciate the answer.

Counsel?
MS. SRINIVASAN: Your Honor, Mr. Weinstein's
model never changed. It has always been based on units.
And Mr. Kidder's responsive report is -- knew exactly what Mr. Weinstein was disclosing.

In Paragraph 175 of his supplemental report, he says he's been asked to consider -- and he's always had a different model. He has a revenue-based model -- now, it does apportion based on a number of installed units, and we'll get to that.

But he's always had that model. Mr. Weinstein always had a download-based model. But in Paragraph 175, you can see -- and in the tables -- Paragraph 175, he said, "I was asked to consider a scenario in which the data of first alleged infringement was no earlier than December 5, 2017, when STS was enabled to Android."

He says, "Under this scenario, the base of
accused devices and downloads would be smaller, and would therefore result in a greater downward adjustment for extensive used relative to Microsoft, Samsung, and Apple." And he offers a damages, a lump sum payment damages number of \(\$ 500,000\), which based on the slides, I understand, is the number he's going to be sponsoring today.

And then in the Exhibit 5 to the report, you can see -- in the Exhibit 5.0, to the supplemental reports, he can see that he has listed all the downloads for 2017 and 2018 for all of the apps.

And at that time, he was responding to
Mr. Weinstein's report that was STS only for the 12 of the 13 apps. That he went ahead and assumed, what if it was STS only for everything.

The \(\$ 500,000\) that he came up with in his September ' 22 report is what he's presenting today. It's the same analysis he planned for that, and that's why it's already disclosed in his report. It's not something that he didn't foresee coming.

That's -- the December 2017 date forward, for all applications, that is what he opined about in 2020 -in this 2022 report; assuming that there would be only STS accused, no Content Data Detectors, no CQSA.

He's responding to and providing an opinion about an STS-only scenario.

MR. PETERMAN: Your Honor, Mr. Kidder --
THE COURT: So we've got multiple things going on here. So we've kind of moved on from what we were talking about with respect to these three slides. So...

MS. SRINIVASAN: Your Honor, with -- yeah, with respect to those three slides, I think the issue is that he was instructed to look at a December 2017 hypothetical negotiation date for this alternative STS-only scenario. And that's fine that he was instructed to use that.

Well, now he wants to say this is the reason that date was chosen, there was a source code release, there as maintenance release. That's not in his report. There's nothing about that in there, even though he does say he relies on this December report.
the court: Right. But we've got two things going on here that he's going to testify about. He's going to testify about his own opinion, and he's also going to testify about his reaction to your expert's opinion. And so maybe that doesn't change what his own opinion is, but certainly I think he should be allowed to testify about his reaction to Arendi's opinion.

And these three slides, I don't have a problem with. Let's keep going.

Actually, let me ask Ms. Garfinkel, do we have
all the jurors here?

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All right. Let's take a break from this, and we will take it up later.

Bring the jury in.
THE CLERK: Yes, Your Honor.
(The jury enters the courtroom at 8:44 a.m.)
THE COURT: Please have a seat.
Good morning, ladies and gentlemen of the jury.
Please be seated.
Welcome back. I hope everyone had a restful
weekend. We are going to continue today with the

Let's have Google call its next witness.
MS. ROBERTS: Your Honor, Google calls
Dr. Edward Fox.
THE CLERK: Please approach.
Please state and spell your name for the record.

THE WITNESS: Edward Fox Edward, E-D-W-A-R-D, F-O-X.

EDWARD FOX, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:
the clerk: Thank you. Please be seated.
Bring the jury in

\section*{testimony.}
so I worked in IT.
I was really fortunate to have a good friend, Bob Frankston, who of the one of the two inventors of spreadsheets, and as my undergraduate advisor, I had a person named J.C.R. Licklider. He is often called the grandfather of the Internet because of his work leading to funding of the first Internet activities. Also, one on the founders in the field of hemorrhage computer tracks. So I had a wonderful mentor when I was undergraduate student at MIT in the electro-engineering department.
Q. And did you obtain a degree from MIT?
A. I finished my bachelors of science in 1972. I spent six years in South Carolina. My wife, who then was going to Harvard, had a wonderful job there, so I went to join her. And I spent a year teaching at a two-year college, and then I spent six years in a steel joist manufacturing plant running and developing software systems.

I decided at that point that I had done all I could do and I wanted to pursue the field of information retrieval -- search engines, finding things -- then I started doing my bachelors thesis at MIT. So I picked Cornell University, where the world leader of the father of information retrieval was there so I could work with him. So I start in 1978 at Cornell university. I finished my master's in 1981 and my PhD in 1983.

\section*{binders?}

DIRECT EXAMINATION.
MS. ROBERTS: Your Honor, may I approach with
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THE COURT: Yes, please.

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BY MS. ROBERTS:
Q. Good morning.
A. Good morning.
Q. Would you please introduce yourself to the jury.
A. Good morning. My name is Edward Fox. I live in Blacksburg, Virginia with my wife of 51 years, and we've raised four children and occasionally have our four grandchildren visit us.
Q. Did you prepare some demonstratives to assist with your testimony today?
A. I did. I have an hour-long, a little bit shorter than some of the classes I teach.
Q. Can you please describe your educational background to the jury.
A. In 1965, I started taking courses at Columbia University and Stevens Institute of Technology. In 1967, I started at MIT, where I began as a math major. I wanted to work with computers. They didn't have a computer science program back then. And so when the
electro-engineering department decided to offer a computer science elective, I switched to electro-engineering. And

\section*{Fox - Direct}
Q. Can you describe your professional background for the jury?
A. So tomorrow I finish the last class of my 40 th year at Virginia Tech as a faculty member in computer science, and then I proceed with grading all of their student projects. There's twenty-two teams that I'm working with this semester in a Capstone computer science course.

Along the way, I've served as a volunteer on a number of different editorial boards. One of boards I was elected to is the Computing Research Association board, which represents the computer research community for the whole U.S. In addition to that, I've, over the years, participated and helped assessing submissions and so forth at hundreds of conferences and workshops.

And at Virginia Tech, I won a number of awards. One for teaching innovation, one for service, and most recently one as a commercialization champion because I worked with a lot of students filing different preliminary and patent applications, including one that's been issued so far.

I've also working with my students and my colleagues. I've done a lot of publications of all different types and have been fortunate to travel all around the world giving talks. If you add all the numbers that are listed there, it's well over 1100. So many different things I've been

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Fox - Direct
and whose thesis I studied as well.
Q. What opinions did you reach?
A. So my opinion is that the asserted claims of the '843 patent are invalid. And I base this on two things. First, is that they were anticipated by the CyberDesk system. In other words, Anind Dey did it first. Also, they were obvious in light of three prior art systems. For example, Apple makes this obvious through its data detectors. And the three systems I considered are CyberDesk, Apple Data Detectors, and very common thing we all are familiar with, Microsoft Word, but back in 1997. Q. Can you give the jury a high level overview of the basis for your opinion?
A. Yes. There were four points that I wanted to make about this. The first is that Arendi admits that the so-called shortcut elements of the asserted claims were well known in the prior art. And we'll talk about what those are. But just to quickly summarize what they are, they're listed here.

The first is that analyzing text to find types of information. The second is providing an input device for a user command to act on identified information. The third is receiving from it an input device, a command to act on identified information. The fourth is causing a search for the identified information to find the
A. I did a lot of work starting in 2019 up until this -up until this morning. I studied the ' 843 patent and its asserted claims. I studied what's called the file history or the prosecution history, which is a big binder that I have sitting in front of me, which is all of the documentation from the time the patent was filed until it was issued.

In that, I noted there's a passage that points to Arendi's Petition for Accelerated Examination Support that it filed during the prosecution of the ' 356 patent, which happens to share the same specification as the ' 843 patent that we are considering in this litigation.

As I do with my students, I studied the prior art up to the period of 1997 because I like them to know what happened years ago. I also studied specific pieces of prior art describing prior art systems. I studied the deposition transcripts. We've heard testimony here from Anind Dey, James Miller, and Atle Hedloy.

I traveled to California just as COVID was getting started -- just made it out in time -- and inspected two PowerBook systems, which we've heard about that James Miller talked about and that he purchased and put software on, so that I would understand the systems as they stood from Apple Data Detectors. I also interviewed Mike Pinkerton, who was a student at the same time as Anind Dey 1152 associated information. And the fifth is performing action, at least -- using at least part of the found second information. These are all the pieces of this so-called shortcut.
Q. What is the second important point supporting your opinion?
A. The second point is that the 843 patent's
requirement to put instructions all in one program was a very obvious choice and one of very few available design choices. This makes clear and obvious argument, which makes the patent invalid. But there's more; there's two more points.
Q. All right. Can you tell us what the third important point is?
A. The third point is that Arendi's principal argument to the Patent Office that allowed it to get the patent was that the prior art used instructions to set up the input device and receive the user commands that were separate from the document editing program. Arendi's invention required the instructions for those actions to be fully inside the first computer program.
Q. What is the fourth important point supporting your opinion?
A. In spite of that, Arendi is now arguing that Google's products are covered by the ' 843 patent's claims. You

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Filed 08 heard last week from the experts who built the systems that Google's products use instructions that are separate from the document editing program.

Arendi's arguments contradict its statements to the Patent Office. If we apply these new arguments, then the ' 843 patent claims cover the prior art CyberDesk and Apple Data Detectors systems, and, therefore, make the patent invalid.
Q. So let's delve into those specific four points. What do you mean that Arendi admitted that the shortcut
elements were well known in the prior art? What are the shortcut elements?
A. So we've looked repeatedly at the ' 843 Claim 23 . We've seen it organized in different ways. To make it simple for our discussion, I've decided to break it up into eight parts, and I've labeled them A through H just to make it easy to refer to those things.

On the right-hand side, so we can clearly go through each one of these and see what's at issue, I've identified a checklist. If you look at the checklist, we see checked off in green are six of the eight things. Those are the ones that I refer to as the shortcut elements. This is all about connecting two things with a shortcut; that's what this is all about.
Q. So let's talk about the first prior art system you

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audiences over a long period of time demonstrations of the system.

So this is like the class that I'm grading this week.
I've had them give multiple presentations. I've interviewed the teams to ask what they're doing. I've had them turn in reports, different versions of their reports, and so that's how I've learned what the systems that they're building are all about. Very similar things here. A lot of evidence.
Q. Did the PTO review the full scope of materials about the CyberDesk system that you reviewed before the PTO issued the ' 843 patent?
A. It's my understanding the Patent Office looks at publications of patents; they don't look at systems. You're the ones who get to look at systems. So they didn't have all this other information that I had available, we've all here heard it at this Court in this litigation.
Q. Did the CyberDesk system disclose the shortcut elements?
A. Yes. They certainly did, and we can go through lots of examples to illustrate that.
Q. Why don't you walk us through the examples shown on this slide, 14?
A. So one of things we heard was one of the first
mentioned in the summary of your opinions, CyberDesk.
What is the CyberDesk system?
A. I'm going to recall to what's called "critical date." Things before that clearly are prior art.

So the CyberDesk system was a system developed as we heard last week in the testimony from Anind Dey starting in the fall of 1996, well before the critical date. It was developed. It was improved. New features were added. By the time of the second instantiation, which was well before the critical date, it had all the features that talked to claims of the ' 843 patent.
Q. What materials did you consider to understand how the CyberDesk system operated in the relevant time period? A. So there -- to me, there's a preponderance of the evidence supporting CyberDesk system. There are five publications before the critical date. We've heard more than an hour of testimony from its inventor, Anind Dey, which teaches us all kinds of things that were not clear in those publications.

We heard from Anind Dey that he set up a website at Georgia Tech, which you can still go to and look at and see the things that are listed there, that describes all the work with the CyberDesk system. We also heard from him that he ran what were called presentations and demo days at Georgia Tech. He gave to a large number of

\section*{Fox - Direct}
versions of CyberDesk system, and we saw this picture on the right-hand side taken from a conference paper. The CHI conference is the big event in the world of human computer interaction. I went to the 1999 CHI conference and gave a tutorial there. It's so big, I didn't want to go back. I don't like big things like that. But it's the way to go if you're in that field.

So in 1997, Anind Dey gave a presentation, and in the presentation, he talked about CyberDesk. There was also a paper in the proceedings, and taken from that paper we see on the left some of the wording exactly from that paper.

On the right-hand side, we see one of the figures from that paper. We've been through this by way of his testimony. I don't want to take a lot of your time, but just want to remind us what is said here.

So just sort of in short, what happens on the right-hand side is we have a web browser that, at that point in time was Netscape. Now we have Edge and Safari and other things. But in that browser window, there are sub-windows, parts of this that we see here. The top two are about the main part of the CyberDesk system. The one on the left is a service that is lets people do things. They can write messages and so forth.

In this particular example, we see a message being displayed. And in the top right, we see this input device
that we're talking about here. In this case, it's called the Acton button. You see a number of choices that people can make. So the system is making suggestions of things that they might want to do with first information coming from the document editing program.

And on the bottom side, we see a couple of actions and the screens that represent those actions that deal with searching and doing different things. So if we just read through -- and its all color coded to match this -we begin with highlighting Gregory Abowd, which the system is smart enough to figure out is a name. It's converting that name to Abowd, Gregory, so it knows you can switch first and last names when you're putting it in a different order.

We see in the top right a number of things that we can do. And the two that are highlighted in blue and green correspond to the blue and green we see in the text. So that, after we've highlighted this, the system causes the Acton button bar to suggest some actions that are shown with the arrow A, so if we pop up that window, we have those options

The green says, one suggestion is to look up the name in an available contact manager, which is B. So we see in the bottom left, the contact manager with his name. We can look at that up and get information based on the name. Gregory's phone number, so he decides to follow another suggestion and initiates a search using the switchboard web service C. So if he picks the blue option to the Acton button window, he goes off this particular system to another program elsewhere in the web, the switchboard service, which returns the second information that relates to the first information, we see Abowd, Gregory D. We get his middle name. We see his address. We see his phone number. So we picked up all this extra information, and the action displays this for us.

So this is just kind of a reminder, and if we
interpret this based on what we heard, that we're teaching all the shortcut elements. And to make this clear, to remind us of those things \(A\) through \(H\) that I pointed out before, in the bottom right of the screen, you see in red I ticked off \(A, B, C, D, F\) and \(H\). So that is the six shortcut elements out of the eight that we are concerned with.
Q. Can we go to the next slide, and can you explain to the jury what this shows
A. Sure. So also from this CHI '97 paper, we saw on the left-hand side the text that we've gone through that's from that paper. Another figure in the paper, Figure 3, is shown here on the right-hand side. This represents the

\section*{shortcut elements?}
A. So if -- what wasn't clear from looking at that particular example from the left-hand side it said mail reader, and one was wondering if this actually could corresponds with the Court's claim construction of a document and a first computer program, we can see from the testimony that we heard last week from Anind Dey, the question was: "So, for example, when you were talking about an e-mail, when it could pull text from an e-mail, was it possible that a user could be working in an e-mail when the text was selected for the CyberDesk to work?" And the answer is, "Absolutely."

So this teaches us that the first computer program could be a first computer program according to the Court's construction. It doesn't have to be a mail reader; you can go with editing tools as he said. I wouldn't have known if I just looked at the publication. I had to hear from him to understand that.
Q. Are there any other ways that CyberDesk disclosed the shortcut elements?
A. Yes. When we looked at the ' 843 patent, we see that one of the things it talks about is a kind of letter functionality where you can also take the information and put it into a letter. So here we see from testimony, again, that we heard last week, a question and answer,
 which I'll read just to make this clear: "Did you ever come up with a version of CyberDesk that allowed the user actually to automatically insert any of the text that was found by CyberDesk?"

And the answer includes: "Absolutely, absolutely. The example that comes to my mind is a text editor." So we see that we can insert text into the working document according to his testimony. Again, this wasn't clear from just looking at the publication.

We also see that we've checked off some of the elements that we see in the bottom right there in this red box.
Q. Are there any on any other ways that CyberDesk disclosed the shortcut elements?
A. So I mentioned that Anind Dey, he explained that he set up a website, and in the web site, he described a system with a lot more detail than appears in any of the publications. When we look at the publications, it mentions numbers of things that were services, but here we actually see a list of the services that were included here.

And we see in the highlighted section a number of things that were given an address, in particular they allow us to retrieve a map. Among the options we see here for retrieving a map, in the bottom right there's one

\section*{1}
called MapQuest, which is something I sometimes use along with google Map and Apple Map.

Also, if we go to the very top where the first yellow thing here is, and if we read the fine print, there's another one about doing a search for e-mail address. So lots of examples of kinds of things that you can search for that were explained by way of the CyberDesk system through this particular page on the website.
Q. If we could go to the next slide, could you explain to the jury why you included this slide in the presentation?
A. So we heard from Dr. Smedley about looking up an address and finding information and going to a map. So I just wanted to remind us that this is what we saw in the CyberDesk system as well.
Q. And can we go to the next slide and can you explain to the jury the network services you've identified here?
A. Yes. So also in this long list of services that you could do with the CyberDesk system, there were a number here highlight in yellow. This is the same list we saw before, but I've highlighted a few others. It's very small print. We see three things here. The first and the third have to do with words, looking up words in dictionaries. A lot of my students can't spell very well, so I encourage them to pick good words and so on. So

\section*{Fox - Direct}

Atle Hedloy, working through his attorneys, filed work with the Patent Office. And in the file history, when I looked through that, I saw a reference on the bottom of one of the pages, and I'll read what it says here: "Applicant notes" -- that's Arendi or Atle Hedloy -- "that application Serial Number \(12 / 841302\), also before the examiner, and the prior art references analyzed in the accelerated examination support document, or AESD, of July 22, 2010, are of particular interest in relation to the present application."

So Arendi is pointing to the Patent Office that they should look specifically at this document to understand the 843 patent.
Q. All right. You mentioned the file history. Can you just remind the jury of what the file history is?
A. I think one of these books here is that. I think this big one here.
Q. If you look at DTX-2.
A. Okay. So this big thing, read through all of this several times. It includes the original submission. It includes interesting pages like the things that the Patent Office was given but didn't look at. Lots of interesting things here.

MR. LAHAD: Your Honor, I object to that.
the witness: Excuse me?

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the court: That objection is sustained. You
Case 1:13-cv-00919-ğLH \({ }^{\text {irg }}\) Eocument 601
can disregard the last portion of the answer. So
disregard -- disregard all of answer.
BY MS. ROBERTS:
Q. If you could just hold up the binder for the jury so they can see what you are referring to.

Thank you.
So what did Arendi say about the prior art references in the AESD?
A. So in the AESD, if one looks into that, which I think is another one of these binders. Yes. So this is another big binder. This is the AESD document that I looked at. And if I look into the table of contents, at the beginning part, I see there's a reference to Page 114. And if I go to Page 114, which is, I think, on the next slide, we see part of what Arendi told the Patent Office.

So I'll read the highlighted sections on this page: "The Dey reference describes a tool called CyberDesk. CyberDesk is a framework that supports the automatic integration of various software applications. In another example, the user highlights a name in the e-mail message, and CyberDesk offers various options that are specific to the name, e.g., look up the name in a contact manager."

So if we just think about the things that are listed here -- and, again, I should point out that Atle Hedloy in

\section*{Fox - Direct}
the critical date. And as I mentioned before, I went to California and spent a day working with Apple devices to understand Apple Data Detectors and try that myself.

Since he had gone to the trouble of buying a computer and putting the software that he kept from years before onto it. So I wanted to see how this worked.
Q. Did the PTO have all of the materials that you considered regarding Apple Data Detectors available to it before the PTO issued the \(' 843\) patent?
A. No. It's my understanding the Patent Office just looks at publications and patents. They don't look at this other kind of information.
Q. Did Apple Data Detectors disclose the shortcut elements?
A. Yes. And I'll show you this in a few slides, just to kind of remind us from these videos. So the first of these video presentations slides shows us the Wall Street Journal article, looked at in a browser on a computer system. We see highlighted in yellow, the whole article. And if you recall from the video, there was a flash because the computer very quickly went through and analyzed the entire publication in this Wall Street Journal article and picked out what we now call "named entities," things, names, addresses, and so forth.

So Frank Casanova, the person who was giving the
the first day of the trial testified specifically that this came from applicant to the Patent Office. If we look at those things, we see in the bottom right-hand side, again, I've checked off the six shortcut elements that are confirmed by the statement from Arendi.
Q. Let's turn to another system that you mentioned earlier, Apple Data Detectors. What is Apple Data Detectors?
A. So if we go back to our timeline, we see that before the critical date, there were -- we see at sort of the bottom section there, there were two demonstrations to very large public audiences about Apple Data Detectors. We saw the videos last week. Big shows, lot of people there, public disclosure of their exciting invention.

So this is the beginning part of our discussion with regard to Apple Data Detectors.
Q. What materials did you consider to understand how Apple Data Detectors operated in the relevant time period? A. So we heard last week from Jim Miller, his testimony. I went through his deposition and studied that in detail. You've seen a part of that. As part of his deposition, we saw the two videos: One at the Macworld conference in San Francisco, and one at the Macworld conference in Boston. So we saw both of those demonstrating that.

There were a number of publications I studied before 1168
Fox - Direct
demonstration, was explaining this. And then he went on to say, as we see in the next slide, that the system, because of this flash of analysis, picked up those things and gives the user a number of choices of things that they can do with this.

Because its kind of fuzzy to read this at a distance, on the right-hand side, I put in Jim Manzi's information just so we can see this. So Jim Manzi, we have his e-mail address and his phone number. So we see from the analysis of this, that this pop-up menu or contextual menu is shown on the screen for the user, and it gives the user five choices of things to do. Browse, and it gives the web address that it picked up for the wall Street Journal article and its website. You see at the bottom a phone number that it picked up, the phone number as well.

We see second place, and then it has the block for Jim Manzi and his address out of quote, "experiences," in Now Contact, which is a contact book you put this and store this information in.

We can send mail to manzi@lotus.com, so we can email a message. And then highlighted in black there, a little bit harder to read, is write a letter to manzi@lotus.com. The post office wouldn't appreciate getting a letter addressed with manzi@lotus.com on the envelope, so the system goes through and does a search -- go to the next

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slide -- looks up this e-mail address in a contact book,

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in an address book, for the entry that we see here. And it finds that information and picks up this second information, additional information it learned based on just using the e-mail address.

And given that information -- if we go to the next slide -- and you can see this "write a letter"
functionality, very similar to what we see in the ' 843 patent, where it's popped up -- when we were processing the document, and it's populated that document with text. To make it clear, I put this on the right-hand side.

So we started off with manzi@lotus.com. It found additional information. It found his company, found his address, it figured out his first name, and put all this stuff into the "write a letter."

So it did all this stuff to provide a shortcut to help us do things more efficiently.
Q. And on the bottom of that slide, I see the letters in the red box. Can you remind the jury of what that means? A. Yes. So again we see the six shortcut elements are ticked off: A, B, C, D, F, and H. So we've seen multiple times that these things are taught.
Q. Did Arendi address Apple Data Detectors with the Patent Office?
A. Yes. In this same AESD document that we talked about
before, we go to the table of contents, we see entry on Page -- referring to Page 111. And if we go to the next slide, we'll see Page 111, which is a summary of the discussion that Arendi gave to the Patent Office about the Apple Data Detectors system.
Q. What did Arendi say to the Patent Office about the Apple Data Detectors system in the AESD?
A. So I will read the highlighted section here. "ADD starts when a user highlights text in a word processing document. ADD then analyzes the text to determine whether it recognizes some portion of that text, as for an example, an e-mail address or web address. The user can use a contextual menu to initiate an action that is related to the recognized data."

So this is a summary of what we've talked about as the shortcut elements that we see again. I've ticked those off on the bottom right-hand side.

If you recall from the first day of this trial, Atle Hedloy confirmed that this was given to the Patent Office.
Q. Now, how did your analysis of the shortcut elements of the prior art and Arendi's discussions of it impact your overall analysis?
A. So if we go to the next slide, we get reminded of the Claim 23 elements. And we see in this particular case, that the six shortcut elements are ticked off. These are 1172

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document editing program as required by the claims. CyberDesk itself analyzes text highlighted by the user, and CyberDesk is separate from any document editing programs. Indeed CyberDesk is the framework that integrates various applications."

So it's telling us about CyberDesk, but noted here with big red highlight section here is the word "separate." That's the main distinction that it's given with regard to the CyberDesk system, to distinguish the '843 from CyberDesk.

And, again, we heard on day one of this litigation, Atle Hedloy testified that this was given to the Patent Office.
Q. Did Arendi make any similar statements about Apple Data Detectors to the Patent Office in the AESD?
A. Yes. So also in this document, we go to the red section, I read part of it, that continues on with more about Apple Data Detectors. "Among other things, ADD does not disclose analyzing selected textual information by the document editing program as required by the claims. Also, ADD does not disclose providing an input device configured by the document editing program as required by the claims. Instead, ADD itself is a part of the operating system, and it analyzes the selected textual information and configures any input device. As ADD is a part of the
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Filed 08 \(21 / 23\) Page \(563^{\text {²0 }} 87^{77} 75^{\text {c P P PageID \#: }} 61142\) Approach 2.
editing program, ADD does not meet the limitations of the claims."

So again, we see the word "separate." This is the big distinction that's being drawn. We also saw that -it's explained that it's part of the operating system. Just remind to us from last week when we talked about the Android operating system.

We also notice that was testified to by Atle Hedloy on the first day of the trial, as \(I\) show in the bottom right side.
Q. If we can go to the next slide, can you explain to the jury what this image is supposed to show?
A. Yes. So having started working with computers in 1965, I have a built lots of systems and taught my students to build lots of systems. Sometimes they build small things, sometimes they build big things. Some of the bigger systems we build get so big it's really hard to learn them, so we split them up.

So many of the things I built since the 1980s are distributed systems.

So it was well known in the \(\quad 80\) s and earlier, that the two ways to build software are to make a big thing or to have a lot of pieces and fit them together. So then we get the approaches that were used, Approach 1 and

Number 2, we see on the right hand
And Arendi has made clear that it views that both CyberDesk and Apple Data Detectors took this separate approach, Approach Number 2.
Q. How are Arendi's argument to the Patent Office relevant to your analysis?
A. Well, there are two points that tie into this. Arendi is accusing Google's apps, even though the instructions that set up the input device and receive the user command are separate from the apps, as we've heard in testimony here.

If Arendi is right about that argument, then that means that the patent covers CyberDesk and ADD, and therefore the patent is not valid.
Q. If we can go to the next slide, can you explain this next image for the jury?
A. So we've talked about Approach Number 1 and Approach Number 2. They are different kind of approaches. It would be obvious to do either one of them depending on the circumstance. We heard from Arendi, through the AESD, that it distinguished its work and said it did Approach Number 1 .

Now instead of staying with what it's talking about, it's overreaching. It's claiming other things that it didn't do. And so it's claiming Approach 2 as well,

So Approach 1 is to build something and add additional features and stick it in that. And systems like Microsoft Word are examples of the way that happens. But nowadays, especially -- and certainly back even in the ' 80 s and the early '90s, many of us would build things that ran on multiple computers and talked to each other and utilized the Internet and the web and all that kind of stuff. So we split things up into different pieces.

And when we did that, it was like in mathematics where you factor something out. Something you're going to use a lot, you put it off in one side, and other things make use of it. This is the tool I showed you.
Q. And the one where you factor things out that you just described, is that Approach Number 2 on this slide?
A. That's right. I'm calling that Approach Number 2.
Q. If we can turn on the next slide, can you explain this image to the jury?
A. So what we heard from the AESD is that Arendi argued that its method was Approach Number 1. In the '843 patent, it took Microsoft Word and put extra things into that. So that shortcut capability was built into that particular program. And that's what it claimed.

And when it distinguished in the AESD other work and said that they made things separate, which is Approach 1176

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according to Dr. Smedley we heard last week.
Q. Now, let's go back to the summary of your opinions.

Can you please explain the basis for your opinion that the CyberDesk system anticipated the asserted claims? A. Yes. So what I've explained is that the CyberDesk system anticipates, and also later on we'll talk about the obviousness argument.

But let's go to the next slide and talk about what anticipation means. I'm not really very good at bowling. It's very rare that I get a strike, but that's what anticipation is like. You have one ball and you knock it all down.

So CyberDesk taught it; did it before. It anticipates. That's the terminology.

The other kind of thing which is more likely for me if I'm lucky to do this, is to get a spare to have a few balls that together knock things down.

So the obviousness arguments are like having a spare. Q. Can we go to the next slide, and can you explain to the jury why you included this slide?
A. So I'm using this slide as a reminder just because it's good for us to keep remembering this particular thing that was taught at the big CHI conference in 1997. There is more that goes on besides what is described here, but it helps us to just have a picture to refresh our memory

So keeping this in mind, then we will go to the next slide and explain in detail about the anticipation case. So I wanted to just remind us about that.

So if we go to the next slide, we can sort of walk our way through how the CyberDesk system anticipates all of the elements of Claim 23.
Q. All right. Can you go ahead and walk the jury through that anticipation analysis?
A. So I won't go through all the same detail we heard
from Dr. Smedley, but I will go through each of these elements.

The first one, A, talks about the non-transitory computer readable medium. So on the website for CyberDesk, there's an option for you to get a single version, standalone version of the CyberDesk system.

So you can go there and download the whole thing. And then you can load it into your browser. You put in a HTML page. It brings in all these, what are called "applets."

And so now you have your browser, as we saw in that window. The browser has all these parts of it, everything is running inside the browser. The browser is a program, and these applets are a part of that. They're running in that situation.
so this is one way to think of it, according to the Court's construction, the browser with all the applets, all running in it, is self-contained, set of instructions to do tasks.

So we have our computer system. We've loaded it from outside, from another place, a non-transitory medium, and it's now running in a computer. And this whole thing is the first computer program. So that's the first part.

Part \(B\) is displaying the document electronically using the first computer program. Browsers display things. They display programs where you can make edits, as we heard from Anind Dey. So we see the -- in the top left of that picture that I showed you before, document. So this teaches us Element B.

Elements \(C\) is while the document is being displayed, doing analysis of the document information and finding first information, that we saw Gregory Abowd -- was the first information that was highlight there. So that's the first information. And it's being analyzed in a computer process. That's part of what CyberDesk does behind the scenes. It's doing this analysis. Very smart system to do all kinds of things like that.

And it can recognize a lot of different kinds of information. So we have the plurality of types of information that can be searched for

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We saw before, from the website and from the demonstration, lots of things can be searched for. So many different things can be searched for. So this gives us Element Number C.

It found that name, that highlighted name. So it retrieved it. So that's also covered. That's Element D.

And then we saw it provides an input device. So part of this program shows us an input device, the Acton button bar with a bunch of different options. So it's providing an input device. It's configured by this browser with all this stuff, CyberDesk running in it. So it is configured by the first computer program.

And what this Acton button does is covered in F. And there's a bunch of stuff here. It can do a search to -for at least using -- at least part of the first information, whether it's using the name. So that's part of the first information. To find second information, it's calling for options to go off and find additional information given that first information. Find other things that relate to that name, to Gregory Abowd.

And it's -- the type or types of the second
information are dependent at least in part of the type or types of first information. So we have a name and we're going to find things that depend on a name. So we get street addresses, and we get phone numbers, we get other

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So



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also anticipated.
Q. Did you consider Claim 30 in your anticipation analysis?
A. So using Dr. Smedley's argument, we can see that another way to think of the CyberDesk system teaching this, is by looking at the different applets. And we see in the picture on the next slide, shown off in yellow is a content page which has -- if you look really in the fine print, you see Andy Wood is the -- is in this to find information. And there's additional information about that.

And you see on the bottom, there's a little button that says "New Contact." So to explain this, and Claim 33 says "Providing a prompt for updating the information source to include the first information." This whole display is a prompt, as is the new command button there. And we have confirmation of this that was taught by Anind Dey.

And a user could add a new contact as well. And he says correct. So this also teaches us Claim 30 .
Q. And so just to be clear, what's your conclusion with respect to whether the CyberDesk system anticipates Claim 30?
A. Yes. As we just said, it anticipates Claim 30. And I went through in detail and pointed out how Claim 23 is

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entry that says Apple Data Detectors home page. So CyberDesk is pointing us to look at Apple Data Detectors. So just following that, we would be motivated to make a combination of those two different things.

The other part of the screen on the bottom right we see a screen from Apple Data Detectors. And if we look in the picture there, we see that this is clearly a word processing document. In the top in parentheses it also says WP for word processing.

So apple Data Detectors tells us to think about word processors and clearly that would lead us to something like Microsoft Word. At that time, it was Word '97.
Q. What is the first combination that, in your opinion, makes the asserted claims obvious?
A. So we heard about two systems, CyberDesk and ADD. We've seen CyberDesk points to ADD. So that would motivate us to want to combine those things, and that's one of the combinations.
Q. Can we go to the next slide and can you explain this slide to the jury.
A. Yes. So we start off with CyberDesk, and we want to combine and add in \(A D D\) and its functionality. So we've heard before, in going through for the CyberDesk system, which of the element are checked off. If there was any question about element number \(H\), then we can show that
Q. Turning back to the summary of your opinions, let's move on to obviousness.

Why would a person of ordinary skill in the art be motivated to combine the prior art systems that you are relying on for this opinion?
A. So for something to be obvious, you have to be motivated to make the combination. So if we go to the next slide, we'll see that in addition to many other reasons for wanting to be motivated to make the combinations that we're talking about, that were explicit instructions in the documentation that were available that would guide us to do that.

So if we look at the description on the left-hand side of that CyberDesk, we see three different things. In the top sort of center, we see a list of desktop services that were supported by CyberDesk. Highlighted in yellow is one that says, "Simple Notepad." Simple Notepad is a word processing document.

So if one thinks of word processing documents, one would think of Microsoft Word. So we pointed to, by way of that, to think about Microsoft Word.

Also, we can see in the bottom left and top right, in publication -- some of the publications that describe CyberDesk, we see in the references there's an explicit 1184

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this was supported by \(A D D\) as an additional combination. So if we look at the example here of the question mark, just in case there's any doubt about the CyberDesk teaching element \(H\).

So if we go to the next slide, we get reminded of Apple Data Detectors "Write a Letter" functionality. Again, this is working with word processing things and making insertions in them and so forth. So this reminds us, and we saw this earlier, so this confirms that with ADD, we also have element \(H\).
Q. What is your conclusion, then, with respect to the combination of the CyberDesk system with the Apple Data Detectors system?
A. So before I had a question mark in the bottom one, now I have a red check mark to show that's also checked off if we added ADD.

I also wanted to remind us, because there's a lot of important terminology in this patent. I have gone through this and explained it, and we've talked about this and it's been testified about, but the word "document" is a very important one. So I just wanted to point out that clearly we're seeing editable documents in our examples. Q. Are there any other combinations that, in your opinion, render the asserted claims obvious?
A. So we looked at CyberDesk plus ADD. We can reverse

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it and look at ADD plus CyberDesk, to be symmetrical. So if we go to the next slide, we see -- and this reminds us that we've had the shortcut elements being taught by ADD. We checked those six things off.

So if we go to the next slide, we see that if we make a combination -- I tried to put checklist here to make it even more clear. ADD has the six things there, and we know that CyberDesk has all eight things there. I went through them one by one to show that. We also have Dr. Smedley's argument that those two things would have been filled in.

So combining these two, put the checklist together, we have all of the limitations taught by this obvious connection.
Q. Did you consider whether the CyberDesk system and the Apple Data Detectors system would render Claim 30 obvious? A. Yes. So Claim 30 gives us the additional requirement of providing a prompt for updating the information source to include the first information.

So we hear two examples here, and I showed this earlier, Anind Dey, in response to the question: "And a user could add new contact as well?" He says, "Correct." And you see here, in the example in the bottom right, this window where you can click on the button that says "new contact."
Q. Can we go to the next slide? What is this slide showing?
A. So when I was working with the PowerBooks that we see here in court, we heard about last week, there were several pictures taken, as \(I\) was working through this, just to understand how the system works.

So regarding Claim 30, it's very clear from these three different pictures how this would work. So the picture on the top left has a word processing document called -- in the program called Notepad, which is an editing program, or document editing program. We see in the top right of the screen there a document. And I've highlighted "testone@apple.com." So that's the first information that's been highlighted.

And the system, as a result, puts up this pop-up menu which we see there, a long list of things that I can do, one of which is highlighted in red, says "Add e-mail address to e-mail address book." And then it says -repeats the first information that I've highlighted, "testone.apple.com."

So when I click on that, I get to another display, which I show a photograph for in the bottom center of this. And reading what it says there, "What user name should be associated with this e-mail address?" So the e-mail address is testone@apple.com. I say, Well, let's

CyberDesk plus Word, and the second one we see on the next slide is Apple Data Detectors plus Word.
Q. When was Microsoft Word '97 publicly available?
A. The alpha version that did all the same stuff was available 1996, became available from Microsoft early in 1997. Copyright comes from 1997.
Q. What is the basis for your opinion that the combination of the CyberDesk system and Microsoft Word '97 and a combination of Apple Data Detectors and Microsoft Word ' 97 would render the asserted claims obvious?
A. To save us time, I put them all in one slide. This goes for CyberDesk and also for Apple Data Detectors. Both of them, we've learned repeatedly, they practice the shortcut elements. They cover the six things that are checked off in green.

The question we've been discussing is about the other two elements, Elements \(E\) and G. So I put a question mark there to see how can we show, how do we learn, how do we understand that it's obvious that these things would have been taught by this combination.

So if we go to the next slide, we get reminded of this picture we've seen before. I have Approach Number 1, which is the one that we've been hearing about from Arendi. And back in the day when I used Microsoft Word '97, and I wanted to make sure that I didn't spell things
wrong, because that's not very good as a professor, I could use the spellcheck capabilities that was built into this.

Much earlier, when I first started with computers, the computers were much smaller. We couldn't do as much in them. So I used a separate program called Spell, which did spell checking. It was much more convenient in Word ' 97 to have it built into the word processor.

So Approach 1 is an example of Microsoft Word with something built into it. Remember this is different from Approach 2, where we have CyberDesk and Apple Data Detectors following this separation approach, factoring these out.
Q. So can we go to the next slide and can you tell the jury what you are showing here?
A. So obviousness combinations mean combining things and it doesn't mean that you take this bunch of software and this bunch of software and cram them together. It means that you can take functionality, the ideas, the methodology of something and put it into something else.

So if we take this CyberDesk shortcut functionality, which they programmed, move it into other programming packages, add it into Word -- it's easy to put stuff into Word back in the day. So if you take the shortcut functionality, you put this into the Microsoft Word
system, that combination would teach us all the elements.
Q. And if we go to the next slide, can you explain that to the jury.
A. The same kind of thing, we have Apple Data Detectors, and we take the key functionality, this shortcut
functionality we've talked about, and we add that into Microsoft Word. And again, this combination, very much like what was done in the ' 843 patent, would teach us this. This was an obvious thing to do. You have two approaches, make combinations, and this would make it obvious.
Q. So what is your opinion with respect to combining CyberDesk system or Apple Data Detectors, the Apple Data Detectors system with Microsoft Word '97?
A. So we saw before, for both CyberDesk and ADD, that they taught us the six shortcut elements. In this combination with Word, where it's all built into that, clearly we satisfy all of these other elements, these elements checked off in blue. So we've made obvious the claim elements of the Claim 23.
Q. Let's turn back to the summary of your opinions on the next slide. And can you please recap for the jury what your opinions on invalidity are.
A. So my opinion is that the asserted claims of the ' 843 patent are invalid. They were anticipated by the

CyberDesk system. In other words, Anind Dey did it first. They were also obvious, through these various combinations, including the work from Jim Miller with Apple and Microsoft Word, for example, as we've talked about.
Q. What are secondary considerations of nonobviousness?
A. In addition to thinking about obviousness, there are other things to consider with regard to obviousness. These are referred to as secondary considerations. There's a list of these that are shown here. I have put them and numbered them 1 through 9 for the sake of discussion.
Q. Can we go to the next slide.

Can you tell us how the secondary considerations of nonobviousness impacted your obviousness conclusions, if at all?
A. So I considered them and I reaffirmed that the obviousness combinations that I've identified apply. These secondary considerations don't have impact on my decision and my opinion.

So when I wrote my first report, I made a statement of that. And in the response report, and you will hear later today from Dr. Sacerdoti, who wrote a response report. He didn't say anything about most of the things that I talked about. So he did consider a few of those --

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indeed, we see a list here of the things he considered.
So just to be clear about secondary considerations, it's important to understand the details of some of these. For example, Number 7 says, "Others have licenses to use the invention." It's true that there are licenses to the ' 843 patent, but they all came as a result of settlements. And if a license comes as a result of settlement, it doesn't count as a secondary considerations. So that one doesn't apply.

The other three that are listed here talk about invention. It's important to understand the terminology. The invention --

MR. LAHAD: Sorry, Your Honor. Can I have a sidebar, please.

THE COURT: Yes.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: Can we go off the record one
second.
(Off the record.)
THE COURT: Okay. Counsel.
MR. LAHAD: Yes. I would object to that testimony, Your Honor. The witness said that if a license is a settlement license, you can't consider it as
secondary considerations of nonobviousness.
Number 1, he is not a lawyer. I don't think that's the law. And so he's given the jury this notion that -- some kind of legal opinion that you can't consider it or that license, as a result of settlements, are entitled to less weight.

So I would object to that. I'd ask for an instruction -- or at least an instruction to the jury to strike that testimony.

THE COURT: Let me review the testimony. One minute.

Counsel?
MS. ROBERTS: Dr. Fox is explaining his
understanding as he went through the secondary
considerations. What he just said on the stand is in his rebuttal report. This being raised now is a bit of a surprise. Experts are allowed to get an understanding of the law so they can do their analysis.

THE COURT: Okay. Standby for a second. I'm going to grab a copy of his rebuttal report. Can you check where that is in his report.

MS. ROBERTS: It's Paragraph 514.
THE COURT: Okay. So we have testimony from the expert on the stand that licenses as part of the settlement negotiations don't count. That's a different
thing than saying that it negates their utility. So I'm going to ask the jury to strike -- I'm going to strike and ask the jury to disregard the portion of the testimony that licenses that result from settlement negotiations don't count.

MR. UNIKEL: I mean, may there be a follow-up question?

THE COURT: Yes.
MR. LAHAD: Thank you, Your Honor.
(Whereupon, the discussion at sidebar
concludes.)

THE COURT: Ladies and gentlemen of the jury,
I'm going to ask you to disregard the portion of the
testimony that states as follows: If a license comes as a
result of settlement, it doesn't have a secondary
consideration. You should disregard that portion of the testimony.
BY MS. ROBERTS:
Q. Dr. Fox, in your consideration of this
seventh factor, whether others have licenses to use the invention, did you consider the licenses in this case to
have utility as a secondary consideration of
nonobviousness?
A. I considered that. In my perspective, they don't
do you?" And the answer is, "Not particularly."
Q. Dr. Fox, you mentioned earlier in your testimony that you were also asked to consider the benefit of the asserted claims over the prior art methods, correct?
A. That's correct
Q. Did you reach an opinion on that issue?
A. Yes. Two things are identified here. The one element that Arendi emphasized was putting shortcut tools inside a word processing or spreadsheet program. So that's the first point.

The second point is for Google, who wanted separate instructions, Arendi's claims were of low value.

MS. ROBERTS: Thank you. I will pass the
witness.
THE COURT: Thank you, Counsel.
Cross-examination.
MR. LAHAD: Yes, Your Honor. Before I begin, could I please have a sidebar.
the Court: Yes.
(Whereupon, the following discussion is held at sidebar.)

MR. LAHAD: Sorry, Your Honor.
THE COURT: What's on your mind?
MR. LAHAD: Yes. Thank you.

The witness repeatedly testified about what was or was not considered by the Patent Office, what could and could not be considered by the Patent Office. He's not an expert in Patent Office procedure. He's not a patent attorney. There's no foundation he has any familiarity with the MPEP or anything like that. And so I think given the testimony of what could and could not be submitted, what was and was not submitted, I think he's opened the door to the IPR evidence. So he's saying we could not have put this -- Google could not have put -- or this art was not available to the Patent Office. I think those statements open the door to the IPR proceedings evidence of the IPR proceedings.

At the very least, I think we need some kind of curative instruction that this witness is not an expert in patent prosecution, patent procedure, the MPEP, or the like.

THE COURT: Counsel?
MS. ROBERTS: The witness -- first of all, he only was asked questions about what was considered before the patent was issued, only as to the CyberDesk system and the Apple Data Detectors system. And there's no dispute that the Patent Office does not consider systems. So he didn't say anything incorrect. He didn't say anything to open the door to IPR estoppel. That happened long after

MR. LAHAD: He held up what was a portion of the prior art and said "the prosecution history" and said "Well, the Patent Office didn't look at this," or couldn't look at it. He mentioned the FCE website and said he couldn't submit that to the Patent Office. Number 1, that's incorrect, given the nature of the publications.

And I think, Your Honor, that opens the door to Google or anybody else could have submitted those same materials to the Patent Office as part of the submission in some kind of post-grant review. I think the door is opened.

THE COURT: So to the extent this is rearguing the issues we've already discussed numerous times of IPR estoppel, there wasn't an objection. The request for a curative instruction is overruled.

Was there testimony that talked about the
inability of prior art systems to be disclosed to the Patent Office?

MR. LAHAD: Yes.
THE COURT: And that, in your view, would be an incorrect statement of the law?

MR. LAHAD: You can --
THE COURT: Because you can submit systems as
part of the original patent prosecution?

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Answer: It's my understanding the Patent Office looks at publications of patents. They don't look at systems. You're the ones who get to look at systems. So they didn't have all this other information \(I\) had available.

We all heard it at this Court in this litigation.

MS. ROBERTS: Your Honor, there was no objection, no opportunity to --

THE COURT: Here's what I'm going to say, there was no objection at the time. So the possibilities are that we can let you cross-examine this witness on this issue. We could have a follow-up question from Google right now to clear this up at this moment.

Either way, I don't think it opens the door to the IPR. That's out. But we can deal with it one of those other two ways.

MR. LAHAD: I will cross him on it, Your Honor.
THE COURT: All right. Great.
(Whereupon, the discussion at sidebar
concludes.)

MR. LAHAD: Your Honor, may I approach?
THE COURT: Yes.
MR. LAHAD: Thank you.
 File
is out of order. The first page on my copy has something in the bottom that it says, section E. If I go to the second sheet, it starts with A. So I think you gave it to me in the wrong order.

MR. LAHAD: Your Honor, may I approach to check the binder?

THE COURT: Yes.
THE WITNESS: See, this is the first page, but
that's not the first page because it's E. So the pages are out of order.

MR. LAHAD: I apologize. There was one sheet
that was out of order, Your Honor.
BY MR. LAHAD:
Q. All right. So there's the -- are we on the same page now?
A. I think so.
Q. Literally?
A. I think so.
Q. Okay. So we had the first case is impact engine. And then the second case was that Eolas case, right?
A. Second one was Uniloc.
Q. I'm sorry, sir, could you repeat that?
A. The first on this page was impact engine.
Q. Yeah, Impact Engine, then Uniloc, then Arendi, right?
A. Yes.
Q. And there's the ELS at the bottom of that page right there for Case Number 4, right?
A. Yes. You skipped a few others, but, yes.
Q. Well, those others weren't Google cases, right?
A. That's right. They were among the other defendants I've worked with.
Q. Yeah. I want to focus on the Google defendant.
A. Okay.
Q. Next page, there's the Bright Response case, middle of the page.

Do you see that?
A. I do.
Q. All right. So that's five. And then if you go couple pages later, on some other cases, it's D.

Do you see that?
A. I do.
Q. Okay. There's another Impact Engine entry there. That's the same as the one before, right?
A. Yeah. I think I've cleaned this up in a newer copy.
Q. Right. On the next page, there's a Bright Smart Corp versus Google case that you were retained for, right?
A. Yes. In the middle of the page, yes.
Q. On the last page there's Rockstar Consortium versus Google, right? Do you see that, sir?
A. Yes. It's the second, third-from-the-last page, yes.

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A. Because they were, yes.
Q. Not one time did you say, "Hey, you know what? This patent is valid," right?
A. I'm careful in picking cases so that I understand what the situation is, yes.
Q. Likewise, when you were the non-infringement expert on behalf of Google, in each case, you found that there was no infringement, correct?
A. Once again, I'm always careful picking my cases, yes.
Q. Not one time have you said that a patent asserted against Google was infringed, correct?
A. In the patent infringement cases, that's correct.
Q. And of course, you wouldn't mind being retained by Google or its lawyers in future cases, correct?

MS. ROBERTS: Objection; argumentative.
MR. LAHAD: Goes to bias, Your Honor.
THE COURT: Overruled.

\section*{BY MR. LAHAD:}
Q. I'm sorry, sir, I didn't get your answer.
A. It depends on my health. I'm getting older, so I can't do as much.
Q. An opinion that a patent is valid and infringed or valid and/or infringed, that wouldn't help insofar as getting hired by Google again, would it?
A. I have no idea. I'm a world expert in search
systems, so I always give an honest opinion.
Q. For a certain hourly rate, right?
A. That's a result of my work, yes.
Q. And your rate for testifying today is about \(\$ 600\) an hour, correct?
A. Today it is, yes.
Q. If I could have Slide 8 .

Dr. Fox, you went through this slide with your lawyer.

Do you recall that, sir.
A. Yes. This was the second of the four points I was making, yes.
Q. Right. You say, Putting -- "To put instructions all
in one program was an obvious choice, and one of very few available design choices."

Those are your words, correct?
A. That's correct.
Q. That's not the Court's construction is it?
A. No. This is my opinion.
Q. Well, this notion that the -- you're describing in this slide the requirement of the S 83 patent, correct?
A. I think you are misreading this. What it says is,
"The '843 patent's requirement to put instructions all in one program." So that's what the ' 843 patent says. Q. Yeah, but --

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A. My comment was that this was an obvious choice. Q. Yeah. But you are using the word "requirement," right? Requirement is like a -- that's a claim limitation. If a patent requires something, that's in the claims, isn't it?
A. This is my understanding of what the patent's claim elements tells us. This is what they teach.
Q. But your selection of words, your understanding has to give way to the Court's construction, correct?
A. I follow the Court's construction as carefully and as thoroughly as I could possibly do so.
Q. You followed the Court's construction thoroughly and carefully, and then you just ignored it and used your own words on this slide, correct?
A. I'm explaining my opinion. I don't understand what you're --
Q. Yeah. You were explaining your opinion in your words, right?
A. That's certainly something I am supposed to do, yes.
Q. And not the context of claims or Court's construction right?
A. Certainly, this is all in the context of the litigation.
Q. You talk about putting instructions in -- all in one program was an obvious choice. You were in the

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\section*{Fox - Cross \\ Q. Okay. So you don't -- he and I were having trouble} communicating or connecting about the relative ease with which you could combine two programs, but as I understand it, in your view, it would be obvious, correct?
A. I'm not sure. I lost what you were saying would be obvious, what were you referring to?
Q. Combining computer programs into one program.
A. In the examples I've given of making combinations, they were obvious. Not every combination of things is obvious. It depends on the situation.
Q. Well, that's not what you said here. You said, "The requirement to put instructions all in one program was an obvious choice." You didn't say, "Sometimes it's obvious; sometimes it's not obvious."

I just want to know if we can rely on this statement.
A. You just told me about combining different things. This statement is about putting instructions in one program. Those are two different issues. So I think you're confusing the two things.
Q. You're --
A. I can't answer one relative to the other without them being fit together sensibly.
Q. Are you differentiating between instructions and code?
A. My understanding of what you said, I mean, if you
want to repeat it, I'd be happy to hear that. But my understanding was that you were talking about combining two different programs. And that's not what this says here. This is saying putting instructions in a program.
Q. Okay. So you're differentiating between instructions for a program and two different programs, right? Is that what I'm hearing?
A. When I made the obviousness argument, I said, "to take the functionality and to put it into something." I put instructions in a program. Putting instructions in a program is a clear thing to do. When we write programs, we put them in a program. So this statement is sort of trivial kind of thing.

Combining two different things is a different matter. So I think you are confusing the two issues.
Q. Let's go to the next slide. This is -- well, let me step back. We agreed earlier that you are not here to opine on whether Google infringes, right?
A. That was not part of my assignment, no.
Q. So on this slide, when you talk about Arendi's position, right, you're talking about that's -- that this is Google's view of Arendi's argument, correct? This notion of instructions being separate from the document editing program?
A. What I'm saying here is the same thing that appeared
products use instructions separate from the document editing program, right?
A. That is what the expert who built the software systems explained last week that I heard.
Q. Right. And just so we're on the same page, you understand that Arendi is disputing Google's characterization of Arendi's argument, right?
A. Yes, of course.
Q. Okay. So in order to get to this slide, you would have to adopt Google's view of Arendi's argument, correct?
A. I'm just articulating what I heard last week.
Q. Right. These are not your opinions. You're just kind of echoing what you heard last week, right?
A. That particular bullet is a repetition of what I heard last week, what we all heard last week.
Q. And, again, you have not performed any kind of analysis, because it wasn't your assignment, about whether or not this is true, right?
A. That's not been my assignment, no.
Q. Okay.
A. I'm just repeating what \(I\) heard in court. We all heard it here.
Q. And then you say, "Applying Arendi's argument" -again, that's Google's characterization of Arendi's argument, right?

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n the AESD. There's a specific wording there that talks about separate. I'm just repeating Arendi's own statement to the Patent Office here.
Q. Can we go to the next slide.

You say, "Arendi is now arguing that Google's products are covered by the ' 843 patent claims," right?
A. That's what I heard last week.
Q. And then you say, "Google's products use instructions separate from the document editing program," right?
A. That's what I heard last week.
Q. This notion of Google's products using instructions that are separate from the document editing program, that's Google's view of Arendi's argument for non -- for infringement, right?
A. I heard testimony that supports that statement last week. I don't quite understand what you're distinguishing.
Q. Well, no, this bullet point right here, "Google's products use instructions separate from the document editing program," that's not Arendi's view of its position, right? You understand that that's -- those are Google's words being used to describe Arendi's position, right?
A. As I said, I heard that last week.
Q. Okay. It's Google that is saying that the infringing

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A. No, actually, the next point is that Arendi's two statements, the statements by Dr. Smedley and the statements in the AESD, are contradicting each other. That's my understanding from studying those things.
Q. Well, if the jury finds that Arendi is right and Google's characterization of its own technology is wrong, then the 843 patent claims are not invalid, correct?
A. Can you say that one more time.
Q. Sure.
A. I didn't quite follow it.
Q. If the jury finds that Arendi is right and Google's characterization of Google's technology is wrong, then the ' 843 patent claims are not invalid, correct?
A. No. No, no. I gave clear evidence that the patent is invalid, the claims are invalid, many, many different arguments from many different sources. That's just one additional argument that one might use.
Q. Well, if the jury rejects the notion -- strike that. If the jury rejects Google's and your characterization of what Arendi argued to the Patent Office, the ' 843 patent is not invalid, correct?
A. That is one of many arguments about the patents being invalid. If that particular situation arose, then that last point wouldn't apply, but the rest of my discussion certainly applies.
Q. All right. So just, again, so we're on the same page, if the jury rejects the first part of your third bullet, rejects your characterization of Arendi's arguments, then the rest of it is wrong?
A. Yes. This is one of the many arguments for invalidity, and the logic here says that if we apply that argument, which I've pointed out is contradictory based on the evidence from Arendi, then we reach this particular conclusion.
Q. Now, I want to go back to the previous slide. Okay. I found the right question to go with this slide. At the time Arendi made these statements to the
Patent Office, Arendi did not have benefit of the Court's construction, correct?
A. The Court's construction came well after the patent was issued.
Q. Right. So --
A. So, yes.
Q. Didn't have benefit of the Court's construction, right?
A. Sure.
Q. Now, you discussed about what was submitted, what could have been submitted to the Patent Office, and you held up the file history.

Do you recall that?
A. Yes. There's a document sitting here that is the file history that I studied many times.
Q. And you understand that that's not the entirety of the file history, right?
A. My definition of file history is that it's the document from the time that a file -- that a patent is filed until it's issued. That's what I think of as file history, and that's what I referred to, and that's what this document is.
Q. Well, but you understand that the file history for the 843 patent is not -- how many pages is that? 400 or so, 300 ?
A. It's a big book certainly.
Q. Yeah, it's about that thick, two and a half inches?
A. Yeah. I don't think the pages -- actually, it's 488 maybe.
Q. So let's call it 500 pages. But you held up 500 pages. You understand the actual file history in this case is over 31,000 pages, correct?

MS. ROBERTS: Objection. May I have a sidebar?
THE COURT: Let me see counsel at sidebar.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: Where are we going with this?

Mr. Boles.
BY MR. LAHAD:
Q. You are familiar with, of course, the layout of the patent, Dr. Fox, right?
A. That's right. I've done lots of work with patents.
Q. All right. There's a section called "cited
references" on a patent, right?
A. Yeah. It's not shown here. This is other publications.
Q. It starts right here.
A. References cited, yes.
Q. Right.

MR. LAHAD: And there's one reference here that goes onto the next page, Mr. Boles.
A. There are eight more pages, right.
Q. Eight more pages of references cited, right?
A. That's right.
Q. And you understand if you take all those pages of the references cited, it's a lot more than 500 pages, correct? A. So I'm not aware of the file history referring to all the references and their content. If you say, so, I mean, if that's part of what should be considered in the file history, but I've never seen it in any of the documents I've worked with.
Q. Well, I mean, you testified a few times about what


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A. Yes. As I went through this list, I saw there were 30 -some works about hypertext, which reads on this. And I looked through testimony of some friends. I looked through the long list of things. It's a very long list.
Q. Did you review all of these documents?
A. No. I looked through the list, and I remembered many of them because I worked in the field and I knew many of them already.
Q. But you didn't review all of the documents?
A. I didn't review all those documents. That would have taken months and months, no. I don't think -- I don't know of any expert who has ever done that.
Q. Well, you don't know what other experts do; you know what you do, right?
A. I said, I don't know of any other experts who would have done that.
Q. But we're here to talk about what you did, right?
A. Yes.
Q. So you did not review all of these documents, right?
A. That's right.
Q. And you didn't ask Google or its lawyers, Well, hey, I've got this binder right here, it's about 500 pages, why don't I -- why aren't these documents -- or why isn't all this other stuff in the file history, as you understand?
A. So I read this entire thing, which is what the Patent

Office -- and the discussion between the Patent Office and Arendi constituted, where they talked about specific pieces of prior art that they considered and made different comments about. That was what I thought was relevant in this case.
Q. You didn't think looking at the other art disclosed by the patentee to the Patent Office was relevant to determining whether the patent's invalid?
A. If the patent examiner didn't say anything about the other works, then to me they weren't considering them.
Q. Did you talk to the patent examiner in this case?
A. No.
Q. Are you a registered patent attorney?
A. No.
Q. Do you have experience prosecuting patents?
A. No.
Q. Do you know what an examiner looks for when reviewing prior art in prosecuting a patent?
A. I see the documentation of what they actually looked at and had the discussion in this document. That's what I was going by.
Q. Well, you don't know what they actually looked at; you just know what's in that paper, right? They could have actually looked at something that had not been in that paper, right?

\section*{Fox - Cross}
A. If they didn't talk about it, then they probably didn't consider it's very relevant.
Q. Well, you don't know that; that's just a guess.
A. That's the assumption.
Q. That is a big old assumption, isn't it?
A. I have the record of what they said and what they wrote to Arendi. That's what --
Q. Where did you get that record?
A. The file history?
Q. Yeah.
A. I was given it by the attorneys.
Q. You were given it by google's lawyers?
A. Yes.
Q. You didn't go off and get it on your own?
A. I didn't see a reason to have to do that.

THE COURT: Counsel, I think at this point in time we are going to take our morning break.

Ladies and gentlemen of the jury, we have scheduled a 15 -minute break. It may be a little bit longer because there are some matters that I need to talk to the attorneys about. We will take the jury out. Thank you.
(The jury exits the courtroom at 10:45 a.m.)
THE COURT: Please have a seat, ladies and gentlemen.

So in terms of triaging what the court needs to deal with to make sure I dealt with everything at the appropriate time --

You may step down, Doctor.
It seems to me that there's a reasonable chance
Mr. Kidder will be taking the stand before we go to lunch. Does that sound accurate and probable?

MR. PETERMAN: Yes, Your Honor.
MS. SRINIVASAN: Yes.
THE COURT: Okay. So I need to deal with these objections to the demonstratives, and what I'd like to do before I hear any additional argument on them is to go back and read the expert reports and then that way I will be in a better position to put into context counsel's arguments about what is and isn't new. So that's what I'm going to do during this break. And it may take me some additional time, and then we'll have some arguments about that before we have Dr. Fox retake the stand and finish his cross-examination.

I anticipate that Mr. Kidder's testimony and cross-examination will go past lunch. After that, does Arendi know -- you don't have to tell me if you don't know or don't want to -- how the rest of the afternoon is going to go in terms of your rebuttal case?

MS. SRINIVASAN: We anticipate calling Dr. Earl
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Fox - Cross

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form. I think that's the universe -- there were some additional issues that came up. But I think that's reflective of what we have.

In the jury instructions, we would probably like the opportunity to be heard on that because there were a few material changes that came in last night.

THE COURT: Okay. And is it correct that the main issues with respect to the jury instructions have to do with how the jury is going to be instructed on the license and how the jury should be instructed on the prior art?

MS. SRINIVASAN: And with respect to willfulness. There is a -- there was a change there. There's disputed provisions based on the law about what instruction should be given.

THE COURT: Okay. Those, I think I can resolve without hearing argument. Let me hear from counsel for Google. Anything that we've missed in what we are going over?

MR. UNIKEL: No. I think there's really those three principal instructions, the verdict form, and then it's just finishing the witnesses with the cross-examination.

There is -- at the close of case, there will be the need to at least preserve the Rule 50A motions. I
sacerdoti as a rebuttal expert on validity. And I don't know how long his testimony will be, but he would be our expected sole rebuttal witness.

THE COURT: So Mr. Weinstein is not retaking the stand?

MS. SRINIVASAN: No.
the court: Okay. And then we will have
cross-examination of that expert. So that puts us in an interesting position about how we get to the end of the day. Let me hear what each side's position is on that.

MS. SRINIVASAN: Well, Your Honor, and I don't mean this to be negative to the other side or anything, but we thought we had reached kind of closure on jury instructions and we got a red line last night with additional changes in the evening. So I know there was a new joint instruction submitted late last night to the Court. And so there are open issues there that still need to be addressed as with the verdict form, some of which we are responding to or have been working on responding to overnight because there were some issues --

THE COURT: Were there new issues with respect to the verdict form after the one that was filed yesterday? Because I think the Court will be in a position to resolve those pretty quickly today.

MS. SRINIVASAN: I don't think for the verdict
Fox - Cross 1228
imagine we can do that briefly, as we did before. So I don't imagine that will take a lot of time, but that is something we will have to do on the record.

THE COURT: Okay.
MR. LING: Your Honor, may I be heard?
THE COURT: Yes.
MR. LING: There are some miscellaneous other issues as well in the jury instructions that the parties have flagged. Google would like the opportunity to make our objections on the record insofar as the Court would like the law.
the court: Okay. I understand.
MR. LING: Thank you.
THE COURT: We are not going to do that right this second though.
Okay. We've got some things we need to work on then. It sounds like we can do some of this shortly after the lunch break today. I guess by my calculations -well, let me hear your best estimates based on what you've heard from the other side about when we're going to be done today if we don't spend a long time arguing about the jury instructions.

MR. UNIKEL: Again, I don't know how long the cross-examination is planned for. So we have about, I'd say, 45 to 50 minutes with Mr. Kidder. I don't know how
long Mr. Sacerdoti is going to testify. I would expect that my cross-examination of him would be somewhere between 30 and 40 minutes, maximum. So again, assuming we can work out the other things and breaks --

THE COURT: Counsel, what's your estimate? I guess what I'm asking is this: Are we going to be done with testimony before \(3: 00\) today?

MS. SRINIVASAN: I think it's -- we will probably be about 3:00 or after 3:00. I don't see us being well ahead of \(3: 00\) to finish the testimony, given that we have the cross-examination ongoing of Dr. Fox. We have Mr. Kidder's affirmative testimony. So let's say that's 45 minutes, plus the remainder of the cross, another hour and a half. Mr. Kidder's cross-examination takes us probably in excess of two hours. And then Dr. Sacerdoti's direct and cross is probably close to two hours, an hour and 45 minutes. So I see us being probably around the 3:00 threshold.

THE COURT: Do you agree with that?
MR. UNIKEL: It sounds about right. I suppose the other issue is how long it will take for the court to read the jury instructions.

THE COURT: Right. So this is what I'm
thinking about. Please have a seat.
So if I read the jury instructions -- I'd like
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to read the jury instructions at the same time as closing. And I don't think it benefits anyone to go ahead with that today and have the closings tomorrow.

So if I did that starting at 3:00, for example, now we're talking about almost to 4:00, and then we've got the closings. That puts us to 5:00. Everybody is going to have to come back tomorrow anyway. I don't think I can keep the jury past 6:00, even if I thought it was a good idea, which I don't.

So I think at this point in time, given where we are today, sitting here right now, I think we're going to do the jury instructions in the morning and then the closings in the morning.

So in light of that, I'm going to proceed on the break right now with that in mind. We will have to get the jury instructions straightened out, but some of that might be able to be done after we send the jury home for the day.

Okay? All right. We will be in recess.
(Whereupon, a recess was taken.)
the court: Okay. Counsel. We took a look at the damages expert reports to give us some context about what's going on here. Can I ask counsel for Google, so these numbers on DDX slide 20 where it says, "Google's royalty \(X\) percentage above," is the reason why those

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installed devices with Android and STS." I believe that's the only dispute. Just to answer Your Honor's question, what the actual pie chart represents is that what damage base is left under Mr. Weinstein's calculation once you remove the August to December downloads.

And then if you saw other slides, you know, that then take more off the pie chart, it's just taking off the damage base, you know, as Mr. Kidder questions the assumptions and methodology that Mr. Weinstein employed.

THE COURT: Okay. Counsel, any objection about this text?

MS. SRINIVASAN: We objected to the text because, again, even though Mr. Kidder had the opportunity for virtually all the applications to raise some question about lack of evidence of how Arendi installed devices were on Android 8 with STS, that was never raised in his reports.

Just to level set, every application with Chrome was 2017, 2018. That was the playing field in his supplemental report. He had the opportunity if he wanted to raise this argument that there was a lack of evidence about what applications or -- were installed on devices with Android 8. He did not. Of course, he himself utilized those installations.

So that is an opinion that, if he's intending
to offer today, would be new. And, again, all of the other applications minus Chrome were in this world of STS only at the time that he served his you supplemental report. So if he was going to make that critique -- he has many other critiques of Mr. Weinstein -- this is not one of them. This is a new opinion that he wants to offer today.

THE COURT: Okay. Well --
MS. SRINIVASAN: And counsel provided us last night with modified slides -- I don't object to the number -- without this text in them, but this text they have in every single slide that contains this pie chart. And if the idea is that he's going to testify or opine that there's a lack of evidence there, that's not contained in his report, and he had every opportunity to make that argument.

THE COURT: All right. But in my view, that's a factual argument. And we're putting that question to the jury about what these numbers are based on the record as I understand it, which by the way, I reviewed very closely over the weekend. So that objection to that slide is going to be overruled.

What do we have on \(30(\mathrm{a})\) ? What's the objection there.

MS. SRINIVASAN: All right. Your Honor, we did

So we do -- we don't object to using a slide like this as long as we are not showing to the jury information that suggests there are all these other revenues basis we're in. We think that should at least --

THE COURT: Understood. So I think what I hear you saying is, there's going to be this big number, and they are going to make an argument like, sir, we've heard about what you did in the Apple case, and aren't you trying to do the same thing here.

Is that what you're worried about?
MS. SRINIVASAN: That is a concern, and also that how do we explain why we're looking at 2017 and 2018 now without getting into issues like the Court's summary judgment ruling that narrowed what was at issue. So I don't know fully how they intend to use it. It was the subject of our conference. I don't object to showing numbers that reflect 2017, 2018 and what's at issue, but the concern I have is the question the jury will have if they start seeing things dating back to the 2012, and, obviously, we don't want to be talking about prior orders or rulings.

THE COURT: Right. Understood.
Counsel?
MR. PETERMAN: Your Honor, I'd like to propose a solution. On April 21, counsel for Arendi produced to
propose a suggestion that it be limited to the time periods that are now at issue rather than putting all of the prior numbers before the jury. I don't know for what purpose that is to put something in there that there's going to be a discussion about how the base was bigger before. Because my understanding that was something we were told not to do.

So I think if we're going to be using any
exhibits from reports on either side for the experts, we should attempt to redact out anything that is not about the universe that's before the jury, which is 2017, 2018.

THE COURT: So I think what I hear you saying
is you think that this would be prejudicial for the jury to see something that's not still being argued?

MS. SRINIVASAN: Yes, Your Honor. It shows --
THE COURT: Even though this was the chart that was used by your expert.

MS. SRINIVASAN: This is from his original report; it's not the supplemental report chart. But they're using things that goes back even prior to summary judgment in this case. It's not just about something that has to do with -- or the summary judgment ruling. It's not just something that has to do with the narrowing with respect to Chrome. Now we're talking about Nexus devices, things that have long since not been part of the case.

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Fox - Cross
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us a new exhibit that we had marked at DTX-1148. That exhibit includes the numbers that Mr. Weinstein relied on.

My understanding is that counsel, even though they produced it on April 21, has an objection to us actually using this as an exhibit in evidence here. These -- you know, this exhibit that they produced is the only reflection of the units that Mr . Weinstein actually relied upon for his calculation. We believe it is appropriately placed into evidence.

My understanding is that they're concerned because, in what they produced to us, they still left some other numbers on it. They certainly could have produced an even more truncated version of this if they were concerned about getting this in front of the jury.

So, you know, if Your Honor will allow this DTX-1148 to be admitted into evidence or used as a demonstrative, we could use this. And I think it takes care of a lot of the concerns that counsel has raised.

MS. SRINIVASAN: We don't have an objection to using it. But, again, it's not something we produced. It's from his 2022 expert report. The highlighting that's on there, could that be redacted? Because again, those are the things that were being removed. So the remainder of the exhibit, we don't have an issue with.

THE COURT: You want to take off the

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highlighting, or you want to redact what's highlighted?
MS. SRINIVASAN: Redact what's highlighted.
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Because again, we didn't produce this. We didn't make this. This is what existed in the report as of 2022. We don't have an objection to using it, but if it's going to show something that's not longer at issue, that's going to create the same question as to why is Chrome in there prior to 2017 when we are only talking about 2017?
the court: Yeah. I get it. Here's what I was thinking when I saw this was, I wasn't understanding why we needed to use the page that has the Pixel 1 on there.

Is there some reason we need to show the jury that?

MR. Peterman: I think it's important to show the jury because it also notes all the sources that Mr. Weinstein used. So, you know, we can certainly show a version of this that has Pixel 1 lined out. I would point out that this is what Arendi produced to us on April 21. They're the ones who put the highlighting in. They didn't produce a version of this exhibit that excised the Pixel 1 line and excised different -- the Chrome and...

And if they had produced a different version of this to us on April 21, that's something that we certainly could have used. It's not up to us to amend their exhibit. And so that's the position that we have here.

Fox - Cross
not the sources. I could be mistaken.
MS. SRINIVASAN: There's one that had the
sources that was the comparative one with Mr. Kidder that had the sources that had all of the accused app downloads for 2018.

THE COURT: Which was that for the record?
MS. SRINIVASAN: Let me get the number from Mr. Weinstein.

MR. Peterman: I believe that one had
Mr. Weinstein and then it had Mr. Kidder saying that
Mr. Kidder agreed with Mr. Weinstein. So that would not be something we would be interested in using.

MS. SRINIVASAN: It's PDX-4-37 was the demonstrative that used with Mr. Weinstein.

THE COURT: Do you want to take a second and see what that is?

MR. PETERMAN: Yes.
Two things, Your Honor, that demonstrative -and perhaps we can put it up -- has a comparison of Mr. Weinstein and Mr. Kidder. And they used that to make a point that Mr. Kidder agrees with Mr. Weinstein.

It also, based on what I saw, that's the just
the apps. It doesn't have that devices.
THE COURT: Right. I guess I'm wondering why we need the -- well, as I'm talking, I understand.

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But if Your Honor is more comfortable with Pixel line being taken out in order to put this into evidence, Google certainly is willing to do that.
the court: Well, you're going to have to refresh my recollection. How did Mr. Weinstein get this? We saw this evidence before. Was that admitted into evidence? Or we had these numbers?

MS. SRINIVASAN: We used it as a demonstrative with his testimony. We -- this is an exhibit to his report. Traditionally, we don't move that into evidence, the exhibits. But it is from the report that he originally issued. We provided it so that it was clear that he was using the same numbers minus what he was removing.

THE COURT: Did the demonstrative he used have the sources on there?

MS. SRINIVASAN: Yeah, it did. It had the -the -- what is now DTX-581, Bates labels ending 156349.

THE COURT: So I think -- we'll get to the apps in a second, because \(I\) have some different ideas about that. But with respect to the page that talks about the Pixel, can you just use his demonstrative?

MR. Peterman: Your Honor, I don't believe his demonstrative actually included the sources. I believe they created a demonstrative that only had the numbers and

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MR. PETERMAN: Again --
THE COURT: Let me make sure. Let me just
paraphrase what I think you're saying. Is that
Mr. Weinstein said he relied on certain numbers, and you want to be able to show the jury where those numbers came from.

MR. PETERMAN: Exactly, Your Honor.
THE COURT: And this is a prior statement that he made when he was on the stand.

MR. Peterman: Yes. And this is the last exhibit -- last set of exhibits that was produced to us on April 21 that Arendi used for Mr. Weinstein's testimony.

THE COURT: And can you confirm here today that you're not going to be making some argument about, look at this big number and now he's only asking for some small number?

MR. PETERMAN: I can absolutely confirm that, certainly, on direct. I would say I can't control what they do on cross. But we are not intending to make reference to all these other numbers in connection.

THE COURT: Okay. I'm going to rule that you can use this as a demonstrative. I'm not going to admit it into evidence. I think it's -- I get what you're saying about how you got it with the highlighting on it, but we're all just trying to do the best we can here in


Any other questions about my ruling?
MS. SRINIVASAN: No, Your Honor.
MR. PETERMAN: And, Your Honor, is that ruling
for both the apps and for the --
the court: Yes.
MR. Peterman: -- Pixel devices?
the court: yes.
MR. PETERMAN: All right. Just one thing that
we are concerned about just from an evidentiary basis, to the extent that there is any further appeal work in this case is actually having underlying unit value that's understood and could be subject to challenge. And so that's --

THE COURT: I see what you are saying. So you want to have this inserted into evidence for that?

MR. PETERMAN: Correct, Your Honor. And we're certainly willing to redact. If I can lean on Mr. Spence here to make a redacted version of this where we take out the Pixel line and take out the highlighted.

THE COURT: So the difference between these two pages, because I agreed with counsel that I have some concerns about the Chrome number. And we have no document that's been put into evidence about the Chrome downloads

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figuring this out. So that's going to be my ruling on that.


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only -- he believes that that data only included Android 8 or 9, and I think Mr. Kidder is prepared to testify that this data does not lead to that conclusion. In fact, it leads to the opposite conclusion, that you would expect 2017 to be much lower than 2016 if only Android 8 was propounded 2017.
the court: What do you think about what he just said?

Counsel?
MS. SRINIVASAN: That is an undisclosed
opinion. If the idea is he's going to get up there now and now say, "Well, can you infer from past years."

THE COURT: I agree with that. That's what comes out.

MR. Peterman: But, Your Honor, this is in response to Mr. Weinstein's new opinion that \(\$ 45\) million is the appropriate damage amount. This was -- we have not had a chance to respond to that yet. And this is only in rebuttal to Mr. Weinstein's \(\$ 45\) million number, which was undisputably disclosed for the first time on April 21.

THE COURT: Yeah. But I think what I'm
concerned about here is that this has got numbers on it, and that numbers have power. And you're asking the jury to make an inference about what trends show from 2015 to 2018. I just don't think it's borne out by the testimony

MR. Peterman: Oh, they're in his report. If you look at Kidder 2022, Exhibit 5. I'm going to have to take you a few places, Your Honor. If you look at 2022, Exhibit 5. You'll see he has numbers for 2017, 2018, and then Chrome going back to --

THE COURT: Chrome, right?
MR. PETERMAN: -- to 2012. But, Your Honor, if we look at Kidder Exhibit 12, 2020, his first report, you see he has numbers for the apps going back to -- in various stages, going back to 2012, and so --

THE COURT: Where?
MR. PETERMAN : Sorry?
THE COURT: Where.
MR. Peterman: This is Exhibit 12 in Kidder's
2020 report, his first report.
MS. SRINIVASAN: Your Honor?
THE COURT: Just wait a second. I'm trying to find -- I don't see Exhibit 12. I'm seeing A, B, C, D.

MR. PETERMAN: So, Your Honor, I don't know if you are looking at the --

THE COURT: I must be looking at the wrong thing. Yep.

MR. Peterman: So if you look at the first line, you see it has Calendar, and there's data going back to 2012 .
that we've heard.
And so I think I've heard Mr. Weinstein say on the stand it would be overinflated. I think your expert is free to say that it's overinflated. But as to putting numbers and asking the jury to infer by how much it's overinflated, \(I\) don't know that that's fair game at this point.

MR. Peterman: Your Honor, this is certainly not going to be used regarding the overinflation point. This is going to be used solely for the point that Mr. Weinstein said 2017 only included downloads of Android 8 or 9 .

And we know the data itself includes downloads of all versions of Android. And if Mr. Weinstein was correct that 2017 was only Android 8, and Android 8 was released in August. So one would expect the number for 2017 to be a lot lower than the number in 2016 if you were only counting downloads from August onwards.

And again, for 2018, if you were only counting downloads from August onwards for 2017, the 2017 number would be much lower than the 2018 number. And I think that's borne out by the data, and that's the point that Mr. Kidder is prepared to make.

THE COURT: Where are these numbers for 2015, 2016, 2017, for Calendar and Gmail in his report?

THE COURT: All right. Counsel, we've got numbers in here graphing out numbers.

MS. SRINIVASAN: Yeah. Yeah. So this 2020 is before summary judgment in this case. What happened in the supplemental report is that Mr. Kidder looked at 2017 and 2018 for Gmail, for Calendar, for Sheets because that's what was in the case. He offered no opinion that you could infer from prior download data that the numbers were inflated.
This is totally new, and frankly, it's not supported by anything their fact witnesses have said, nor anything he has quoted in his report. It is very clear that, after summary judgment, after this 2020 report was issued, the universe for these apps, Calendar, Gmail, Sheets, was 2017, 2018. If he wanted to offer the opinion in 2022 that you could go back and infer something from prior application data, he could have, but he didn't. And this is entirely -- what counsel has described is a new opinion, no support for him to now come on the stand and say that. And he had a full opportunity to do it, because what was at issue in his supplemental report? 2017, 2018.

THE COURT: All right. Stand by for one
minute.
This document's going to be out. I'll sustain

MR. PETERMAN: Next one, Your Honor, is I
believe that they, Arendi, objects to us using testimony from Mr. Weinstein that Mr. Kidder was in the courtroom for.

THE COURT: Yes, I've looked at these. So 41, 42, 43, 44. This is similar to what I ruled on earlier.

MS. SRINIVASAN: Yes. Your Honor, with respect to 41 , if he wants to rebut it, that's okay. 42 to 44 , the idea that there was a slow rollout after

December 2017, again, all those 12 out of 13 applications were at issue for 2017 and 2018. In his ' 22 report, you won't find any mention about a slow rollout. He said it was enabled and that he was instructed to use

December 2017 as a date.
So those three slides are -- the idea that
there was some slow rollout or it shouldn't even be 2017, it really happened later in 2018, never disclosed in his 2022 report, which was, again, for the 12 out of 13 apps, about STS, 2017 and 2018. So if he's going to offer new opinion on this now, he had a prior opportunity to do that in his 2022 report.

THE COURT: I understand your argument on that. The objection on those slides is overruled. I carefully reviewed the reports; \(I\) think this is all fair game.

MR. PETERMAN: Your Honor, I believe 47, 48,
49, 53, 54, 55, 56, those all go to the same way as your earlier ruling, because the only issue was the text.
the court: Yep. Agreed.
MS. SRINIVASAN: Agreed.
THE COURT: And then 59 looks similar to
something I already ruled on?
MS. SRINIVASAN: Agreed.
THE COURT: 61?
MR. Peterman: Yes, Your Honor. My
understanding is that there is an objection to the title here, possibly. I think the point here, and this is covered in Mr. Kidder's report, is that if you exclude the
\(\square\) 凹 \(\square\) the royalties go down by approximately 42 percent. And Kidder raised this in Paragraph 154 of his 2022 report. And so we think it's disclosed, and we don't understand the objection.

MS. SRINIVASAN: Okay. We don't have an
objection in talking about his 42 percent calculation, but he can't be talking about already giving royalties that apply to Google, obviously, because that's a legal opinion. He can't do that. And that's the issue and concern that I raised.

THE COURT: All right. Seems like this one we ought to be able to resolve. Can we just change the
rollout.
THE COURT: So that has to do with Chrome, but she's right --

MR. PETERMAN: Yes.
THE COURT: -- about the other apps, right?
MR. PETERMAN: Yes. Yes, Your Honor.
THE COURT: All right.
MR. PETERMAN: The whole negotiation does -hypothetical negotiation takes place in December 2017 as opposed to 2012.
the court: Right. Okay. The objection on this one is going to be overruled. Of course you're free to discuss with him on cross regarding the situation we're in.

MR. PETERMAN: That's it, Your Honor. We appreciate it.

THE COURT: Okay. Let me just see if I have anything else I wanted to talk to you about before we bring the jury back in.

Just for purposes of the record, I just wanted to put on the record that my rulings on this and related issues reflect my finding that Dr. Weinstein's opinion on the stand was a different opinion than what he gave in his supplemental report. And the way I'm looking at it is this: He relied on a number of accused app installations,
but during trial, after the jury was selected but before we began testimony, what the accused apps were changed.

And so my view is that Google gets to rebut what I view as a new opinion. Arendi has pointed out that Mr. Kidder had his own opinion about what the lump sum payment would be if only the STS functionality were accused. That was his opinion. He didn't have an opportunity to respond to testimony from Mr. Weinstein regarding a royalty base that included only Chrome units with STS functionality because that was not
Mr. Weinstein's opinion at that time.
I don't think that Google was required to put on a contingency expert report about what Mr. Kidder's opinion would be if Mr. Weinstein changed his opinion because Arendi dropped a chunk of accused products. We will leave it at that.

Okay. Let's finish up the cross-examination.
Can you put the witness back on the stand.
Ms. Garfinkel, let's bring out the jury.
(The jury enters the courtroom at 12:22 p.m.)
the clerk: Your Honor, the jury.
THE COURT: Please be seated. Thanks for your patience.

Doctor, I will remind you, you are still under oath. Let's proceed.

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\section*{Fox - Cross}
didn't go to the documents that were pointed to.
Q. And you said that would take months and months of work, correct?
A. Eight pages of references, I think you gave a large number of pages, yes, that would take a while.
Q. And that work is not worth doing when you're trying to take a man's property away from him?

MS. ROBERTS: Objection. Argumentative.
THE COURT: Sustained. Please disregard the question.

BY MR. LAHAD:
Q. Well, it's not worth doing to show invalidity by clear and convincing evidence, correct? Is that your testimony?
A. I think I provided clear and convincing evidence.
Q. Right. But in your view, going through all the documents that the patentee gave to the Patent Office, that's not worth doing when you're trying to prove invalidity by clear and convincing evidence?
A. To show invalidity, one needs to show that something anticipated or something made obvious. If I had gone through more of those, I would have had even more arguments for invalidity, I believe.
Q. Well, there are many references on the face of the patent that are related to CyberDesk, correct?

MR. LAHAD: May I?
THE COURT: Yes. Thank you.
MR. LAHAD: Thank you, Your Honor.
BY MR. LAHAD :
Q. Dr. Fox, before the break, we were talking about the file history in front of you.

Do you recall that?
A. I do.
Q. And you mentioned that you got that file history from Google's lawyers, correct?
A. Yes.
Q. And I asked you whether or not you pulled a copy of it down from the PTO, the Patent Office yourself.

Do you recall that?
A. I don't know if you asked me that, but I didn't do that.
Q. And you didn't see a reason to do that?
A. No.
Q. You also mentioned that you didn't review each of the documents on the face of the patent, correct?
A. I guess you are referring to the 8 -page list; is that what you are referring to?
Q. Yes, sir.
A. No. I didn't review all of those. I went through and looked at the list and considered each of them, but I
A. A number of those are related to CyberDesk. That's true.
Q. Yes. And let's show you a demonstrative that Mr. Boles has prepared for us. On the right -- excuse me -- on the left is DTX-8, which you will recall is one of Dr. Dey's exhibits. I believe it's his CV, correct?
A. Could you point specifically to what you are referring to? There's a lot of stuff on this screen. Q. I'm referring to the left side of the screen. This is a list of CyberDesk references, right? It says "CyberDesk and Related Papers."
A. This looks like what's on the website. Is that what you're referring to?
Q. Well, it's DTX -- we can't really see it on the screen, but it's Defendant's Exhibit 8. Do you see that? A. I see it on the screen in front of me, yes.
Q. And that's a list of CyberDesk papers, right?
A. It is one list of CyberDesk papers.
Q. What I've done is match up with these numbers -sorry -- one thing that Mr . Boles has done is match up the references when using these numbers. I've got 1, 2,3 through 7 on this side, on the left side, and they correspond with the seven papers identified on the face of the patent. Do you see that?
A. They seem to correspond. Yes, I see that.

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Q. Okay. So the patent examiner had before it during prosecution at least seven references related to
CyberDesk, correct?
A. That's correct.
Q. And issued the patent nonetheless, correct?
A. That's correct.
Q. Now, as I understand it, you are relying on the

CyberDesk system, air quotes, to prove anticipation, correct?
A. Yes. That's the basis for the anticipation argument,
yes.
Q. You are using the CyberDesk system as part of
combinations to show obviousness, correct?
A. That's also true.
Q. You've never used the CyberDesk system, have you?
A. I have not.
Q. In fact, that's impossible because the CyberDesk
system no longer exists, correct?
A. Right. This was done more than two decades ago, yes.
Q. Yes. So we saw it was done more than two decades ago with -- in part by the gentleman we heard from, Dr. Dey, right?
A. He testified to his work on the system, yes.
Q. He talked about going to some conferences, right, and showing it off?
A. He presented papers at conferences, a big conference in the field of human computer interactions.
Q. Wrote a bunch of papers on it, presented it at conferences, and didn't keep a copy of it?
A. He did this as a graduate student. He did a better job than most of my students do in keeping up things. He has a website with a lot of details on it, but I don't have -- most people don't keep things for decades.
Q. This was his graduate student work, right?
A. It was part of his graduate work. His thesis actually was on a different topic. This was part of his research.
Q. I mean, this is what -- he's getting a master's or a Ph.D., what he's trying to do as his career, right? It's not just some kind of stuff on the side, woodworking beekeeping. This was his career, intended career, right?
A. He did more than most people would do at the time
with regard to documenting in the system, yes.
Q. But he didn't keep a copy of it, did he?
A. He didn't give us evidence of keeping a copy, no.
Q. He didn't keep a copy of it, did he?
A. As far as \(I\) know.
Q. Did you try to find a copy?
A. I was told there was not a copy.
Q. So you didn't try to find one. You are like, hey,

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there's no copy. You're like, okay, cool, thanks. That's what you did?
A. I didn't investigate further. Once I had
confirmation there wasn't a copy, I didn't think it would make sense to go searching around further for something that didn't exist.
Q. You didn't try to find a copy?
A. That's true.
Q. I mean, you've written extensively on the idea of digital libraries and storing digital information, right?
A. That's correct.
Q. And, of course, this CyberDesk system was digital
information, right?
A. That's true.
Q. You could store it on a computer, on a hard disc, on a \(C D\) or a floppy, depending on its size, correct?
A. Yes. There were different media forms.

Unfortunately, they tend to decay over time. So even if I saves things from that period, I'm not sure they still would work.
Q. Yeah, but, you know, if you really want to hold on to something, you would understand that media decays and get a new hard drive, put it on a new CD, if you really wanted to keep it, right, if you thought it was important?
A. The publication record and the other records that are

Fox - Cross
existing for this are sufficient evidence for most people in the field.
Q. Yeah. We're not there yet.

I'm just asking you about -- I mean, you are -- like I said, you've written extensively on digital libraries and storage, right?
A. If you look at my house and my lab, you will see all kinds of old junk that probably still doesn't work, even though I've kept it.
Q. And if you really wanted to keep a copy of something, you would take into consideration, for example, that the media would decay or -- right?
A. It's enormously expensive to try to reconstruct things and move them. Unfortunately, our society has not done a very good job of financing this kind of thing. There's very little support for doing that kind of work, especially after you've left an institution.

MR. LAHAD: If I could have -- I think it's Slide 13, Mr. Boles, from Dr. Fox's presentation. Yes. Thank you.

\section*{BY MR. LAHAD:}
Q. This is your slide describing what you say you relied on to understand CyberDesk system, air quotes, right?
A. It's a summary, yes.
Q. You would agree that the, quote-unquote, system that
you're relying on is -- when the evidence of the system that you're relying on is some kind of, like, Frankenstein, a little from here, a little from there, a little bit of demonstration, some engineer testimony and some publications; is that fair?
A. No.
Q. Well, you're using more than one piece of information to describe a CyberDesk system, correct?
A. Just if -- as if I took a picture of you from many different angles, those would be different parts of
evidence at the moment, yes. We need lots of information to understand something as complicated as CyberDesk.
Q. Well, let's talk about this evidence or this
information. Demonstrations, those are just documents showing how they work, right?
A. Demonstrations are not documents. They are
presentations in a public audience that demonstrate public disclosure.
Q. Well, the demonstrations we're using that you're relying on in this case, it's not -- you're not looking at videos of CyberDesk or anything like that. It's just testimony regarding demonstrations, right?
A. I'm sorry.

I'm relying on the fact that he gave public
demonstrations in large numbers to public audiences as
did you ask when was it no longer in existence?
A. I read Anind Dey's testimony. He explained that. I thought that was sufficient information.
Q. He explained when it went missing?
A. He said it went missing. He said it wasn't there. He didn't say when.
Q. He wasn't asked when.
A. I don't recall whether he was asked or not, but he said, from my recollection, that it wasn't there.
Q. Well, fortunately we have a transcript of what he said. Do you recall reading that transcript?
A. I do.
Q. Do you recall anything about -- anything in that
transcript about when CyberDesk went missing?
A. I don't recall such, no.
Q. And the documents that were submitted to the Patent Office regarding CyberDesk, they reference the website, right?
A. I think so.
Q. Okay. So the examiner could, looking at those documents, be apprised of the website containing this information, right?
A. I guess that's possible.
Q. It's also possible -- and the website contained some of these demonstrations, correct?
part of his public disclosure of the system.
Q. The FCE website, that, too, is a collection of documents, correct?
A. It's a web page and it has links to different things. Documents -- depends on your terminology, whether they include links or not. It is an active site. It points to different things making connections. So it's hard to flatten the web to turn into documents. The web is a linked collection of information. So it's hard to just put it -- pack it into something. It has a different kind of existence, hypertext in the web, we're all familiar with, is much more than just documents. It's a whole collection, network of connections.
Q. It's not like there's a working version of the quote-unquote system on the website, is there?
A. It was a pointer to a self-contained version that is mentioned on the website, which doesn't exist anymore.
Q. Yeah. When did it go missing?
A. I don't know.
Q. Didn't ask?
A. No, I didn't ask.
Q. Was Dr. Dey -- sorry. Go ahead.
A. I was told it was an existing system, so I didn't go investigate further, as I've already said.
Q. Did you ask -- well, if it was an existing system,

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A. The website discusses a number of scenarios which were used for demonstrations. And a demonstration's different when you give it in person than if you look at some screens, as my testimony is different from the slides that we've shown.
Q. Your testimony is different from the slides that you've shown?
A. Yeah. I'm saying more words than just what are on the screen.
Q. Same concepts though, right?
A. When I give a demonstration, I answer people's questions, \(I\) chose different kinds of things. So it's a different entity than just a presentation in terms of slides.
Q. You agree that the capabilities disclosed in these publications on the face of the CyberDesk, on the face of the ' 843 patent, you agree that those publications don't anticipate the patent, correct?
A. It's the system that I'm arguing is anticipating.
Q. Right.
A. Not the publications.
Q. In your view, publications themselves do not anticipate the ' 843 patent, correct?
A. My discussion is about the system and that's my argument. I didn't consider whether the publications
Q. You didn't consider whether the publications anticipate it?
A. I didn't look at publication by publication and say, "Does this one cover everything?" As far as I was concerned, my charge was to look at the system as a whole, which is what I did.
Q. Okay. So you weren't asked to just look at the publications and see if they anticipated?
A. I considered whether the system anticipated. The system includes more than the publications, so it's much better to look at the whole than look at the pieces.
Q. Well, I hear you. My question is very simple. You were not asked whether the publications on CyberDesk anticipate the ' 843 patent, correct? You were not asked -- that was not part of your assignment, right? A. I don't recall that being my assignment. I'm not sure, but \(I\) don't recall that being my assignment.

I don't think it's necessary. I think the system is the right way.
Q. I hear you. We're going to talk about the system a little bit more. But your testimony to this jury is you don't recall what your assignment was, or rather -- let me strike that.

You don't recall whether or not -- looking at

\section*{Fox - Cross}
in that regard, I used his testimony to make clear what I understood from the publications.

So if we're using strict terminology and making sure everything is specifically there, then the anticipation argument is much more complicated. And I didn't think it was necessary. Certainly the anticipation argument, if we switch to obviousness, it would have been obvious from the publications, I believe.
Q. You also -- hold on now. You are not relying on CyberDesk publications alone to show obviousness, are you? You're relying on the system, right?
A. You asked for my assessment now thinking of things, publications. If I were to think of the publications, as you just asked me to do, and try to say whether it made obvious the claims of the ' 843 patent, I think that's the case.
Q. Okay.
A. But I have to do a bit more thinking to make sure about that. I believe that's the case.
Q. Okay. Same thing for anticipation. Go.
A. I think I've already answered this. I think I've said that there were things in the publications that were not so clear. And it was useful to have Anind Dey's testimony to make those things clear, so that it was an anticipation situation.

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anticipation by the cyberDesk publications only, you don't recall whether that was part of your assignment?
A. There might be some statement in my report that says something, but I don't remember at this time.
Q. It wasn't part of your assignment because the CyberDesk publications do not anticipate the ' 843 patent, correct?
A. I didn't make that assessment. If I remember -- I can't remember whether I made that assessment, but I can't think at this moment whether that's the case or not. I'd have to investigate more. It wasn't necessary because I looked at the bigger picture.
Q. Well, investigate what? You have the documents, right, and the patent, and Court's constructions. What more do you need?
A. When those -- it's something bigger -- covers something, I don't see a reason to be discussing why whether a piece of it also is sufficient.
Q. Well, I know that wasn't your assignment. I get that. But can you do it for me now? Can you just give me an answer on whether the CyberDesk publications anticipate the ' 843 patent? Yes or no?
A. There were parts of my argument that I made use of Anind Dey's testimony where it was not clear from some of the publications whether certain things were taught. So

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Q. Got it. So, documents alone, not so clear. Accordingly, documents alone cannot anticipate by clear and convincing evidence, correct?
A. I'm trying to make an off-the-cuff answer to your question. That sounds possible, but again, I don't think it was necessary to even consider that.
Q. Of course because the conclusion would have been no anticipation, right?
A. (No audible response.)
Q. I'm sorry. Did you answer, sir?
A. You didn't ask a question; you made a statement.
Q. No. It was a question, comma, right: Because the conclusion would have been no anticipation comma right, question mark?
A. I didn't hear the last part. So could you repeat the question?
Q. Sure. You didn't feel that it was necessary to do the analysis because the conclusion would have been that there would be no anticipation, correct?
A. No. I didn't do the analysis because I had the conclusion from looking at the system, and it wasn't necessary to look at a subset of the evidence and decide whether the subset of the evidence would also produce the conclusion I had for the system.
Q. All right. So the sole basis for your anticipation
exists, except in the memory and some writings of memory of Dr. Dey and some writings, correct?
A. Most of the systems from prior years are documented less well than this particular system was documented. I had clear and convincing evidence that this system did what it did at the -- in the second instantiation before the critical date and anticipated the 843 claims.
Q. So on one hand you're telling me this is a well-documented system, better than others, I had what I needed. And on the other hand you're saying, I can't tell from the documents, things aren't clear from the documents. Is that what we're hearing today?
A. Documents that are listed here as publications are on the right-hand side of this particular screen which describes four different sources of evidence. The combination of that information from all those different sources, just like I explain with my students in class, I've done interviews of them, I've looked at reports, I've looked at presentations, that's how I understand the system and can assign them grades in the next week.

So the preponderance of the evidence is the combination of all these things.
Q. What did you learn from Dr. Dey's testimony about CyberDesk that wasn't in these documents?
A. I mean, if you recall, in my testimony there were a number of slides where I had Dr. Dey's testimony. And I explained that they filled in and clarified what \(I\) was concerned with. So those are examples of what I learned through Dr. Dey's testimony. It's a long, long
deposition. I went through the whole thing. And we heard a section of it last week that explained lots of things and went through carefully and explained how the claims were taught by this system.
Q. Okay. Give me an example, please, of something you learned about CyberDesk from Dr. Dey's testimony that wasn't in the documents.
A. Okay. So one of the things that I learned was that the -- what's referred to as the document editing program in some ways or the first computer program was something where you could do editing in the CHI 97 paper, when we looked at the screen there, we saw on the screen was from an e-mail message and Figure 3 it described Mail Reader. So readers are not typically things where you're sure that you can do editing, but he explained in his testimony, described that that indeed could be edited. So that's something that was not clear from that publication.
Q. So your testimony is that when you look at Reader, it's ambiguous as to whether or not something is editable, the document is editable?

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\section*{Fox - Cross}

So the system works by combining two different things, a first program and a second one. And there are many different first programs that can be used, as he explained.
Q. And you have no trouble relying on the uncorroborated testimony of Dr. Dey to prove invalidity by clear and convincing evidence?
A. He's the creator of the system, and the system has been described as handling lots of different first programs. And he gave an example, and he explained that was the case. And if we look at the FCE website, the thing that we see in the second column over there, you see there are lots of different programs that are mentioned there. I pointed out and another slide of mine pointed out said Notepad was one of the desktop services. So there's a lot of evidence that supports what he said, and I believe it. He's a highly distinguished person. He's a dean --
Q. Dean at the University of Washington computer science school, right?
A. No, no. There's a different department for computer science. He's in the iSchool, the Information School. It's a different part of the campus and not the one that you were talking about the other day.
Q. And you would agree -- so let me get this straight.

Again, on one hand, you are saying CyberDesk, well documented, more than normal, and there's no proof, no evidence other than Dr. Dey's testimony about documents being editable?
A. I don't find that strange. I've tried in some of my older systems to get them, to bring them back to life, and it's really a hard thing to do.
Q. On one hand, you mentioned it's -- strike that.

On one hand, you mentioned that CyberDesk was well documented, above average, but in the publications that we've seen, there's nothing in there about editable text so you have to go rely on Dr. Dey's uncorroborated testimony.

That's your position, correct?
A. I think I've already said that the website talks about a number of different services, including Notepad, so that's another bit of documentation. Not in the publications, but on the website.
Q. Well, again, as we agreed earlier the publication do refer to the website right?
A. That's true.
Q. Yeah. So a person of ordinary skill in the art person, like the patent examiner, could look at the publications, see, hey, there's a website -- in fact, actually, let's pull it up.

DTX-14. And just go straight to the bottom paragraph. Thank you.

BY MR. LAHAD:
Q. There's the website, the CyberDesk website in DTX-14, correct?

Read the title of the document, please.
A. It says, "A demo version of CyberDesk is available at," and then it gives the website.
Q. Right?
A. "Video accompanying the paper summarizes CyberDesk and shows more sample scenarios. Code samples are
available at" -- and it gives another address.
Q. Okay. And so you testified earlier there's reference to Notepad in the documents, correct?
A. On the website.
Q. Okay. On the website. And so let me ask you this question: What did you get out of Dr. Dey's testimony about how CyberDesk works that's not in the documents or the website pointed to by the documents?
A. So the example I gave before is that he confirmed that one could edit in the first computer program, essentially.
Q. And there's a question about that from the documents and the website?

\section*{Fox - Cross \\ version of this was IAD. So that's what I was actually} using on the system.
Q. You understand that these PowerBooks, those didn't come from Apple, right?
A. Well, they were manufactured by Apple.
Q. Well, no, you recall Mr. Miller's testimony that he found and purchased them?
A. As I said, they were manufactured by Apple.
Q. Yeah.
A. He purchased them later, yes, I understood that.
Q. Right.

No questioning from Google's lawyers about where and when he came to have these laptops, right? Didn't hear anything like that, did we?
A. We had his testimony where he talked about doing that, in his deposition, which we all heard last week.
Q. Well, you recall that he said that he set up these MAC Books about four or five years ago in that deposition. Do you recall that?
A. Actually, they're PowerBooks. He said he purchased them and he set them up. He had the old software, and he installed that. That's what he said if I recall in his deposition.
Q. We don't know where that software came from, do we?

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A. He was under oath when he testified to that.
A. It wasn't clear from the other places that I looked at. He made it very clear.
Q. Similarly --

MR. LAHAD: You can take that down, Mr. Boles.
BY MR. LAHAD:
Q. Similarly, you're relying on a collection of materials to show what ADD did and when it did it, correct?
A. Yes. I had a similar slide to the one you showed with regard to CyberDesk pointing out the different sources of evidence that were used, including the videos that we all saw last week.
Q. I want to talk about those videos and the laptops. You understand that those laptops, those didn't come -let me step back.

You had a portion of your direct testimony where you purported to use the actual ADD functionality, right?
A. Yes. So there's laptops sitting on the desk over there that I referred to.
Q. Yes, you know, these --
A. And what I used -- can I finish?
Q. Yeah -- sorry. Go ahead.
A. So on the laptop, was a program called IAD. If we remember, Miller's testimony, he explained that ADD was the software system that was built, and a productized

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Q. We don't know where that software came from, do we?
A. Well, if you look on the machine and you run it, it
has information about that, but I don't recall the
details.
Q. He wasn't asked details during his deposition, was he?
A. His deposition was quite long. We only heard a small portion of it.
Q. And we didn't hear how he came to get the software,
did we?
A. I don't recall if there were other questions in his deposition that was originally taken. We didn't hear that last week.
Q. You understand that Mr. Miller put together these laptops in 2013 or 2014, right? That's when he put these laptops together; you understand that, right?
A. I haven't done the arithmetic to figure out when he did the deposition and when he obtained them, how many years ago. But if you say that.
Q. I mean, this is going to be easy, I hope. 2019 minus five years is, 2014?
A. Sounds right, yes.
Q. All right. So assuming that, he put these laptops together in 2014, right?
A. Yes. That's what the arithmetic tells us.

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Q. So the devices that you're relying on to show invalidity are not from the late '90s, they're from 2013 and 2014, correct?
A. No. The machines are from the ' 90 s and the software is from the 90 s .
Q. We don't know that, do we?
A. We have his testimony as far as that's concerned.
Q. You are -- as part of your opinions, you're combining CyberDesk and ADD plus Word, right?
A. So my obviousness arguments were categorized. And I had those three systems in four different combinations.
Q. Let me step back. Did you make any attempt to verify the vintage of what was going on, on these laptops?
A. What do you mean by "vintage"?
Q. Did you make any effort to verify that the software and programs and hardware and everything that these laptops purport to be, did you make any attempt to independently verify the accuracy of what they're represented to be?
A. I looked at the machines, and I saw the date of production. I looked at the running system. I looked at the screens and the copyright notices and other kinds of things, so I did some work about that, yes.
Q. Of course, the creator of \(A D D\) was deposed in this case, right, Dr. Dey, right?

Fox - Cross
"Hey, would you have been motivated to combine CyberDesk with Microsoft Word 97?"
A. That's a true statement as far as I know.
Q. Same thing with ADD. You're relying on ADD plus Microsoft Word 97 to show obviousness, right?
A. That's one of obviousness cases, yes.
Q. And we heard from Mr. Miller, and at no point during that deposition did we hear any questioning about whether or not he would be motivated to combine ADD with Word 97, correct?
A. I don't recall him being asked that, no.
Q. Nothing about that in either of those depositions, correct?
A. I don't recall either of that, yes.
Q. If the jury finds that there is no motivation to combine the systems you allege to be combined, then the claims are not obvious, correct?
A. So I presented four different obviousness arguments. Are you talking about all four of those?
Q. Well, you presented CyberDesk plus ADD, right?
A. Yes.
Q. If there's no motivation -- step back. Strike that. If the jury finds there's no motivation to combine CyberDesk with ADD, no obviousness, correct?
A. If the jury were to disregard the direct pointer from
Q. Dr. Fox, I'm on limited time could you answer my question, please?
A. Could you repeat it?
Q. Sure. If the jury finds that there was no motivation to combine CyberDesk plus ADD, there is no obviousness, correct?
A. For that of the four cases, that would be the situation, yes.
Q. And same thing for the combination of ADD plus CyberDesk, right? If the jury finds there's no motivation to combine in that direction, there's no obviousness, correct?
A. If, in spite of evidence, they find there is no
additional motivation to combine, then that's what they decide.
Q. And if the jury finds there is no motivation to
combine CyberDesk with Word 97, no obviousness, correct?
A. If the jury decides that, they make a decision.
Q. Say that again, please?
A. Again, if the jury makes a decision, then they make a decision.
Q. Well, if their decision is that there is no motivation to combine, then there's no obviousness, right?
A. If they make that decision, yes.

ADD plus Word 97, there is no obviousness, correct?
A. Yes. The jury is empowered to make these decisions, yes.
Q. All right. So using your bowling ball analogy, if
there is no motivation to combine, that's a gutter ball, right?
A. That's the situation for the obviousness, but you didn't give one for the anticipation.
Q. Well, there's no motivation to combine in the context of anticipation, right?
A. That stands on its own. You don't need the obviousness.
Q. No motivation to combine means gutter ball for obviousness, right?
A. Yes. You don't get a second attempt if you can't combine the things, certainly.
Q. In response to one of my questions, you said, "Well, if you took a bunch of different pictures of me."

Do you recall that?
A. I recall testifying to that, I'm not sure if you asked the question.
Q. That happens a lot. A picture of me or a set of pictures of me, that's not a system, is it?
A. Pictures are documentation of something.
competing prior art proposals, understanding Arendi's point that Google had already agreed to proposals. And I will take that into account. But \(I\) was wondering why we're disputing what the relevant date is for some of this prior art. Does it even matter given the evidence we've heard? We had an argument about a '97 date versus a '98 date. Can we get that worked out?

MS. SRINIVASAN: We can try to confer about it maybe over lunch, but we have the ' 97 date, which was the operative date that had been used in the jury instructions until yesterday. So I think that's probably something we should talk about. We got it back last night with the addition of -- with the other date as well.
the court: I don't think I was focused on the -- the dates of this prior art as it was coming into evidence because \(I\) didn't understand that to be a particular dispute. But my recollection is that, regardless of which date we used, the '97 or '98 date, there wasn't really a dispute. But if you can all confer on that, that would be helpful. That would streamline.

MR. LING: That was our understanding as well, Your Honor. So we weren't really focused on that until we were preparing for the -- our case in chief. And so there is no evidence of an earlier invention date, so we don't really think there should be a dispute.

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the court: Not having had the ten-year history that you all have with this case, I don't know how we came up with what we came up with. So understanding that I could be opening up a can of worms with anything I do, you all know better about this than I do. So why don't you take a look at that and also take a look at version of the Federal Circuit Bar Association Model Jury Instructions where there is no dispute about dates, because I think we might be able to maybe crib some language from that could help with us. Okay? We will be in lunch recess.
(Whereupon, a recess was taken.)
THE COURT: All right. Please be seated.
MR. UNIKEL: Your Honor, may I ask a 10 -second
question?
THE COURT: Yes.
MR. UNIKEL: I know both parties have to
reserve enough time for closings, and I was wondering if we can get some count from the court as to --

THE COURT: That's what I'm working on right now. So for today, I'm charging as of this minute, an hour 18 to Arendi, and hour 12 to Google. So the time -I won't charge the time before the jury came out to either side as it took a significant amount of time reviewing expert reports in chambers so that I could rule on

Arendi's objections. I won't charge that time to Arendi,
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but I will charge the time to Arendi after I came out and took the bench but before we brought the jury back out. So I think that's fair to both sides because I didn't charge additional time to Arendi, which I could have spent on the bench reviewing expert reports to see if they were inconsistent. That's the way that worked out.

So based on that, by my rough calculation, it
looks like Google is at 12:26 -- no, sorry, Arendi is at 12:26. Google is at 10:41.

Does that sound right to everyone?
MR. UNIKEL: I believe so, Your Honor.
MS. SRINIVASAN: Sounds right, Your Honor.
the court: All right. So that means we have
to reserve an hour for closings, that Arendi's got a
little bit over an hour left for examinations. And Google's got a couple hours more than that, almost.

Okay. Are we ready to bring the jury out?
MR. PETERMAN: Your Honor, just to note, this
is Mr. Kidder's testimony. There will be two segments within his direct where we'll need to close the courtroom talking because we're talking about other settlement agreements.

THE COURT: Okay. How about cross? Can we keep it modulated?

MS. SRINIVASAN: We will try to do that, Your

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THE CLERK: Thank you. Please be seated.

DIRECT EXAMINATION
BY MR. PETERMAN:
Q. Good afternoon, Mr. Kidder.
A. Good afternoon.
Q. Would you please introduce yourself to the jury.
A. Sure. My name is Doug Kidder.
Q. What is your area of professional expertise?
A. I'm a damages expert. I calculate damages in cases such as this.
Q. And did you prepare some slides to accompany your testimony today?
A. Yes, I did.
Q. What is your professional expertise as is relevant to this case?
A. So I'm a managing partner with a small firm that we, basically, do damages calculations. I have about 25 years experience working with intellectual property matters. I've bought and sold my own businesses before, and I've testified in over 70 cases, over 30 of which involved patents.
Q. And what experience do you have in licensing
practices?
A. So in the course of my career, I figure I've read

over a thousand different licenses. It's just -- kind of comes with the territory.
Q. And can you give the jury a little bit of
understanding of your educational background and other accomplishments?
A. Sure. So it's not on here that I graduated from Milford Miller High School, Baltimore County, and went to Amherst College, and then went to UC Berkeley for a master's of science.
Q. And what about your professional affiliations?
A. I was Adjunct Professor at Golden Gate University, which is a local college in the San Francisco area. And I was teaching a course on damages in their school of accounting there. And I'm also a member of a couple of societies that people like me tend to join.
Q. Mr. Kidder, your firm is being compensated for the
time that you've spent working on this case, correct?
A. Yes.
Q. And will the outcome of this trial have any impact on your compensation?
A. No, it will not.

MR. Peterman: Your Honor, we tender Mr. Kidder as an expert in the valuation of intellectual property, calculation of patent damages, and licensing.

MS. SRINIVASAN: No objection.
request wrong?
A. Because it's completely out of scale with what
they've settled for in other cases. So you can see, I just put together a quick graphic here showing that, you know, Arendi's asking for \(\$ 45\) million. They settled for
\(\square\) and ■ ■ And as I'll
describe later, the license that would be extended to Google is for a far shorter period of time for a far shorter extent of accused use. One would expect the payments to scale with the amount of accused products.
Q. So Mr. Weinstein is making a 45 and a half million dollar damage calculation for Google.

What demand did he make the Apple litigation?

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\(\square\)
Q. Mr. Kidder, we are going to go through your opinions in a step-by-step manner, but let's get back to some of

BY MR. PETERMAN:
Q. Mr. Kidder, what were you asked to do in this case?
A. I was asked to calculate damages, assuming that the ' 843 patent is valid and infringed. So I take that as an assumption. So I was asked to calculate damages, and also reply to the opinions that were expressed by
Mr. Weinstein, essentially my counterpart, on Arendi's side.
Q. Mr. Kidder, if the ' 843 patent is valid and
infringed, what is your opinion on the appropriate measure of damages that Google would owe Arendi?
A. It is \(\$ 500,000\). It is -- you know, it's not the \(\$ 45\) million that Mr . Weinstein calculated.
Q. Now, Mr. --

MR. PETERMAN: Now, at this time, Your Honor, we actually do need to seal the courtroom.

THE COURT: All right. Ms. Garfinkel, seal the courtroom.
(The following discussion is held under seal: THE COURT: The courtroom has been sealed. MR. PETERMAN: Thank you, Your Honor.

\section*{by MR. PETERMAN:}
Q. Mr. Kidder, on a high level, why is Arendi's damages
the basics first.
Will you tell the jury what evidence you reviewed in order to form your opinions here?
A. Sure. It is very similar to what Mr. Weinstein looked at. I started by reviewing the ' 843 patent, and I looked at the existing licenses. And there are four up there you should probably recognize by now: Samsung, Microsoft, Microsoft Mobility, Apple. And then the fifth license with InNova, which you've heard a little bit about. I also reviewed the financial records that were produced by Google in this matter, some limited financials from Arendi, and other evidence, just e-mails, web searches, documents, kind of a catch-all.
Q. Mr. Kidder, what is your understanding of the products that are accused here? Start with the devices first.
A. So the accused devices here Pixel 2, Pixel 3 family of devices that were sold with Android 8 with STS on them. So there were some devices sold prior to that, that didn't have Android STS, but it's only those that were sold after December 5, 2017.
Q. And with respect to the apps, what is your understanding of the accused apps in this case?
A. Again, there are 12 apps here, and I think you've seen this list previously. So it's any app that was
downloaded from Google between December 5, 2017, when Android 8 with STS was enabled, to November 10, 2018, when the patent expired. So it's the accused apps here are all the ones downloaded from that period.
Q. Mr. Kidder, what were Google's revenues for the apps that are accused in this case?
A. So the total revenues here for the accused devices, the Pixel 2 and 3 in that time frame, is \(\square\). And the accused apps, which is the apps that were downloaded, again, between December 5, 2017, and November 5, 2018, it's about ■, leaving you with a total of about in accused revenue here.
Q. And what is the basic measure of damages that you applied in this patent case?
A. So the -- you should recognize this slide from

Mr. Weinstein's. We're all doing the same thing here, which is that the measured damages is a reasonable royalty for the use made of the invention by the infringer.
Q. Mr. Weinstein mentioned Georgia-Pacific Factors, did you also use those?
A. Yes, I did.
Q. And in addition to the 14 factors that are listed here, is there a 15 th factor that you also applied?
A. Yes, there is. So the 15 th factor is really this

\section*{Kidder - Direct}
was asserting that Google was infringing on a patent that it had. And so inNova, Google paid inNova. So it's -- in the jargon, it's in-licensing versus out-licensing. This is Google taking a license to something.
Q. So how much was paid for each of these settlement and license agreements?
A. So again, these are numbers that I think we're generally familiar with. \(\square \square \square \square\) And InNova received \(\$ 625,000\) from Google.
Q. Now, in front of you in the binder, there is a tab that's marked DTX-499.

Do you see that?
A. Sorry. Yes, I do.
Q. Take a second to refresh yourself with the document, and the first question is, what is the document?
A. So this document is the license between inNova and Google.
Q. And is this the inNova agreement that you just referenced?
A. Yes, it is.
Q. Did you rely upon this inNova agreement as part of the opinions you are relying on in this case?
A. Yes.
notion of a hypothetical negotiation, which I thought Mr. Weinstein did a good job explaining the basic idea of the Georgia-Pacific analysis and the hypothetical negotiation, this idea that the parties sit down around the time that infringement began and negotiate the license. And the question is, what's the opinion as to what that license amount would be.
Q. And in general, how did you apply the Georgia-Pacific factors here?
A. So the Georgia-Pacific analysis is, basically, you start, it's like valuing real estate or valuing a car. The first thing you do is you look for comparable transactions. What did people actually pay for this property or similar properties. And then you adjust it up or down for various differences between comparables and the property that you're trying to evaluate.
Q. So what did you determine in this case were comparable licenses?
A. So there were four licenses I viewed as comparable. There was a settlement agreement with Apple, settlement agreement with Samsung, settlement agreement with Microsoft, and the settlement agreement with inNova.

Now, the inNova one is a little different. I mean, you've heard about Apple, Samsung, and Microsoft repeatedly. The inNova one was a license in which inNova

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MR. PETERMAN: Your Honor, we move DTX-499, the inNova license, into evidence.

MS. SRINIVASAN: No objection.
THE COURT: It's admitted.
(Exhibit DTX-499 is admitted into evidence.)
BY MR. PETERMAN:
Q. Now, Mr. Kidder, why is it in your opinion that inNova is a comparable license?
A. So it's comparable in the sense -- in sort of two senses. There's economic comparability, and then this is a license for, turns out to be just three patents. There is one that was asserted against Google, an inNova license, just two other patents. So it's relatively simple.

There are a lot of licenses you see that are broad portfolio licenses that one company may take a license from another for a hundred different patents. And that's, in an economic sense, not comparable to what we're looking at here.

It's also comparable from a technology perspective in that it licensed a similar patent. The patent is similar technologically to the ' 843 patent.
Q. And how do you know its technologically comparable?
A. I relied on the opinion of Dr. Martin Rinard for that.

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Q. And how comparable are the rest of the three licenses that you relied upon?
A. Well, they're all very comparable in the sense that the 843 patent was licensed by every one of Apple, Samsung, and Microsoft.
Q. Now, you mentioned under the Georgia-Pacific factors you need to make adjustments based on the licenses. What is the first adjustment that you made here?
A. So the first adjustment \(I\) made was -- the jargoning term for it is extend of use. In other words, what -- how much in revenue is being accused or infringing by Arendi for each of the other licensees. And so in Apple's case, the accused products were some of their big sellers -- it was phones, tablets, PCs -- over a period of, I think it's nine years.

So it amounts to \(\$ 422\) billion of revenue that Arendi was accusing.

Similarly, \(\square \square\) Excuse me. For Microsoft, it was Microsoft's Office product, and again, over the multi-year term of that

\section*{} Microsoft.
Q. Now, I understand that Mr. Weinstein looked at units -- number of apps, number of devices -- as opposed
to revenue.

Why did you approach this as looking at revenue as opposed to units?
A. Well, so the problem with units is that they're different things, right, and, you know, the Apple units and the Samsung units being phones and tablets, they're sort of the same thing. But when you move over to Microsoft and you start trying to equate one unit of Microsoft office, which, in and of itself, you wonder how to count the units there. Is that one unit, or is that -Word plus Excel plus PowerPoint plus Outlook -- is it four units?

So "unit" becomes kind of this funny and sort of indeterminate number. But if you look at revenues, revenues are what the company's received from selling their products. And that's what profits are made off of. And then at the end of the day, what I'm talking about is money, so I focused on revenues.
Q. And how did you determine the revenue numbers that you have here for Apple, Samsung, and Microsoft?
A. It was a combination of evidence that was provided by Arendi and also just public -- you know, you go and you do searches and you try to understand to the best extent you can, you know, how much Microsoft made selling Office over those nine years.

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Q. Now, what's the next step in your analysis, Mr. Kidder?
A. Well, you compare that to Google's revenue, which we just saw before. And you can see that Google's revenue is very much smaller than the accused revenue for \(\square\)

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\(\square\) And I did not do any scaling for inNova because that's Google on Google. So that would leave you with \(\$ 625,000\).
Q. So, Mr. Kidder, how do the number of patents at issue in this current litigation compare to the number of patents at issue in the other litigations?
A. So what I did here -- so the short answer is, there's only one patent here; there are multiple patents in the other litigations. And what I've done here is I've just prepared a chart in which you can see -- excuse me -under -- in the columns under each of those license names is the number of patents.


Google got a license to three patents plus seven patent applications.

So they're all sort of bigger things than just the ' 843 patent.
Q. So, Mr. Kidder, why did you feel it was important to point this out to the jury?
A. Well, it's, you know, it's a comparable in the sense that, you know, all of these licenses are to the ' 843 patent, but all of the licenses also included other stuff that has to have some value.
Q. Going back to your house analogy, what effect does

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\$45 million has got to be attributable to the other

license to.
Q. Now, what about the license terms, meaning, the length of the license? How do those compare between the license matter in the Google case versus the licenses in those other cases?
A. So Apple, Samsung, and Microsoft all got licenses for approximately 9.7 years. That was the amount of time they had before the patents all expired. And in the inNova license, Google got a license to patents that lasted for about 12.4 years. And in this case, Arendi is accusing Google of using its patents for an ll-month term.

So in this case, the license term for Google is vastly shorter than the license terms for the other patents -- excuse me -- the other agreements.
Q. And what effect does the shorter duration for the Google license have in your opinions?
A. It would tend to reduce it.
Q. How much of a downward effect?
A. Well, it's hard to, again, put an exact number on it for a couple of reasons. There doesn't tend to be a linear relationship between the length -- the term of the license and the amount paid.

And secondarily, this is partly also covered by
A. It would reduce it from the starting point. So if you scale it by revenue, you get numbers in blue at the top. But you also recognize that Google is getting a license to fewer things. So you -- that suggests a downward adjustment.
Q. Do you have a precise amount of downward adjustment that you are applying?
A. No, I don't. And the reason for that is that patents can have widely different values.

\section*{\(\square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square \square\)}
- The only thing you can be sure of is that the additional patents are worth something.
Q. Now, did Mr. Weinstein account for additional patents in his analysis?
A. No, he did not.
Q. Do you believe this failure to account for additional patents was an error?
A. I do.
Q. Why is that?
A. Because, basically, it inflates his opinion. It accords no value to it, and yet there had to have been some value. So some part of his calculation of

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scaling for revenue because the revenues I looked at were over the entire term. It has some downward affect, but it's not a dramatic effect.
Q. So I see a lot of red arrows here.

What does this mean for your opinion?
A. Well, what it means is that you would start with the numbers in blue up there, which are the scaled revenue numbers, and you would adjust them downward for the number of licensed patents and the shorter term.
Q. Are there any considerations that would increase the numbers upwards?
A. Yes.
Q. What consideration is that?
A. That's the concept of known, valid, and infringed. And, again, Mr. Weinstein described this a little bit, so I won't belabor the point. But in this hypothetical negotiation between Arendi and Google around the date when Google first starts using this technology, the assumption is that the patent is valid and the patent is infringed. And this is not a situation that you see in a sort of a nonhypothetical negotiation license in the sense that in, not all, but in many negotiations, the licensee says, "Well, I'm not sure your patents are valid. I'm not sure I infringed," and that sort of gives them some leverage to negotiate downward on the amount they want to pay.


Q. So, Mr. Kidder, considering all these different factors, what is your opinion as to the amount of a reasonable royalty, assuming that Google is found to infringe the ' 843 patent and it's also found valid?
A. Well, my conclusion, as I stated earlier, is \$500,000.
Q. And how did you arrive at \(\$ 500,000\) given all the information you presented to the jury?
A. Well, what I did was that I very much followed what you're seeing on the screen here, and then sat back and thought about, well, as a damages expert, what I'm trying to do here is, I'm thinking about validity and infringement. I'm trying to be as conservative as possible. I'm trying to step back and give Arendi as much credit as I think it might be due in a hypothetical negotiation. And I think about where this might come out.

And when I looked at the evidence, to me, the licenses that were most similar here to what we're dealing with Google are the Apple and Samsung licenses. Right.

Microsoft is a different thing. Microsoft, they're licensing it for use in Office, which there's no sort of equivalent comparable product at Google. So the two that are clearest to me are Apple and Samsung. And I believe I've been very conservative in the \(\$ 500,000\) opinion.

MR. PETERMAN: Thank you. Mr. Spencer, you can

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going to use it for demonstrative purposes rather than for admission.

THE COURT: All right. Let me see counsel at sidebar briefly.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: Counsel, my recollection is that I said that this exhibit could be admitted to the extent he wants to highlight it, and he can make that into a demonstrative.

MS. SRINIVASAN: Objection withdrawn.
MR. PETERMAN: Thank you, Your Honor.
(Whereupon, the discussion at sidebar concludes.)

MR. PEterman: We move to admit DTX-1148 into evidence.

MS. SRINIVASAN: No objection.
the court: It's admitted.
(Exhibit DTX-1148 is admitted into evidence.)
by mR. PEtERMAN:
Q. Mr. Kidder, what's being reflected here on the first page of this exhibit?
A. So this is the total number of count of devices for Pixel 1, Pixel 2, Pixel 3. And you can see the sources
take that down.

Your Honor, we can open the courtroom for this next section.

THE COURT: Thank you. Let's unseal the courtroom.
(Whereupon, the sealed discussion concludes.)

\section*{By MR. PETERMAN:}
Q. Mr. Kidder, in your binder you have Exhibit DTX-1148.
A. Yes, I do.
Q. What is this document?
A. This was an exhibit that was attached to Mr. Weinstein's report, maybe it's two separate exhibits, but they were exhibits to Mr . Weinstein report.
Q. And did you rely upon this document in forming your opinions with respect to this case?
A. Yes, I did.
Q. In general, what are the contents of the exhibit?
A. So what's in the exhibit is, basically, it's a count by Mr. Weinstein of the total number of units of accused products and between 2012 and 2018 with a lot of blanks.

MR. PETERMAN: Your Honor, we move to admit
DTX-1148.
MS. SRINIVASAN: My understanding was we were

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down at the bottom come from a couple of Google documents and deposition of Sai Marri.
Q. And who is Sai Marri?
A. He's a Google employee that was the individual who produced these documents.
Q. And did you review this deposition of Mr. Marri?
A. Yes, I did.
Q. And is it your understanding that some of the numbers here within this exhibit are no longer accused?
A. Yes, that's correct; this is an older version.
Q. And what numbers need to be removed?
A. So you need to take out the entire row that says, "Pixel 1." I'm hoping that we can do that graphically. Is there a way to sort of highlight that? Oh, look at that. Okay. Great.

And my memory is that the Pixel 2 started selling a little before -- I think it started selling in October 2017. So part of the Pixel 2 number, 926,349, is also -- I wouldn't erase the whole thing, but recognize not all of that is currently accused.
Q. And to be clear whose exhibit is this?
A. This is Mr. Weinstein's.
Q. And let's go to the next page of this exhibit. What's being reflected here in the second page of DTX-1148?
A. So this is Mr. Weinstein's count of the accused app downloads by year. And you can see, again, there's some sources down the bottom that have GOOG-something, and those are documents that were produced by Google in this case.
Q. And did you review those documents?
A. Yes, I did.
Q. Now, what entries did Mr. Weinstein remove from this exhibit in connection with his opinions in this case?
A. Well, the current opinion, if you see Row 6 there, it says, "News," so please remove all of News because that's no longer accused. And then you remove all of the numbers for Chrome up through 2016. That's the first row.

And then you would remove part of the 2017 figures for Chrome, that 105,609. Again, the accused infringement starts in December of 2017, so most of that 105 million units in 2017 occurred before December, so you remove a good chunk of that as well.
Q. And in the opinions that you formed regarding Mr. Weinstein's analysis, did you use the numbers based off of the updated modifications that you just made on the stand?
A. Yes. So this led me to understand what he was accusing, and I used that to calculate the revenues for the appropriate time period.

\section*{Kidder - Direct}
Q. So what does that mean for his analysis?
A. It means that it's overstated. So if you -- so the entire pie here is his entire \(\$ 45\) million analysis.

If you take out the units I just identified between August and December 2017, you take out about a third of that pie.
Q. Now, Mr. Weinstein testified regarding the launch of STS in connection with his testimony last week, correct?
A. Yes.
Q. And what did Mr. Weinstein say as far as you are aware, was the impact if STS did not launch before December 5, 2017, on his opinions?
A. Well, he agreed. If Google is correct the date is later than August, which is the date I and Mr. Weinstein used, then the period between August and December would not include infringing devices or apps. So he agrees that if Google is right, it was December instead of August, that his figures are all overstated.
Q. Is there specific testimony that you recall from last week which supports the December date as opposed to August date?
A. Yes. My memory is that -- I think it was

Mr. Elbouchikhi -- yes, Mr. Elbouchikhi testified December 2017 is the first time when we actually activated this feature for users who had 0-MR1, which is Android 8
mR. Peterman: you can go back to the deck. by Mr. PETERMAN:
Q. Now, were you in Court for Mr. Weinstein's testimony?
A. Yes, I was.
Q. And you come to a very different conclusion with respect to damages than Mr . Weinstein did; is that correct?
A. Yes. I think that's a fair statement.
Q. What were the major errors that you've identified in his analysis?
A. So there are a number of them. And I will just, you know, without reading the cover slide, I'll take you through the six major errors that I saw in his analysis.

The first one is -- I just call it the wrong number of units.
Q. Explain what you mean by "the wrong number of units."
A. Sure. There are a couple of parts to that. But the first thing to start with is this -- as he told you, he started his count of the number of units on August 21, 2017, when Android 8 was released. But the testimony I heard was that STS was not enabled in Android 8 until December 5, 2017. And in between those two periods, there's 149 million app downloads and .9 million or 900,000 devices sold that were sold or downloaded without STS enabled.

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with maintenance release 1 .
Q. Was there additional testimony?
A. Yes. Mr. Toki, who is also a Google engineer, said that the source code would have been published around December 2017. Again, the evidence seems that while Android 8 was released in August, STS was not enabled until December.
Q. Did you also consider testimony from Mr. Choc?
A. Yes. Mr. Choc verified that Android 8, or O-MR1, released in December 2017.
Q. Are there other errors with the unit count?
A. Yes.
Q. What are those errors?
A. So we've been talking about particularly the apps, and the question is -- well, not the question -- but what Mr. Weinstein did was he assumed that an app that was downloaded, let's assume in middle of December, December 15, 2017. He assumed that an app downloaded in December of 2017 would be downloaded onto a device that had STS. Well, that would require that device be running not only Android 8, but it's got to be running Android 8 with maintenance release 1 on it.
Q. Now, what data did Mr. Weinstein rely upon for his analysis?
A. So this is DTX-581, which I'm assuming is in this


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(Whereupon, the following discussion is held at
sidebar.)
MS. SRINIVASAN: Your Honor, this is
undisclosed opinion for Mr. Kidder. His reliance on Mr. Marri's testimony -- by the way, Mr. Marri was deposed in 2019. He could not have disclosed this opinion in 2022 if he had the opinion that somehow the units in these installed downloaded numbers were overstated, but he didn't because he uses those numbers himself. Never disclosed an opinion like this in his prior -- we are talking about a spreadsheet was available to him that he cites in his report.

This is something that is now being raised for the first time from Mr. Kidder, that he has a reason to believe that those numbers are overstated because of the operating system. That is not what -- he did not disclose that opinion in his report.

THE COURT: Let me make sure we are all on the same page. So does Mr. Kidder have in his expert report any reliance on the testimony of Mr. Marri?

MR. Peterman: Mr. Kidder does list depositions as part of "materials considered" and the deposition of Sai Marri is, I think, part of -- it's cited in a couple different places and his report with respect to the Pixel

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MR. PETERMAN: Yes, Your Honor. Our point is that the numbers, the data that Mr. Weinstein relied upon included all versions of Android, not just 8 or 9 , so Mr. Weinstein's analysis is unreliable on that basis.

THE COURT: That's where it will end.
MS. SRINIVASAN: Mr. Kidder is not a technical expert. He is not here to give an opinion about non-infringing units. Again, not in his report. So if he's talking just about the numbers, that's one thing. If he is going to offer an opinion it is overstated by any amount, that's not disclosed.

THE COURT: He is allowed to offer an opinion it is overstated by some amount. That is fair and within the scope of the other opinions he's rendered in his expert report. And I also think it's fair, given the situation that we're in right now; we had changes, as I mentioned on the last break, to what Dr. Smedley's opinion was. So it sounds like we will be talking in general terms and that's fine.

MS. SRINIVASAN: For a point of clarification, if we are going to be doing this, we will want to use exhibits from Mr. Kidder's expert reports, which per our conversation this morning, if we are going to use that as a demonstrative, we only show 2017, 2018 because he's, you know, using the same units we are going to demonstrate
that he -- to rebut his position now that they are not reliable or overstated.

THE COURT: I understand you may want to do that. If there are objections to the exhibits, we will deal with those at the time.

MS. SRINIVASAN: Thank you, Your Honor.
MR. PETERMAN: Thank you, Your Honor.
THE COURT: Let's continue.
(Whereupon, the discussion at sidebar
concludes.)
by MR. PETERMAN :
Q. Mr. Kidder, the deposition of Mr. Marri that you referred to, was that the same deposition that was cited on the face of DTX-1148, Mr. Weinstein's Supplemental Reply exhibit?
A. I am pretty sure it was. I think it was the December 2019 deposition.
Q. And did you rely on Mr. Marri's December 2019
deposition as part of your opinions in this case?
A. Yes, I did.
Q. What does -- the testimony from Mr. Marri, how does that impact your opinions here?
A. It doesn't affect my affirmative opinion, but it affects my view of Mr. Weinstein's opinion in that

Mr . Marri confirmed that, in fact, those downloads were for more than just Android 8 or 9 .
Q. What does that mean for Mr. Weinstein's analysis that he presented last week?
A. Well, it means that his counts of downloads, the many of those downloads are actually not infringing, or there is no evidence of what portion of those downloads are on a device that has STS on it.
Q. Besides Mr. Marri's deposition testimony, is there any other evidence that confirms that the data in DTX-0581 for 2017 and 2018 is for all Android versions, not just Android 8 and Android 9?
A. Sure. So I don't know if you have a version -- okay. That's fine. So --
Q. I'm sorry.

MR. PETERMAN: Mr. Spence, if you can pull up the Excel spreadsheet.
the witness: Great. Okay.
by MR. PETERMAN:
Q. First of all, can you tell the jury what we're looking at here?
A. Sure. This is DTX-581.
Q. What is this again?
A. Sorry. This is DTX-581. This is the data that was provided by Google that Mr . Weinstein used to count the
estimate of the number of downloads after August of 2017 was he just took the number of days in the year after August 21, 2017, divided into 365, and multiplied by this number up here. So he just sort of assumed. He's prorated it, technically.

And recognize in 2017 that the -- and his accusation is only four months. Okay. So he took about a third of the units for Chrome in 2017.

Now, if the number of units -- if this was just Android 8 or 9 , then you would expect to see, for example, the 2018 number, because that's 11 months. You would expect to see that as more than what he had. If you scroll down to row -- looks like 21 maybe -- you will see 2018.com.Android -- yes. That one.

What you see is a total number of downloads in 2018 is actually 80 million. So that's over 11 months. And 105 million he had to prorate. He to four months. It makes no sense that the four months of data would be bigger than the eight months of data. And we can go through more examples but, basically, it's -- there's absolutely no doubt that this data is for all versions of Android.
Q. Just -- let's just do one more example.

MR. PETERMAN: If you would look at Calendar from 2017 versus 2018. I believe it's Row 46, Mr. Spence.
the witness: So row -- there we
com.google.Android.Calendar. So that's the Calendar app. And again, Column C, you can see that there are -- without the columns, it's hard -- but it looks like it's 29 million. I think that's right. So 29 million downloads in 2017. And if you -- thank you.

If you go down to the row for 2018, it's -- I have it right here. Sorry. It's 27 million. So you've actually got slightly less. But again, over an 11 -month time period, this is all versions of Android. This isn't just Android 8 and 9.
by mR. peterman :
Q. So what conclusions do you draw from your analysis of this document and the testimony that you also relied upon regarding Mr. Weinstein's count?
A. That Mr. Weinstein has counted a number of devices that he's accused of infringing that were not infringing. They were not running on devices with Android 8 or 9 or 8 with MR1 or 9 .

MR. Peterman: Go to slide 41, Mr. Spence.
by MR. PETERMAN
Q. And you were in the courtroom when Mr. Weinstein
provided this testimony about this claim here?
A. Yes. We agree. He understands that if it includes
downloads on versions other than 8 or 9 , then his numbers are too high.
Q. Now, Mr. Kidder, you heard from a number of Google witnesses as to the length of time that it took to roll out Android 8 with STS, correct?
A. Yes.
Q. And what is your understanding of the length of time that that all took?
A. So my understanding is that for Mr. Elbouchikhi, he testified that, you know, with a typical Android release, the rollout takes three to six months. In other words, it takes a while for it to get adopted. It's not, you know, it doesn't come out and then all of a sudden everybody has got Android 8 MR1 running on their phone.
Q. What about testimony from Mr. Choc?
A. Similarly, Mr. Choc testified it takes quite a long time, potentially never happening to users' phone -- I'm one of those users. I see the update and I get scared and I don't do it. Right? So I'm not running the latest version.
Q. Could Arendi or Mr. Weinstein have asked Google for more detailed information if Mr. Weinstein needed it?
A. I would assume so, yes.
Q. Do you recall when Mr. Lahad, on cross-examination asked Mr. Choc the question regarding how far off Mr. Weinstein's numbers were?

In this case, or in all cases -- so here
Mr. Weinstein issued a report and said: Here's what I think damages are. And I was retained to similarly offer an opinion on damages, but also reply to Mr. Weinstein's report.

So my reply came about a month after I had his report. One of the things I do when I'm looking at another expert's report is \(I\) just check the math, see if there are any math errors. And so I went through and I -because the data didn't naturally fall into those buckets, he had to do some allocation and apportioning, I asked my team to check the numbers. And I did not find that he made math errors. But that's what he showed on the screen, was my check of his work.
Q. So is it an incorrect assumption to say that you signed off on his work?
A. Well, I signed off on his math, but I did not sign off on the underlying concept of what was accused there. Q. Now, the next error that you had identified in your slide deck was the 4 X multiplier. Would you explain to the jury what you mean by this?
A. Sure. So the 4 X multiplier, if you recall,

Mr. Weinstein testified that he had conversations with
Mr. Hedloy, which Mr. Hedloy said that there was a chance
of losing before trial, there's a chance of losing at
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A. So he said -- so Mr. Lahad asked: So he's pretty much -- he's off by pretty much the whole thing; is that what you're saying?

Mr. Choc answered: Yes. This is my understanding of the slow ramp-up process for Android. And the estimate Mr. Choc gave would be probably 95 percent wrong. This is a rounding error. This isn't like a couple of ones might have gone down, hit some device other than Android 8 or 9. It's, in Mr. Choc's opinion, the vast majority of them.
Q. Now, Mr. Kidder, what does all this information you've just relayed to the jury have on your ultimate opinions here?
A. It means that Mr. Weinstein's opinion is just completely unreliable. It's based on an absolutely incorrect count of the number of apps. You need to recall that in his testimony the apps provided the vast majority of his damages number.
Q. Now, Mr. Weinstein used, as part of his justification, that you used the same numbers that he did. How do you respond to that?
A. It was -- I was surprised. So just by way of background, understand how this process works a little bit.


supplier can provide a component without being accused. So the licenses very frequently have language in them saying, "Not only do I have a license, but suppliers, customers" -- but, you know, they don't list them out, because, of course, customers and suppliers can change.
Q. Is Google a supplier of Samsung as it pertains of operating systems and apps?
A. Yes. It's my understanding that Google provides

Samsung Android.
Q. And do customers of Samsung use Google apps on Samsung phones?
A. I'm sorry. Customers of?
Q. Of Samsung use Google apps on Samsung phones?
A. Yes. My son has a Samsung phone, and used Google Chrome on it.
Q. Mr. Kidder, the last major error you identified was non-infringing alternatives. Will you please explain to the jury what that is.
A. So let's put this in the context of damages because I think you've heard about it in the context of technology. So from the context of damages, you think about hypothetical negotiation. And in this hypothetical negotiation Arendi wants \(\$ 45\) million. And Google can, if they want to use that technology, they absolutely have to negotiate a settlement agreement or a license. But if

\section*{Kidder - Direct}
identify non-infringing alternatives. That is different from saying the Court has determined they are non-infringing alternatives. There is no basis for him to be introducing an opinion based on Court order.

THE COURT: All right. Let's take a look at his report and see what he says.

MR. PETERMAN: Your Honor, it's Paragraph 147. 2022 report.

THE COURT: So the distinction here is the fact that the Court adjudged Linkify and Smart Linkify as being non-infringing. I don't think the Court adjudged they were non-infringing alternatives.

MS. SRINIVASAN: Correct, Your Honor.
THE COURT: I'll ask the jury to disregard -I'm going to ask the jury to disregard the last answer. We will have you ask a different question.

Do you need anything else from the Court?
MS. SRINIVASAN: No.
MR. Peterman: May I ask if the Court adjudged Linkify and Smart Linkify as non-infringing?

MS. SRINIVASAN: He shouldn't ask about the Court's opinion at all. He doesn't need to say the Court rendered a decision on it. If we go to that path, we will open the door to all kinds of prior rulings. In the ordinary course, the damages expert says: In my opinion,
they have something else they can do that would avoid them having to take a license, that's a non-infringing alternative and it exerts pressure on the hypothetical negotiation, like why would I pay you that much. I can just do this.
Q. On the -- I think it was the next slide. What other areas did Mr. Weinstein fail to consider?
A. So Mr. Weinstein failed to consider Linkify and Smart Linkify, which had been judged by the Court to be non-infringing alternatives. They're essentially similar technology. And he also failed --

MS. SRINIVASAN: Your Honor, sidebar. the court: Yes.
(Whereupon, the following discussion is held at
sidebar.)
THE COURT: I think I understand the basis for the objection.

MR. Peterman: It's in his report --
THE COURT: That the Court has adjudged those to be non-infringing alternatives.

MR. Peterman: Identified as non-infringing alternative.

THE COURT: Counsel?
MS. SRINIVASAN: Damages experts always
these are non-infringing alternatives, relying on the technical opinion that's been rendered. So I don't see any need for him to be talking about any court opinion.

THE COURT: I tend to agree with Arendi on this one. Did we have testimony from one of the infringement folks about Linkify and Smart Linkify?

MR. PETERMAN: They identified Linkify and Dr. Rinard identified Linkify and Smart Linkify as non-infringing alternatives.

THE COURT: Is there any reason why he can't ask that in this way?

MS. SRINIVASAN: No. As long as we are not talking about Court's orders or Court opinions.
the court: That's fair. That's the ruling. (Whereupon, the discussion at sidebar concludes.)

THE COURT: Ladies and gentlemen of the jury, you should disregard the last answer by the witness.
by mR. PETERMAN:
Q. Mr. Kidder, did you rely upon any experts in this case regarding whether or not Linkify or Smart Linkify were non-infringing alternatives?
A. Yes.
Q. Which expert did you rely upon?
A. Dr. Rinard.

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Q. On the slide here, you have the last point being "Delay release of STS by 11 months."

What does that mean?
A. Well, we know that STS was -- that they decided in August 2017 that it wasn't ready to roll out. They delayed it and implemented four months later in December. And when faced with a \(\$ 45\) million request, Google had the option of saying, "Well, we'll just delay this release for 11 months until November, and then the patent expired and no harm, no foul."

MS. SRINIVASAN: Objection, Your Honor, sidebar.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: It is pretty clearly seems to be undisclosed opinion.

Do you disagree with that?
MR. PETERMAN: I do have -- this was one slide we discussed it this morning. It is only relevant now because of the change of Mr. Weinstein's opinion. Only looking at the last 11 months means this is a new hypothetical negotiation date.

Mr. Kidder is not offering affirmative opinion on non-infringing alternative he said Mr. Weinstein failed

\section*{Kidder - Direct}

Can I ask him: Could Google have delayed the rolling out of STS for 11 months in a hypothetical negotiation?

MS. SRINIVASAN: No, Your Honor. That is -first of all, there is no factual support -- if he is going to render an opinion about what could have been done -- hypothetical negotiation still involves book of wisdom looking at what actual facts are in the records.

The clear implication they did rely on the
forthcoming expiration of patent to delay rollout, he has no basis for that.

THE COURT: So the reason for my ruling to not let him testify about this is I just recently rereviewed his supplemental expert report this morning during a break, and he did talk about what the negotiation would be if it had occurred in 2017 with his own damages model.

And I would have thought if he wanted to say that one of the options was to wait to roll it out, that he would have done that. I didn't see that that's something he said they could have done.

I understand that you are taking issue with their damages model at this point in time. But that's still something that \(I\) would have expected to be in his report. So that last answer is going to be stricken.

MR. PETERMAN: May I ask a question: Did

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to consider. So that's context of which all this comes in.

MS. SRINIVASAN: His testimony that they chose to forego rolling out their STS because of having the threat of having to pay \(\$ 45\) million is totally undisclosed. There is zero fact evidence that came in to support that statement. It is way beyond talking about non-infringing alternative. He is asserting Google made a conscious decision.

THE COURT: All right. Let me --
MS. SRINIVASAN: His reference to damages
model, \(\$ 45\) million implication is there was a decision to not have to do that and pay a license instead to wait 11 months. There's been no testimony about a decision to wait or 11 months, frankly, on the record at all.

THE COURT: Let me review the response.
So my ruling is as follows: You are welcome to bring in -- the prior response will be stricken. You are welcome to bring in testimony about the rollout beginning when it began. But he can't testify that there was an option for Google to delay rolling out the STS until the patent was expired.

MR. Peterman: Your Honor, this is in the
context of hypothetical negotiation of what Google could have done.
A. Yes, he did.
Q. We've gone through the various errors that you've identified in Mr. Weinstein opinion. Will you just sum them up for the jury?
A. Sure. And I won't go through this entire list, but these are the six errors we just stepped our way through, starting with wrong number of units, four times multiplier, et cetera. And my point is, when you correct these errors, what you get to is -- that \(\$ 45\) million is entirely unreliable.
Q. And again, what is your final opinion with respect to the appropriate measure of damages if the patent is found valid and infringed?
A. It is \(\$ 500,000\), not the \(\$ 45\) million that Mr. Weinstein calculated.

MR. PETERMAN: Thank you. I pass the witness. the Court: Thank you.

Counsel.
MS. SRINIVASAN: Your Honor, may I approach to
hand the witness the binder?
THE COURT: Yes.
the witness: Thank you.
CROSS EXAMINATION
BY MS. SRINIVASAN:
Q. All right. Good afternoon, Mr. Kidder. My name is Kalpana Srinivasan. We have not met before.

In the start of your testimony, you made a point of
emphasizing that you looked at the revenue rather than
focusing on units, right?
A. Yes.
Q. And you did your own analysis, you provided an
affirmative opinion about what you think the reasonable royalty is in this case, correct?
A. Yes.
Q. Okay. So I want to drill down a little bit about how you got there. Let's pull up your DDX slides and go to Number 9 .

So you were looking at the revenue for the apps
you mean the accused devices and the accused apps, what's at issue in this case. That's right, Mr. Kidder, right?
A. That's correct.
Q. And you say -- and I'd like to talk about how you got to this number for the accused apps.

Now, to do that, you started by looking at all the revenue associated with the various apps at issue in this case; is that right?
A. Yes, that's fair.
Q. And then you took it down to a specific number to reflect the revenue for the accused applications in this case, correct?
A. Well, I took it down to anything that might have been accused under Mr. Weinstein's theory with a start date of December 1st, 2017, that's correct.
Q. All right. If you could look at your supplemental Exhibit 5.2. That's from your expert report in this case, from August of 2022. And you prepared that report, Mr. Kidder, correct?
A. Yes, I prepared the supplemental report. I'm sorry. I'm just -- did you put a little yellow sticky on it for me?
Q. I did not. But it's in the Exhibit 5.2 that's attached to the back of it.
A. I'm not far off. Hang on a second.
installed on devices with Android 8 with STS, and your start date is December 5, 2017, to November 10, 2018, correct?
A. So, yes, and what I did was I just apportioned revenue after December 5, 2017.
Q. You apportioned revenue. You didn't want to include in your base all revenue that might be associated with an application. You wanted to narrow in on the revenue related to the accused applications in this case, the applications accused of using STS, correct?
A. Yes. As the accusations were laid out in

Mr. Weinstein's report.
Q. All right. So let's look at slide Number 10. And that has your revenue numbers for the accused products and the accused --

MS. SRINIVASAN: I'm sorry, Your Honor. We
need to seal the courtroom.
THE COURT: Let's seal the courtroom.
MR. PETERMAN: Seal the courtroom, yes.
(The following discussion is held under seal:
THE COURT: The courtroom has been sealed.

\section*{By MS. SRINIVASAN:}
Q. All right. Back to DDX-10.10. This is your slide of the Google revenue for the accused products. And by that,

\section*{Kidder - Cross}
Q. Okay.
A. Sorry. The supplemental I labeled them side A, 5B, do you mean 5B?
Q. Side two on your supplemental report. Do you have that? On your report dated August 2022.
A. I apologize. I have my August 26, 2022 report. Oh, I'm sorry. Hang on a second. I was back into Mr. Weinstein's. I apologize. Okay. Now I'm at 5.2, yes.
Q. Okay. And that -- you prepared that supplement to the report, correct?
A. Yes, that's correct.
Q. All right. Now, I want you to just focus on Gmail, Gmail in 2018. What was the total amount of revenue that you found there?
A. For 2018, it was -- sorry hang on a second. No, for a portion of Android was \(\square\)
MS. SRINIVASAN: And, Your Honor, to aid the witness, I have a demonstrative of this exhibit that he prepared with some redactions that I'd like to be able to use and publish to use as a demonstrative.

THE COURT: Any objection?
MR. PETERMAN: Not as counsel has presented it to me.

\section*{Fi}
    BY MS. SRINIVASAN:
    Q. All right.
        MS. SRINIVASAN: If you could bring up,
        Mr. Boles, the Kidder supplement 5.2 demonstrative. And I
        just want you to focus on the Gmail number, Mr. Boles,
        when you bring that up.
        by MS. SRINIVASAN:
        Q. Okay. So, Mr. Kidder, you said it was
        for the Android. Let's go to the Gmail line item .but you
        started with a bigger number?
        A. Yes, that's correct. I started -- well, I started
        with all of the Gmail revenues for 2018 for iOS and
        Android.
        Q. And to get down to that \(\square\) number, for
        revenue, you looked at the number of downloads that were
        for Android versus the number of downloads that were for
        ios, correct?
        A. Yeah. I guess it's -- it's funny because, since
        they're all annual numbers, it's all based on apportioning
        the year, but it's the same idea, yes.
        Q. Well, it's not just based on apportioning the year.
        You apportioned it based on the app downloads that were
        for Android versus everything else, correct?
        A. I'm sorry. I'm not quite understanding. I agree
Q. And the way that you got there, you looked at this number that is listed there, 67 million and change for the Android app downloads for 2018, correct?
A. Yes. That's what that number is.
Q. And so that's how you were able to do an apportionment, take all this revenue and focus in on what was at issue in this case, correct?
A. This was divided between Android. We made making sure we weren't getting iOS downloads in there, yes.
Q. Well, let's look at where that 67 million number that you used to try to narrow the revenue came from. If you could turn to your Exhibit 5 of your -- in your supplemental report?
A. This is 5.0?
Q. 5.0 .
A. Yep.
Q. Now, that exhibit shows the accused U.S. app device installations.

MS. SRINIVASAN: Mr. Boles, I think you could bring that up as the first -- there you go.

BY MS. SRINIVASAN:
Q. Do you see that?
A. Yes. Sorry. I'm good.
Q. And if you look at Gmail, which is what we had just been looking at --
with you that it was apportionment based on time, which is how you get to the app downloads for Android for that portion of the year.
Q. And you've relied on the app downloads for Android to come up with a percentage of the total revenue that you allocated for Android, correct?
A. Maybe we're talking past each other. There's no -there's no distinction between the apportioning -- I'm trying to figure out how to phrase this.

As we saw earlier, the number of downloads were provided just for the year. So I didn't have a way to say, I know exactly how many were downloaded on these days, so what we did was we used a percentage of the year, just like Mr. Weinstein did, to calculate the number of downloads. And that's mathematically the same. It's just apportioning based on time across the year. So maybe it's a distinction without a difference.
Q. My question was a little different, but I appreciate your answer. To get from -- to go from 231 to 119, to take 52 percent of the total revenue to figure out the revenue dedicated to Android, you looked at the downloads for Android versus the downloads for other devices?
A. I'm sorry. I understand your point. So, yes, we know that in 2018 , 52 percent of all downloads were on Android devices as opposed to iOS devices.

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A. Sure.
Q. -- for 2018. 67 million downloads. That's what you used to apportion the revenue, correct?
A. Yes. That's based on a -- the fraction of the year that would be represented by January 1st through November, I guess -- is it 5th? 8th? -- 2018.
Q. And that's how you were able to feel confident that when you're looking at revenue, you're trying to isolate what is relevant to this case by looking at the downloads related to the accused applications in this case, correct? A. Yes. To the Android portion of it, correct.
Q. Now, this list here, you see these sources at the bottom? You can see the top of the exhibit, "Accused U.S. App Device Installs." You're talking here about the applications that are using the STS feature, correct? A. This is actually the device downloads that were accused by Mr. Weinstein, so we are, basically, following his math there.
Q. You aren't just following his math. You are using it to apportion revenue, Mr. Kidder.
A. No, I agree with that. It's all based on time and prorated.
Q. Now, you mentioned Mr. Weinstein, but I'm looking at this exhibit. I don't see a reference to Mr. Weinstein here. Do you see one?

\section*{A. No, there's no reference to Mr. Weinstein.}
Q. Okay. Instead, there's a reference to two sources, and those are Google documents?
A. Yes. That's correct. And the bottom one there is DTX-581.
Q. And that's the exhibit we looked at during your direct examination?
A. That's correct.
Q. And I heard you say, I think, that this was something Mr. Weinstein looked at, Mr. Weinstein relied on, I was there to do a math check. But your own apportionment of revenue, you relied on the same document, correct?
A. That's correct.
Q. Okay. Now, you have these figures here of the downloads from 2017 and 2018 for each of the apps. And you know that Mr. Weinstein also looked at downloads -application downloads for all of these applications in 2017 and 2018, you're aware of that?
A. Right. Yes. He looked at the entirety of 2017, 2018, and prorated.
Q. Well, if you could look at Mr. Weinstein's
supplemental 4B report. I'm sorry. The supplemental report, Exhibit 4B.

And let me know when you're there.
A. Yes, I'm there.
Q. Okay. So -- and I want you to look at that.

MS. SRINIVASAN: I'm going to put up his -that as a demonstrative, Mr. Boles. There we go.

\section*{BY MS. SRINIVASAN:}
Q. And that is Mr. Weinstein's, the downloads that he presented in connection with each of the accused applications, correct?
A. Not quite.
Q. Is there something there that you dispute?
A. Yes. You removed the Chrome line from that.
Q. For purposes of our -- okay. That's fair. We're going to come back to Chrome. Good catch, Mr. Kidder. Aside from Chrome, the other applications, those are the download figures that he included in his analysis, correct?
A. No.
Q. The download figures from 2017 and 2018 he, included this in his report as accused app installations?
A. Again, the Row 6 there, News, was not part of his calculation.
Q. All right. That's --

MS. SRINIVASAN: Mr. Boles, can you remove 6, please.
BY MS. SRINIVASAN:
Q. So other than that, the other apps reflect the

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different issue, as you forecasted. Mr. Weinstein begins in August; you begin in December, correct?
A. Yes.
Q. All right.

MS. SRINIVASAN: So let's move, Mr. Boles, to Slide 4.

\section*{BY MS. SRINIVASAN :}
Q. So, not surprisingly, your numbers as to the installation of the accused applications, the numbers are not going to be the same because he has a longer time period than yourself; is that fair?
A. Yes, it is.
Q. Okay. But you're both relying on the same underlying data to begin with, correct?
A. Yes. That was the data that was produced by Google. Absolutely.
Q. And you're not -- there's no issue about the data being different. You're just -- the number of days that you each used to calculate the downloads is not -- is different. That's what's different?
A. Yes. Absolutely.
Q. Okay. And you were right to put a little pin in Chrome, because that wasn't on the last tab we looked at. So we're going to come to that now.

I'd like you to look at your opening report. That
should be in your binder, Exhibit 5.
A. The opening you said, right?
Q. Yes. Your opening report. Exhibit 5

MS. SRINIVASAN: And, Mr. Boles, if you could
put that up at Slide 7 .
by MS. SRINIVASAN:
Q. In your opening report --
A. Sorry. Hang on a second.
Q. I'll wait for you to get there.
A. Thank you. I appreciate that.
Q. Sure. And your analysis in 2020 -- I'm just focusing on Chrome now.
A. That's good to make that point.
Q. Yeah. In 2020, you prepared this exhibit, and you didn't calculate Chrome or put in installations for Chrome for any other years but 2017 and 2018; is that fair, Mr. Kidder?
A. Yes. In this particular version, that's correct.
Q. Well, that's the version you served. That's the version that was attached to your expert report.
A. In the opening expert report, yes.
Q. Okay. So you isolated 2017 and 2018 for Chrome.
A. Um-hmm.
Q. And those are the total -- those are the total number of installations of the accused applications -- accused
just have a different number of days that are at issue, correct?
A. Yes. That's where the time difference is between us. That's absolutely right.
Q. All right. And -- and I can go back.

MS. SRINIVASAN: Let's go back to PDX-7-8.
THE WITNESS: I'm sorry. Is there something
you wanted me to look at?
BY MS. SRINIVASAN:
Q. Yeah. Sure. We are looking up here at PDX-7-8. Again, for the purposes of your analysis, you looked -and the way that you got to that \(7,812,179\) number is by taking the Chrome download data you had and apportioning it for December 2017 through the end of the year, correct? A. That's correct.
Q. And the difference between you and Mr. Weinstein is that he started in August, so he was apportioning for a larger part of the year?
A. That's correct. That was the error I was talking about with the number of units.
Q. And again, when we're looking at your exhibit, from October 20, 2020 of the accused U.S. app device installs, you relied on Google's data for that purpose, correct?
A. Yes. I mean, you need to recognize that in October of 2020 , it was a much more extensive set of accused
Filed 08 of

chrome application using STS that you relied on, correct?
A. Yes. Using the same, you know, prorating by the number of days in the year methodology.
Q. All right. And Mr. Weinstein also looked at how -the number of downloads for the accused Chrome application, correct?
A. That's correct.
Q. And as to 2018, you would expect that his number would be identical to yours, right?
A. Yes, I would expect so.
Q. Okay. And let's look at that.

MS. SRINIVASAN: We have a comparison there. Mr. Boles, at PDX-7-25 -- sorry, 7-26. So for 2018, it's going to be identical, and that is the number that Mr. Weinstein also offered.

For 2017, it's not going to be identical for the same reason that you started your first date of infringement in December and he started his first date of infringement in August.

So you agree with that Mr. Kidder?
A. Yeah, I'm sorry. I got caught up in trying to follow the math, but yes.
Q. I mean, effectively, you're working from the same number of installations and downloads for the accused application, the accused Chrome application here, and you
Q. That didn't change the source material that you were relying on. At the end of the day, you were looking at what Google provided to make your determination.
A. That's absolutely right. My point is that this report was focused on a different set of accused functionalities, of which STS was one.
Q. Now, Mr. Kidder, you are an expert for Google, right?
A. I have been retained by Google's attorneys in this case, yes.
Q. Fair to say that you have unlimited access to Google as an expert in this case?
A. No. I don't think that's fair to say.
Q. Well, you have access to anybody that you would need to talk to for purposes of preparing your analysis, fair? A. I don't think that's quite fair. It's not that easy, no.
Q. Well, did you ask anybody about this download data? Did you raise any questions about it when you received it?
A. No. Because we had Mr. Marri's deposition that clarified what it was for us, that it was all versions of Android.
Q. You didn't go to anybody within Google to ask whether there was better data that existed for your purposes, right?

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A. No. That's correct. I took this data that had been produce.
Q. And I think your counsel asked you on direct if Arendi could have asked for better data. Do you recall that question?
A. Yes.
Q. Now, as between Arendi and Google, you'd agree with me that Google has better access to its own data, correct?
A. Yes. I think Google has better access to its own data than Arendi does.
Q. And I heard you on direct reference Mr. Choc and his testimony last week about the download data.

Were you here when he indicated that he didn't know if there was any better data available within Google? Did you hear that testimony?
A. I think I read that, yes.
Q. And likewise, that he didn't really go talk to anybody in the Google Play Store to find out if there was additional or different data he should be looking at or you should be looking at related to the Google Android installations for the accused applications.

Do you recall that testimony?
A. Not really, but I'm not debating your
characterization of it.
Q. Well, in fairness, you didn't go talk to anybody at

Google Play to ask them about whether or not they had different data related to downloading -- download data for the accused applications in this case? You didn't do that?
A. No, I did not.
Q. And, in fact, you didn't go talk to Mr. Marri about it. I know you read his deposition, but you didn't go ask him to say: Is this data that's in this source document, is there other data that I should be looking at when I apportion revenue? You didn't do that?
A. No, I didn't. I was just trying to figure out what that question would even look like. But, no, I didn't do that.
Q. You don't know what that question would look like because you didn't have a reason to think you needed to ask it? Is it a fair way to say it, Mr. Kidder?
A. Well, because at that time, it was a much more complex overlapping, sort of intertwined set of release dates. And it was a much more complicated case. And when it boiled down to STS only, then some issues sort of popped out that I hadn't caught previously.
Q. Well, you issued a report in 2022 that was focused on STS. And we're looking here at a time in which you looked at Chrome data for 2017 and 2018, during the period when STS was released, correct?
scenario in which STS was the infringing function in the Chrome application, correct? You would agree with that?
A. I honestly don't recall why we did Exhibit 5, but that sounds right. It was relatively complex back then. Q. All right. I want to go back to Slide 10 from your demonstratives. And we've talked a little bit about how you apportioned to get down to that revenue that is related to the accused applications in this case using STS. We talked about that already, correct?
A. Yes.
Q. All right. Now I want to talk about where you started from. The pool of revenue that you started from. You got that revenue information from Google, correct?
A. That's correct.
Q. All right. Well, let's look at some of those revenue numbers that you relied on in your analysis. Here's one at PX-37 for Chrome. Actually, before we do that, do you have in your binder, if you look at the back tabs, PX-37?
A. Probably. Yeah. It's yellow. 37 you said?
Q. Yeah.
A. I may need some help. I see one that's labeled 77 and I see a PX-61. Yeah.
Q. Okay. If you look at the tab marked "Natives."
A. I see. Yes.
Q. Okay. Then you will see there -- after the second

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yellow slip sheet, you will see --
A. You are looking for PX-37, you said?
Q. Yes.
A. Okay. Yes. I've got that.
Q. Are you with me there?
A. Yes.
Q. And is this revenue data that you relied on in the course of preparing your opinions in this case?
A. I believe it is. I can't remember the Bates numbers precisely.

MS. SRINIVASAN: Your Honor, we move to admit
PX-37.
MR. PETERMAN: Is there a citation you can
point us to, to make sure this is exactly what he relied upon?

MS. SRINIVASAN: Do you need his report? He
just said that he did rely on revenue data.
the court: Let me see counsel at sidebar.
(Whereupon, the following discussion is held at
sidebar.)
the court: Do we need to take a minute to
confirm?
MR. Peterman: Your Honor, he said he wasn't
sure if this was the revenue number. We need to make sure

Kidder - Cross
in coming up with your revenue apportionment, correct?
A. Yes.
Q. And you got that revenue information from Google. To be clear, this is the form in which it came to you, this spreadsheet?
A. That is correct.
Q. You didn't get any backup for this, right?
A. What do you mean by "backup"? I got a spreadsheet with the numbers.
Q. Just this for Chrome?
A. Yes.
Q. And you don't have any understanding of how Google makes money off of its accused apps, do you?
A. Not off of Chrome, no.
Q. How about the other apps?
A. Yeah. I was reviewing in the course of the last few days, just reviewing things, and the Gmail revenue appears to come from advertising.
Q. Okay. In the course of preparing your report for this case, you didn't dig into how Google generates revenue from its applications, fair?
A. That's correct, yes.
Q. You relied on these summaries that you got from Google to come up with your numbers, correct?
A. That is correct.
this is the correct one. Obviously counsel can have him look at his report.

THE COURT: Why don't you take a minute and
confer.
MS. SRINIVASAN: This is internal Google
revenue data that he used. I don't know what their
objection would be to their own revenue numbers.
THE COURT: I want him to confirm that whatever
data he relied on is the same exhibit you are trying to admit. This should take 30 seconds.

MS. SRINIVASAN: Okay.
(Whereupon, the discussion at sidebar concludes.)

MR. Peterman: No objection.
the court: It's admitted.
(Exhibit PX-37 is admitted into evidence.)
MR. PETERMAN: Your Honor, we want to make sure
that this is kept under seal. It is Google's financial information.

MS. SRINIVASAN: We are presently under seal, and no objection to that remaining under seal.

THE COURT: That's fine. Let's proceed.

\section*{BY MS. SRINIVASAN}
Q. All right. Okay. So, Mr. Kidder, this is the, as an example, the revenue information you looked at for Chrome

\section*{Kidder - Cross}
Q. So if I ask you now: What is the Chrome revenue number based on that we're seeing up here, you can't answer that for me?
A. No, I can't.
Q. In fact, the number for 2018 is but you can't tell us why that is?
A. I think Mr. Marri was asked about that in his deposition, and I don't actually recall. It had something to do with accounting.
Q. During your direct examination -- I know it was bit tongue-in-cheek, you referred to yourself as a math nerd. And I'm just wondering when you get, you know, numbers like this going from, you know, \(\square\) t \(\square\) did it not make you want to dig in and figure out what's going on there?
A. So, first of all, these are -- these are not in
thousands. So it's And this looked to me like
a product that they were, like, \(\square\)

Mr. Marri testified to.
Q. Okay. But you didn't ask anybody when you got this spreadsheet?
A. You know, I think that's correct. We noted
and were curious about it, but I think that was cleared up in Mr. Marri deposition.Filed 08Q. And you had three other people in your team looking
    at these numbers with you, auditing numbers, right?
    A. That's correct.
    Q. But none of this flagged for them such that you went
    back and looked at the backup to see exactly why the
    Chrome revenue does this?
    A. No. As I said, I think it was addressed in
    Mr. Marri's deposition. Those are questions that Arendi
    asked.
    Q. Arendi's questions about it.
    A. Yes.
    Q. Not your questions?
    A. That's correct.
    Q. Okay. Let's -- I'd like to look at one more of
    these, PX-37.
                            MS. SRINIVASAN: And, Mr. Boles, just hang
    tight for a minute.
    BY MS. SRINIVASAN:
    Q. If you could look, Mr. Kidder, at your exhibits
    there.
    A. Sure. And I'm sorry. PX-37 is what we are looking
    at, it's a different one?
    Q. PX-36. Thank you.
    A. Yes, I've got that.
    Q. Okay. And is this revenue information that you
    a minute?
        the court: Yes.
        MS. SRINIVASAN: Sidebar.
    (Whereupon, the following discussion is held at
sidebar.)

MS. SRINIVASAN: Your Honor, Google had moved in limine to prevent -- well, I guess really to prevent Mr. Weinstein from testifying about Google app-related revenue.

The witness has just said that he noted that some of the way in which they accounted for Gmail revenue was through advertising, and I would like to explore that with him. I want to make sure there is no ruling on the Court has issued on limine.

One issue I would like to ask about is their public filings that show they are looking at advertising revenue when they talk about these Google properties.

MR. PETERMAN: Your Honor, I think that's inappropriate. There is a MIL with respect to the larger Google advertising. There is no tie that's been made between Gmail and larger Google advertising.

The testimony in the record is specifically with respect to the Gmail app and the revenue numbers that have been provided here. I don't think we have an
relied on in preparing your analysis in this case?
A. It looks like it, yes.

PX-36.
MR. PETERMAN: One second, Your Honor.
No objection.
the court: It's admitted.
(Exhibit PX-36 is admitted into evidence.)
BY MS. SRINIVASAN:
Q. Okay. We can put that up now.

All right. And so this is the data -- again, you got a spreadsheet from Google. You used that to come up with your revenue numbers, right?
A. That's correct, yes.
Q. And for some of these,

questions of Google about where this data came from, did you?
A. No, I did not.
Q. And you used it in coming up with that number that you showed us in your direct examination that all of the accused app-related revenue was \(\square\), correct?
A. That's correct. I relied on data that Arendi
requested from Google and Google produced.
MS. SRINIVASAN: Your Honor, may I approach for

\section*{Kidder - Cross}
objection to the Gmail app revenue numbers. Specifically anything beyond what is the subject of the MIL.

THE COURT: All right. Let's let the jury take their afternoon break, and we will take this one under advisement.

In the meantime, I want to alert Arendi counsel that I won't charge you for the times we spent at sidebar, but you are running out of time to put on your validity case. I don't know how much more of this you want to get into it.

MS. SRINIVASAN: He said it. I don't want to ask if it's going to violate the limine.
(Whereupon, the discussion at sidebar concludes.)

THE COURT: Ladies and gentlemen of the jury, we are going to take the afternoon break, give you a chance to stretch, use the restroom if you need to. We will take approximately a ten-minute break.

Ms. Garfinkel.
(The jury exits the courtroom at 4:20 p.m.)
THE COURT: All right. Counsel, we will be in recess. I will remain on the bench. Feel free to move about the cabin. But I'm going to take a look at the pending objection.
(Whereupon, a recess was taken.)
the court: All right. Let's go back on the record. Can I see counsel at sidebar.
(Whereupon, the following occurred at sidebar:
the court: So I went back and looked at the testimony. There was an answer from the witness that he had reviewed things and that the Gmail revenue appears to come from advertising. There can be limited follow-up questioning about that as long as it's in compliance with the Court's ruling on the motion in limine.

MS. SRINIVASAN: Meaning, that if I asked him about Google's own representations about advertising connected to Gmail and Google properties is that in bounds, out of bounds?

THE COURT: I don't know if he's reviewed
Google's representations about that.
Counsel, do you have any views on this?
MR. Peterman: I don't think he's reviewed those. We think it gets close to asking about Google's overall advertising revenue, things that are not tied to the apps have the -- I believe the testimony is specific to the apps.

We are okay with questioning on that, but
broader I think is really subject to sort of the agreed-upon MIL, not to talk about the size of Google revenues, overall wealth and the MIL with the Court. They

Kidder - Cross
related to the browser and then other Google properties like Gmail, Google Maps, and YouTube. This advertising revenue feature is tied to those Google properties. It's not a company-wide global corporate advertising revenue figure.

MR. PETERMAN: First of all, I think YouTube is not accused here. Are you intending to ask about these specific numbers or any number?

MS. SRINIVASAN: To ask if he considered this revenue that was related to the Google property and whether he knows if it's included in the revenue that he relied on for this case.

MR. PETERMAN: Google property is not
synonymous with the 12 apps on Android or nine at issue. We think that goes beyond the bounds of what's under the MIL.

THE COURT: Why don't you show me a copy of what you intend to ask him. Why don't you all sit down while I take this under consideration.
(Whereupon, the discussion at sidebar concludes.)
(Whereupon, a recess was taken.)
THE COURT: Counsel, I'm ready to see you at sidebar.

MS. SRINIVASAN: Well, they have revenue
figures that are tied to Google properties, like Google Chrome, Search and Google Gmail and Google Maps, so it's not global advertising revenue, it's what they describe as Google properties, like the apps at issue.

I want to know if he looked at it at least because he's talking about now that he looked at one application revenue figure that he thinks advertising may be relevant to. But as I took it from his testimony he didn't consider or doesn't know if it was reflected in the revenue that he looked at for every other app.

THE COURT: It's fair. She asked him if he looked into other numbers, is it not?

MR. Peterman: Your Honor, with respect to the accused apps at issue, I don't know if the numbers counsel is referring to are --

MR. UNIKEL: I argued the MIL on --
THE COURT: We will stick with the rule. You are welcome to confer with counsel.

Why don't you take a look at what she proposes to ask him.

MS. SRINIVASAN: There is specific disclosure
around Google property search properties revenue from traffic generated by search distribution partners, that's

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(Whereupon, the following discussion is held at sidebar.)

MR. BELGAM: Your Honor, Mr. Kidder is still here, so we might need the noise machine or we could ask him to leave.

THE COURT: You can turn on the machine. That thing is very effective.

False alarm. Give us one more minute.
(Whereupon, the discussion at sidebar concludes.)
(Whereupon, a recess was taken.)
the court: All right, Counsel, I'm ready.
(Whereupon, the following discussion is held at sidebar.)

THE COURT: Okay. My ruling is that counsel for Arendi can ask questions about this. You will not show this exhibit to the jury. This exhibit will not be admitted into evidence.

You can ask him if he took these things under consideration. You have to stick with the answer that you get.

MR. PETERMAN: Your Honor, we object to the extent she is allowed to mention the number. This was not raised in the MIL discussion. We had a very long
discussion about MIL. Counsel for Arendi could have
chancery Court connection with the trial.
raised it during the argument. This was not produced
during discovery. This was not shown to Mr. Kidder or any other witness during deposition.

We respect Your Honor's decision, but the
numbers themselves are very harmful, very, and
particularly at issue in the MIL we don't believe they should come in. He's going to answer that he didn't consider this.

THE COURT: Okay. All of your points are
taken. I did review the transcript of the motion in
limine. I believe this is fair game.
Your expert testified about appropriate numbers
based on revenues. She wants to cross him on whether his revenue numbers are correct and the word "revenues" is on this page. She can ask about it.

You have to take the answer you get from him.
MR. UNIKEL: Does that mean she can ask about
the numbers themselves?
THE COURT: Counsel.
MR. Peterman: Two things, Your Honor. This document is not limited to the apps at issue in this case. Numbers themselves are something that was specifically the subject of the MIL the Court ruled that numbers regarding overall advertising cannot be asked about included
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MS. SRINIVASAN: It includes Google properties, Your Honor, but this is the closest that they keep --
the court: Okay.
MS. SRINIVASAN: But, Your Honor --
THE COURT: I usually want to make sure
everyone understands I am not the type of person -- you realize by now this is not a situation where whoever talks last wins.

In this particular case, the point that counsel just brought up about this not being limited to the accused apps, I do find persuasive on that point.

You can not bring up these numbers because they are not tied to the apps in this case. You can ask him if he considered things like the \(10-\mathrm{K}\) or if he explored other revenue, sources for revenue, but we're not going to reveal these numbers. That's the ruling. Thank you.

Let's bring the jury back in.
MR. BELGAM: Your Honor --
MS. SRINIVASAN: May we make a proffer on the record? This is what we would have offered had we been permitted to do so.

THE COURT: Okay.
MS. SRINIVASAN: This is PX-61 that we would have introduced.

MR. Peterman: Has not been admitted.

MS. SRINIVASAN: This is a global advertising number.

THE COURT: It is global.
MS. SRINIVASAN: It is not global. They didn't
want corporate advertising global advertising for the
company. He's relied on documents that are not kept in the ordinary course as to revenue. He doesn't know how they were prepared. He was handed them by Google. It is fair game to ask. He could have gone and looked at the SEC filings.

THE COURT: So the problem, Counsel, that
counsel just raised is that these numbers are not limited to the apps in this case, so why is that appropriate?

MS. SRINIVASAN: They don't keep that in the ordinary course. So they have generated a number for revenues. He doesn't know how they did it. They are relying on that and ignoring other relevant financial information. They don't have an explanation.

THE COURT: Counsel, standby. Standby.
When I initially made the ruling, I had
understood that we were crossing. As I'm looking at this,
this very clearly, on its face, relates to things that are not accused in this case.

Do you disagree with that?

MS. SRINIVASAN: No. It's not been admitted yet.

PX-61 that we would have questioned Mr. Kidder about Google SEC statements that talk specifically as to advertising revenue related to Google properties including Gmail, Google Maps, Google Play, YouTube, and as well as traffic revenue from traffic generated by Google browsers at Page 28.

THE COURT: Okay. Counsel, would you put on the record your view about whether or not this -- what these numbers correspond to.

MR. Peterman: Yes. Our view is the numbers that are in PX-61 relate to many properties beyond the specific 12 accused apps in the case and Google Pixel devices that are part of this.

We believe it is subject to the MIL that the Court ruled on regarding larger advertising numbers and believe that the Court is appropriately keeping these numbers out of the case.

THE COURT: All right. Let's bring the jury in.
(Whereupon, the discussion at sidebar concludes.)

THE COURT: For the record. The ruling at sidebar relied on Federal Rule of Evidence 403, as well as
the Court's prior ruling on the motion in limine.
Let's get the witness back on the stand.
Ms. Garfinkel, let's bring the jury back in.
the clerk: Yes, Your Honor.
(The jury enters the courtroom at 4:48 p.m.)
the clerk: Your Honor, the jury.
the Court: Please have a seat.
Let's continue with cross-examination.
MS. SRINIVASAN: Thank you.

\section*{BY MS. SRINIVASAN:}
Q. Mr. Kidder, before the break, I had asked you about the revenue information that you relied on in preparing your opinions, and your testimony was that that was data that you got from Google, correct?
A. Yes.
Q. Did you make any effort to go look at Google's public securities filings or any publicly available information about how Google earns revenue?
A. Not in the context of this case, no.
Q. Did you make an effort to determine the different revenue streams that Google earns related to the accused applications?
A. No.
Q. You testified earlier that you had considered advertising in connection with Gmail.

Did you look at how advertising revenue might have impacted the revenue numbers you received from Google in this case?
A. Just by understanding that the Gmail revenues included advertising revenues.
Q. But for the remainder of the applications that you analyzed that form that application revenue number, your understanding is that the rest of those did not take into account advertising, correct?
A. No, it's not correct. I just didn't know what was in the rest of those.
Q. And you didn't ask, to be fair?
A. That is correct, yes.
Q. Is you didn't ask anybody at Google, should the
numbers that I get reflect the benefits from advertising revenue that Google gets in connection with those
applications, correct?
MR. PETERMAN: Objection, Your Honor.
THE COURT: Overruled.
THE WITNESS: I'm sorry. Can you repeat the

\section*{question?}

BY MS. SRINIVASAN:
Q. Sure. In the course of doing your analysis, you got these revenue numbers, you didn't ask anybody at Google whether those numbers reflected the benefit that Google

1380 the past few years?
A. Over the past, I think, 16 years, I think that's correct.
Q. And that is almost ten times that you've served for Google in that capacity, correct?
A. I have been retained by attorneys for Google, yes.
Q. And you've offered testimony as to damages in each of those cases, correct?
A. That is correct.

MS. SRINIVASAN: Pass the witness.
REDIRECT EXAMINATION

\section*{BY MR. PETERMAN :}
Q. Mr. Kidder, just a few follow-up questions.

What date did you first understand that Arendi was accusing the STS functionality only of infringement? A. Whatever the late Friday night was before trial started.
Q. And what date did you first learn that Arendi was alleging a \(\$ 45.5\) million damage number in this case?
A. At the same time frame, like, 10:00 at night or something like that on the Friday before trial started. Q. That was after the day the jury was impaneled? A. Yes.

MR. PETERMAN: Mr. Boles, can you bring up PDX-7-3, please.
Q. And does that reflect the instances and cases in which you testified as a damages expert for Google over by mr. PETERMAN:
Q. Will you explain to the jury why your numbers and

Mr. Weinstein's numbers in PDX-7-3 are the same?
A. Because we matched his methodology.
Q. Is it your opinion that the numbers here overstate the downloads to Android 8 with STS or Android 9?

MS. SRINIVASAN: Objection. Leading.
the court: Overruled.
THE WITNESS: Yes. These are all -- this is
just an apportionment of all downloads for -- sorry, this isn't an apportionment for 2018. This is most of 2018, but it doesn't -- there's no specificity as to which version of Android were downloaded to. It's just downloaded to Android, as we saw the tab in that prior sheet.

\section*{BY MR. PETERMAN}
Q. And what is the impact of this overstatement on your \(\$ 500,000\) damages calculation?
A. It doesn't make too much difference, actually. So if
you remember, I'm looking at revenues. And most of revenues come from the devices. And there's
out of that came from the apps. So, you know, even if I took away the entirety of the apps revenue, it wouldn't make a substantive difference in my opinion.
Q. And what is the impact of this overstatement on

A. It's significant. Because, I mean, most of his damages opinion relies on app counts and multiplying the app counts by ten cents.

MR. PETERMAN: Thank you, Mr. Kidder. No further questions.

THE COURT: Thank you very much.
You may step down, sir.
MR. PETERMAN: May Mr. Kidder be released, Your
Honor?
THE COURT: Yes, he may.
THE COURT: Does Google have any additional
witnesses to call?
MR. UNIKEL: Google rests its case, Your Honor.
THE COURT: Thank you very much.
MS. SRINIVASAN: And, Your Honor, we might have some motions to raise outside the presence of the jury. I think we can do that at the end of the day if the Court agrees with that.
the court: That's fine.
Would Arendi like to present a rebuttal case?
MR. LAHAD: Yes, Your Honor. We have a
rebuttal witness, Dr. Earl Sacerdoti, please.
MR. Peterman: Is the room unsealed as of yet?
THE COURT: The courtroom should be unsealed.

\section*{Sacerdoti - Direct}
' 843 patent.
Q. I believe you have some slides for us today; is that true?
A. I do.
Q. These are they, correct?
A. This is the first one.
Q. We are on the clock today, Doctor, so we're going to be going through these pretty quickly. But before we get into your -- let me ask you this: What is, generally, your opinion that you are going to give today?
A. My opinion is that the currently validated '843 remains valid.
Q. Before we get into that, tell me about yourself. Where were you from?
A. I'm from Northern California, been out there for about 52 years.
Q. Where did you go to school?
A. Did my undergraduate work at Yale, my graduate work in computer science at Stanford.
Q. You have an MS and a PhD from Stanford; is that correct?
A. That's correct.
Q. How long have you been -- let's call it working in computers or working with computers?
A. Well, a bit longer than Dr. Fox who testified this

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morning. I wrote my first company computer program in 1963.
Q. And can you give the jury a flavor of some of your experience involving computers and computer science since then?
A. Yeah, I've done a range of things. I was working at SRI, Stanford Research Institute, nonprofit research institute at Stanford for about ten years. Got the entrepreneurial itch and founded a number of companies, one called Machine Intelligence that was trying to commercialize machine vision and robotics. And we spun out of there another company that -- an initial product understanding natural language questions against a database. That product became \(Q\) and \(A\), which was the first product of a company we spun out of Machine Intelligence called Symantec, which you may have heard of. Q. What did you do for Apple?
A. After consulting for Apple for a while, they hired me on as a full-time employee to establish a group, basically to coordinate their R\&D efforts. This was in the middle '90s, and believe it or not, they'd been around for 15 years and they'd never had what's called a product roadmap, a plan of which products are going to come out which order, what software is going to be in what hardware and stuff. So that was the job I took on there.
Q. And you've got a few patents. Can give us a brief flavor about the technology you've invented?
A. Yeah. I've done a range of things. The first couple patents I did were in the area of data visualization and an interactive system for building these kind of visualizations. With some colleagues, I built a portfolio of patents around consumer-selected advertising in virtual worlds. So if you had an avatar and you put a Nike Swish on your chest, you could get paid for that as other people saw it and interacted with you.

And then and I also have a patent in applying machine learning to predicting which homes in a given local area are most likely to go on the market and sell in the next year.

MR. LAHAD: Your Honor, I'd offer Dr. Sacerdoti
as an expert in computer science and programming?
MR. UNIKEL: No objection, Your Honor.
THE COURT: He's qualified.
MR. LAHAD: Thank you, Your Honor.
THE WITNESS: Thank you, Your Honor.
BY MR. LAHAD:
Q. In forming your opinions, sir, what materials did you review?
A. I kind of looked at all the stuff you've been talking about all week; the patent itself, it's file history,

\section*{Sacerdoti - Direct}

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prior art references, transcripts of the depositions that we all saw last week, the videos of the various conference presentations that we heard about and saw. And I also inspected the MAC Book devices that Dr. Miller discussed in his deposition.
Q. You were in the courtroom today for Dr. Fox's testimony, correct?
A. I was.
Q. You read the reports he issued in this case, correct?
A. I did.
Q. Do you agree with Dr. Fox's conclusion regarding validity of the patents?
A. No, I don't.
Q. Do you agree with Dr. Fox's approach or his analysis?
A. I'm not sure I understand his approach for the analysis, but I certainly don't agree with how he's presented or what the results of that are. It doesn't make -- he hasn't given, in my perspective, thorough analysis.
Q. What do you mean by that?
A. Well, this is a very intricate and connected pattern of all the various claim terms there, claim elements refer to the same terms, in many of the claim elements. And it's not okay to just say, okay, I see some of these things in some prior art and some others in some other

\section*{Sacerdoti - Direct}
prior art and paste them together and check off the things that are in the middle. All of these things in this day after New Years confetti of the floor slide are intended to indicate how the various terms in the claim elements are used over and over again.

And if I talk about first computer program in one of the elements, I have to be talking about the same first computer program in all the others. So what Dr. Fox didn't do, for example, this morning was when he said, "Okay, I can check off this line here," he didn't go back and see if the way he checked off that line connected using the same other elements, other terms consistently throughout all the different elements. And in my understanding of how to interpret a claim, that has to be done.
Q. What are you showing us here with this slide?
A. So the approach that I took was to kind of take the kind of analysis that's suggested by my New Year's party slide and give myself a sequence of questions that I to have to say, "yes" to for something to possibly practice the patent, that is, you know, kind of do the invention.

And so first question is, "Was an editable document displayed by the first computer program? If so, does analyzing the information identify multiple types meeting the Court's construction?" And so on and so on and so on.

There's a whole set of questions that I ask in sequence, and if I can go through that and get to the end, then I know that I have a candidate for something that might practice the patent. And I'll go back and look at it in more detail.
Q. And Dr. Fox provided his opinions with respect to anticipation and obviousness this morning. And is there any portion of Dr. Fox's opinion that you agree with?
A. Is there any portion of it that I agree with? Well, I don't agree with his bottom line conclusions. I'm sure if we looked, there would be parts of it I agree with.
Q. Let me ask you that. Do you agree with any of Dr. Fox's opinion on the validity of the patent?
A. I don't.
Q. And is it true with respect to anticipation and obviousness?
A. Yes, it is.
Q. Can you -- the Court will instruct the jury on the law, but can you give us just a brief recap of anticipation and obviousness?
A. Yeah. As I understand it. I'm not a lawyer; that's not where my expertise lies. But anticipation, as we've heard several times, is when a single prior art, a piece of prior art, a document or a system, if you can prove out that the system existed -- does everything. Practices

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Q. Let's start talking about some of the Dr. Fox's opinions and some of the grounds for invalidity. Let's start with anticipation by CyberDesk. Of course, you disagree that CyberDesk anticipates the \(\quad 843\) patent, correct?
A. Yes.
Q. So tell me, what's CyberDesk missing?
A. Well, one thing that it's missing, we can see here from the -- this is the Chi paper that we've heard a lot about over the last week. The diagram that shows how CyberDesk works, shows as its example the input coming from a mail reader. It's a mail reader, not a full mail client. It means it's reading your mail. That means what it's reading is not an editable document under the Court's construction; therefore, it's not a document. If it's not a document, then my cascading list of questions kind of gets a "no" right at the very top. And consequently, CyberDesk cannot invalidate the \(\quad 843\) patent, cannot anticipate the ' 843 patent.
Q. You were in the courtroom last week when we heard the testimony of Dr. Dey, correct?
A. Yes.
Q. And you recall he gave some testimony about editable documents in CyberDesk. Do you recall that?
A. Yes, I do.
every element of the claim and does so in the way that the claim is arranged. If that is the case, if that can be proven, then it practices the claim.
Q. What about obviousness?
A. With respect to obviousness, you can combine multiple references. You can't combine them willy-nilly, though. You have to ask yourself the question, would a person of ordinary skill in the art at the time of the invention, have had the motivation to do so? You know, would they have said, "Oh, it would be a good way, a idea to put these things together," for some reason. And that has to be done, importantly, not in hindsight. The game here isn't, oh, I see this patent. So let me look around at what art was available at the time and see if I can take a piece here and there and copy what the patent did.

The idea is, would you see those things and be motivated to make the invention. So it's like would you be motivated to put all these things together and end up with the invention, not just see the invention and then make art that copies it.

So if you're trying to build the invention from reading the claims, that's hindsight. You have to imagine that somebody hasn't seen those claims yet, hasn't seen the invention, and they're motivated to build it on their own.

\section*{Sacerdoti - Direct}

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Q. And candidly, that testimony is inconsistent with your opinion. You'd agree with that?
A. Yes, I would.
Q. So are you ignoring or disagreeing with Dr. Dey's testimony?
A. No. I'm sure he believes what he said. And it's a question of looking at all the evidence. We have contemporaneous evidence like that picture we just showed from the CHI paper that says at that point in time, at least his best example, wasn't editable text.

And Dr. Dey from 20 years later, remembered that at some point in the CyberDesk project, which took years, some work was done before the CHI paper. A lot of it was done after the CHI paper. He recalled that at some point it was an editable document, but he didn't recall -- in the deposition transcripts that I've read, he didn't recall when.
Q. So fair to say you're putting more weight on the contemporaneous documents that we saw rather than uncorroborated testimony of Dr. Dey?
A. Yeah. That's a good way to put it.
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MR. UNIKEL: Objection. Leading.
THE COURT: Overruled.

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BY MR. LAHAD:
Q. So what are you showing us here with respect to
        CyberDesk, sir?
    A. This is demonstrating that, under my analysis, it's
    pretty clear that CyberDesk doesn't anticipate the ' 843
    patent.
    Q. Because there's no document?
    A. Because there's first -- there's no document, that's
    correct.
    Q. You were in the courtroom this afternoon when -- or
    this morning, rather, when Dr. Fox testified about
    CyberDesk's browser.
        Do you recall that?
    A. Yes, I do.
    Q. And all the applets being in the browser?
    A. Yes.
    Q. What do you think about that opinion with respect to
    anticipation by CyberDesk?
    A. That what he showed us this morning also demonstrated
    that CyberDesk doesn't anticipate. This was a good
    example of him not applying the kind of approach that I'd
    suggest. Yeah
    Q. Let's talk about Claim 30. Does CyberDesk anticipate
    Claim 30?
    A. It does not.
    Q. Why not?
    A. Well, as we've heard several times, the dependent
A. ADD, if you remember, was the system for dynamically integrating programs that Apple Computer developed. This was a multi-year project. Started in their R\&D group. And the papers about it discuss a kind of cheat by gel collaboration between the \(R \& D\) and the product group trying out different things and doing what one of the authors called "a dance" to try out features and put them in and out and user test them, and come down with a tight system that would support Apple's user's.
Q. What's ADD missing from the claims?
A. Well, ADD doesn't have a first computer program that sets up the input device. ADD was created by modifying the operating system so that it would watch what the applications were doing and be able to provide the kind of integration that they wanted without having to go in to modify every application, which would be unpleasant for all Apple's developers.
Q. Doctor, if I could direct your attention to your notebook and have you turn to Page -- or the tab at DTX-192.
A. Sorry. I'm having trouble finding it.
Q. So am I. Let's move on.

So remind us, what's missing from ADD?
A. So what's missing from \(A D D\) is an input device that's set up by the first computer program because the only
claim depends on an independent claim. And if the independent claim isn't practiced, then the claim that depends on it will also not be practiced. So because Claim 23 didn't anticipate Claim 30, which depends on Claim 23, can't anticipate either.
Q. And does this apply to the obviousness argument that we're going to talk about in a second?
A. It does.
Q. So if Claim 23 is not rendered obvious, then Claim 30 is not rendered obvious, correct?
A. Correct.
Q. All right. So we can cross that one off.

Let's put a bow on it. What's your independent
opinion on whether CyberDesk anticipates the asserted claims of ' 843 patent?
A. CyberDesk does not anticipate the asserted claims of the 843 patent.
Q. Let's move to some of the combinations. Now, you understand that the CyberDesk system is the only ground of invalidity that Dr. Fox asserts anticipates?
A. That's correct.
Q. Okay. And he's got a few combinations. Let's talk about the combinations. First, let's talk about ADD and CyberDesk. Very briefly, remind the jury what is or what was ADD?

functionality provided by the Java API framework. Do you recall that?
A. Yes.
Q. And the allegation was that the Java API framework was part of the operating system.

> Do you recall that?
A. I do.
Q. Okay.

MR. UNIKEL: Objection, Your Honor. Sidebar, please.

\section*{Sacerdoti - Direct}
input device there, the menu, is set up, like I said, by the operating system.
Q. What sets up ADD, then, the input device in ADD?
A. The input device is set up by the operating system, by the code that was added to the operating system to support ADD.
Q. Okay. Well, let's -- you're my witness, but let me cross-examine you for a little bit. You were in the courtroom last week when Dr. Smedley and the rest of the witnesses testified about infringement?
A. I was here for some of it. I wasn't here for the protected parts of the testimony.
Q. And -- but you were here for the portions that discuss this notion of the application being serviced by

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(Whereupon, the following discussion is held at sidebar.)

THE COURT: Okay. What's the basis?
MR. UNIKEL: Your Honor, objection. This is outside the scope of the expert report. He's a validity expert. He's not an infringement expert. If he is about to give infringement opinion about how our system does or does not work, it would be infringement opinion. He can talk about how Apple Data Detectors works, talk about Dr. Fox's opinion that if Arendi's position is right what would that mean for the invalidity case. He cannot offer opinions on how our system work does or doesn't do.

\section*{THE COURT: Counsel?}

MR. LAHAD: I agree. He is not going to talk
about that.
THE COURT: Great.
MR. UNIKEL: Great. We are in agreement.
Thank you.
THE COURT: There wasn't a pending question,
jury.
Let's continue.
(Whereupon, the discussion at sidebar concludes.)

MR. LAHAD: Thank you, Your Honor.

\section*{Sacerdoti - Direct}

MR. UNIKEL: Objection, your Honor. Leading the witness.

THE COURT: Overruled.
BY MR. LAHAD :
Q. So what are you showing us here?
A. What I'm showing us here is, if there is no input device set up by the first computer program, that fails my fourth question, and so that helps me determine that Apple Data Detectors does not practice the ' 843 patent claims.
Q. Right. So but Dr. Fox is not asserting that anticipation by Apple Data Detectors is asserting the obviousness by the combination of CyberDesk and ADD, right?
A. Correct.
Q. Okay. So what is your opinion with respect to whether or not the combination of CyberDesk and ADD renders the claim obvious?
A. That combination also does not render the claims obvious. If neither of the prior art systems practices one of these steps, then the combination couldn't either. Q. What about a motivation to combine? Would a person of ordinary skill in the art be motivated to combine Cyberdesk and ADD?
A. I don't believe so.
Q. Why not?
Q. My question to you is, how is this any different than what we heard last week?
A. Remind me back one question. What -- oh, the -- the Infringement discussion.
Q. The Java API framework?
A. Yeah. The Apple Data Detectors documentation clearly indicates that the communication here is done through what are call Apple Events, which are messages that are sent from one piece of system to another. The message would be a piece of a data structure that gets built up by one program and that data structure is then transmitted to another program. It's quite different from linking from one piece of code to another during execution, which is -was my understanding of what Dr. Smedley was, basically, accusing Google of doing, linking as opposed to sending messages.
Q. Is there a call from, for example, Notepad or a text editor in the Apple product to ADD?
A. No. There's no call in that sense. The programs aren't linked together. They don't behave in execution like one big program.
Q. So they're not joined together temporarily like Mr. Elbouchikhi said?
A. That's correct.

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\section*{Sacerdoti - Direct}
A. Well, the two systems are both trying to work on integrating computer programs dynamically as the user was doing stuff. But they were following very different objectives, and they're kind of going in opposite directions. Apple's system was designed to be something that was going to be actually added to the commercial operating system and needed to be attractive to their developer community because a lot of the value in Apple's computers was the software that would run on them. They couldn't keep their developers happy, they couldn't keep selling hardware.

CyberDesk, by contrast, was a research project that was looking -- as opposed to Apple, which was trying to narrow the kinds of options they gave to users so the user wouldn't have no think about it much and could do it really quick.

What CyberDesk was looking at was kind of blowing out the menu, looking at way more kinds of options over time. So they were looking at things like where am I on the campus when I'm asking this question or when I'm using this program? What does my face look like when I'm using the computer? It's a research project. So they were looking at finding other ways to determine the context and figure out what options to offer to the user.

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So one was a research project looking at making
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 bigger menus, if you will, or bigger kinds of choices. The other was a commercial effort, which required changing the operating system, was looking for the smallest increment to take advantage, make real value to their end users. Different motivations, different directions, they were headed altogether. It's hard to understand why you would combine them.
Q. So what's your opinion regarding whether CyberDesk and ADD or ADD plus CyberDesk renders the claims obvious?
A. My opinion is that the combination of those two
systems would not render the ' 843 patent claims obvious.
Q. Let's move on to the combination of CyberDesk and Microsoft Word 97.

What's your opinion on whether that combination renders the claims obvious?
A. My opinion is that combination, likewise, does not render the claims obvious.
Q. So what's missing from the combination of CyberDesk and Microsoft Word 97?
A. Well, I haven't seen anything in the documentation from Microsoft Word that would suggest that it analyzes information in the document to determine if the information is one or more types as the Court has construed, the kind of types that it's looking for, namely, contact information or identifying information.

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\section*{Sacerdoti - Direct}
me. I misread it. "One approach to integration is a tightly integrated suite of tools that take advantage of known services." This is what CyberDesk wants to say. So that is one approach. That is the Word 97 approach. It's part of Office 97, tightly integrated suite of services. If something is going to link to Microsoft Word in the Microsoft world, it's coded into the program.

And what the CyberDesk folks say is, "This approach, available in many commercial personal productivity products, is unsatisfactory," and then they give you two reasons.
Q. Is Microsoft Word 97 a commercial personal
productivity product?
A. Yes.
Q. And they find the use of Microsoft -- they being the CyberDesk guys -- they find the use of a tightly integrated suite of tools like Microsoft Word 97 to be unsatisfactory?
A. That's what they're saying here, yes.
Q. So what does that tell you about whether or not there would be a motivation to combine the two?
A. Well, if I were a person of skill in the art and I read that one approach was unsatisfactory from the point of the other, I don't believe I'd have a strong motivation as to checkout whether they could be combined.

So a system that, as Dr. Fox had suggested this morning, that pulls aspects from CyberDesk, wouldn't do so either.
Q. Well, do you agree that there's a motivation to combine CyberDesk and Word 97?
A. I pretty strongly disagree with that. There's good evidence that such a motivation does not exist.
Q. You think the CyberDesk guys would agree with you?
A. I do.
Q. Why do you say that?
A. Well, I've read their papers and they say it.
Q. Let's go to DTX-10, please, which is in your notebook.
A. I have that one.
Q. Excellent.

MR. LAHAD: If we can have DTX-10 on the screen, please, Mr. Boles.

BY MR. LAHAD:
Q. Can you direct us to the portion of this document on which you are relying?
A. Yeah. If you go down to the second paragraph in the introduction. There we go.

Let me read out that first sentence there: "Our approach to integration is a tightly integrated suite of tools that take advantage of known services" -- oh, excuse
Q. Are you familiar with the concept of teaching away?
A. Yes.
Q. What's teaching away?
A. Teaching away is a lawyerly kind of term for saying that a piece of prior art suggests that you shouldn't do what the patent does.
Q. Does this document teach away from the combination from CyberDesk and Microsoft Word 97?
A. Yes, it does. It's saying taking Microsoft Word approach tightly integrated is not the direction that we should be going in.
Q. Thank you.

So let's wrap it up. What is your opinion on whether there is a motivation to combine CyberDesk and Microsoft Word?
A. In my opinion, there is not a motivation to
combine --
Q. And does that --
A. CyberDesk Microsoft Word.
Q. I'm sorry, Doctor.

And does that render the claims obvious?
A. Yes, it does -- sorry. That does not render the claims obvious.
Q. Thank you.

Let's go to the last one, ADA and Microsoft Word.

Does that combination render claims obvious in your view?
A. It does not.
Q. Why not?
A. Generally, the same kind of argument. Apple Data Detectors was very explicitly looking at a way to integrate programs from the user's point of view dynamically, and not -- again, not require changing the individual apps, not making the developers go in and change their code in order to product the integration. That was kind of the whole thrust of what they were doing as well.
Q. Do you think there's motivation to combine the two references?
A. There isn't.
Q. Why not?
A. Well, again, as I said, they were aiming in opposite directions. Microsoft Word is trying to keep a closed system around the Office suite of products that call each other or send messages to each other. And Apple Data Detectors was trying to allow all programs to participate in this integration process dynamically in run time. Q. Let me direct your attention to your binder at DTX-9-54. I think it's the last tab.

Do you recognize DTX-954?
A. I do.
Q. This is one of the documents that you relied on in forming your opinion regarding validity, correct? A. It is.

MR. LAHAD: Your Honor, I offer DTX-954.
MR. UNIKEL: No objection, Your Honor.
THE COURT: It's admitted.
MR. LAHAD: Thank you, Your Honor.
(Exhibit DTX-954 is admitted into evidence.)
BY MR. LAHAD :
Q. I want to direct your attention to Page 8 of 11 at the bottom.

MR. LAHAD: And that paragraph right there
Mr. Boles that starts with -- let me step back.
by Mr. LAHAD:
Q. If we go to the front of this document, it says, "An overview of LiveDoc."

Do you see that?
A. Yes.
Q. What is LiveDoc?
A. LiveDoc was a research project that was done using Apple Data Detectors kind of as a basis and standing on its shoulders. One of problems that Apple was finding with Apple Data Detectors was kind of the use of these menus was a little clunky. And they were looking at ways to make it kind of faster and easier for the user, and

\section*{Sacerdoti - Direct}

But we were still concerned about acquiring
developers to change their applications to gain access to LiveDoc's capabilities. Again, from Apple's perspective, we don't want to make our developers have to recode something just because we have a cool new feature. And that's what they said and it makes sense.

We know from experience that developers are justifiably reluctant to change their applications just to implement a new feature provided by the toolbox. So we experimented with some alternatives that we hoped would ease this restriction.
Q. Would the -- would you have to change the application, in this case Microsoft Word, to include the Apple Data Detectors functionality?
A. Well, no. With respect to Apple Data Detectors, the InNova system you would not. It would work with any application.
Q. So what does this say about -- what does this say with respect to teaching away as to ADD and Word '97?
A. Again, the ADD folks, we're looking at ways to not make -- not have to make the programs explicitly link with one another, in direct contrast with Microsoft Word '97's approach, which was to directly link to the other programs. So directly link, try to avoid directly linking, teaching a way.
for release. But -- so what they said was Live Simple Text worked well as a prototype.

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LiveDoc was experimental system to look at some other ways of providing user interface other than a menu that was in a released Apple Doc product.
Q. Does LiveDoc include ADD functionality?
A. It does. It's built on top of ADD functionality.
Q. And one of authors on this paper is James R. Miller. Do you see that?
A. That's correct.
Q. Same James Miller we heard from last week?
A. Yes, that's Jim Miller.
Q. Now if I could can have you join me at Page 8 of 11 .

MR. LAHAD: And, Mr. Boles, if you could
highlight "A live simple text."
THE WITNESS: Yeah, so it's the second paragraph there I'm interested in.
BY MR. LAHAD:
Q. Yeah. So what does this say with respect to motivation to combine or the lack thereof?
A. Okay. Just a second. Live simple text was a version of a text writing and weaving program, and they -- they went in and changed the code of simple text to make it work with this experimental system they were doing. So it was a prototype. It was not something that was intended

Q. And so let's wrap it up. What is your view as to whether or not the claims of the 843 patent are obvious in light of the combination of ADD and Word '97?
A. My opinion is that they are not -- that combination does not render the ' 843 patent obvious.
Q. Let's briefly touch on secondary considerations of nonobviousness. I will focus on the licensing one. Why is licensing relevant or how is licensing relevant to obviousness or nonobviousness?
A. Well, these secondary considerations, ones that aren't technical, they're just other considerations. Doesn't mean they're not important. They are both secondary, which means they don't have to do with the technical stuff, per se. But if someone is paying for a license, they've got to be paying for something that they believe is valuable. And something that was obvious, you wouldn't think to pay for it, right? It's obvious.

So the fact that other firms paid for licenses for the ' 843 patent suggests that there is something innovative there, there is something that was worth it to them to have a right to practice that patent in their products.

MR. LAHAD: Pass the witness, Your Honor. THE COURT: Thank you.

Cross-examination?

Sacerdoti - Cross
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billed to Arendi in excess of \(\$ 200,000\) for your work on these various cases?
A. Frankly, I don't remember what I may have -- what I may have billed -- what I did bill in 2020.
Q. Sir, do you recall at your deposition that you gave testimony under oath?
A. I do.
Q. And, sir, you were asked the following question and gave the following answer:
"Question: Do you believe it's in excess of \(\$ 200,000\) that you've billed to Arendi in connection to your work on these various cases?
"Answer: I believe so, yes." Unquote.
Do you recall that testimony?
A. No.
Q. Do you have any reason to believe were you not telling me the truth?
A. I have no reason to believe I wasn't telling you the truth.
Q. Do you know three years later how much you've actually billed to Arendi in connection with your work on these cases today?
A. No, I don't.
Q. Your work on these cases focused on validity issues, correct?

MR. UNIKEL: Thank you, Your Honor. CROSS EXAMINATION

\section*{BY MR. UNIKEL:}
Q. Good afternoon, sir.
A. Good afternoon. It's nice to see you in person. You look much better than when you are a 1 -inch square on my computer screen at the deposition.
Q. Thank you. I will try to be brief. I know it's a late in the day.

Sir, like all the experts in this case, you are being paid for your hourly service, correct?
A. That's correct.
Q. You are being paid at the rate of \(\$ 550\) an hour; is that right?
A. Yes.
Q. When we spoke, you and I spoke, I think you just mentioned, in October of 2020 , correct?
A. I don't remember the date, but I'll take your word for it.
Q. As of that date, you had told me that you had already made in excess of \(\$ 200,000\) from Arendi at that point in time. Do you recall that?
A. No, I don't.
Q. I'll show him his --

Sir, as of October 2020, do you believe that you have

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A. That's correct.
Q. And you looked at the patent in this case in connection with validity analysis, correct?
A. A few times, yes.
Q. And you're aware that the earlier U.S. filing date that is claimed by these patents is November \(10,-1998\); is that right?
A. Yes, that's right.
Q. Sir, if I may --

MR. UNIKEL: And if I may impose on Mr. Boles to put up one of your slides, PDX-5-16, please. Sorry. I think we may be --

Thank you very much.

\section*{BY MR. UNIKEL:}
Q. Sir, am I correct that this is sort of the sequence of questions that you used to perform your analysis? A. It's not the entirety of performing my analysis. This was kind of a summary description of what \(I\) did. It's -- how do I say this? What this doesn't do, which I insist on doing to myself, is to incorporate the exact claim language and the terms as construed by the court. I'm always -- when I'm doing this work, I have to --
Q. Sir, I want to make sure we get out of this, so I'm going to ask you some specific questions. If you could give me some specific answers, it will help us to get
A. I'm sorry. I'm happy to do so.
Q. Sir, this particular claim language that you took the jury through, this is not the actual claim language of the patent, correct?
A. That was the point \(I\) was trying to make.
Q. This is how you personally think about the claims, as you say in the title of this slide, correct?
A. That is correct.
Q. And you've created these questions that you believe correlate to the elements of the claims, but this is not the actual claim language; is that right?
A. That's correct.
Q. And as I think you took us through, you went through these questions and you answered yes or no, and then that told you whether you could move on to the next question; is that right?
A. Generally speaking, that's right.

When I get to the bottom, that doesn't mean, okay, I don't do anymore analysis, that just means, okay, this is worth analyzing. This is now looking close.
Q. And, sir, when it comes to CyberDesk, you agree that Dr. Dey knows more about how the CyberDesk system works than you do, correct?
A. You'd have to tell me what the CyberDesk system is

\section*{Sacerdoti - Cross}

My recollection of what's on the website pages has something like a simple Notepad or there's some adjective that suggests that it's not a complete notepad program.
Q. So you recall that on the desktop services, there was mention of a simple Notepad; is that correct?
A. Again, I would want to look at that document. I don't -- as I say, I'm older than Dr. Fox. I don't necessarily trust my memory any more than I would trust Dr. Dey's memory. I would like to look at that document and we can see what -- you know, we can see what the contemporaneous document shows us rather that my recollection --
Q. Sir, sitting here today, you don't whether or not the desktop services on the CyberDesk website included a reference to the simple Notepad; is that what you're telling me?
A. I am saying I don't recall. I believe there was a reference to a simple Notepad.
Q. And, sir, you have no reason to dispute Dr. Dey's testimony concerning when he posted individual items on the CyberDesk website, correct?
A. Please repeat that.
Q. Yes. You have no reason to dispute Dr. Dey's testimony concerning when he posted individual items to his website, correct?
for me to answer that.
Q. Do you believe that Dr. Dey knows more about the work that he did in connection with CyberDesk than you do?
A. Yes.
Q. And, sir, you are aware of the Future Computing Environment's CyberDesk website from Georgia Tech, correct?
A. Yes.
Q. In fact, as part of the work on this case, you personally went to that website, clicked on some of its hyperlinks to retrieve versions of some of the materials that are on that website concerning CyberDesk; is that right?
A. That's correct.
Q. Did you see, for example, the list of network services and desktop services that CyberDesk actually allowed to be used?
A. Yes, I did.
Q. And did you see Mr. Fox earlier today -- Dr. Fox -included some excerpts from that referring to, for example, a Notepad that was referred to in the desktop services that were integrated?
A. I think we need to look at that slide. I'm not sure that it was identified -- Dr. Dey, in his testimony, I believe called -- said there was a Notepad at some point.

Sacerdoti - Cross
A. I don't recall a whole lot of testimony regarding when individual items were placed on that website, other than some of the papers that he was preparing for publication.
Q. And you have no reason to dispute Dr. Dey's testimony about that, correct?
A. Regarding those dates for those papers, no.
Q. And sir, you -- I think you opined that the reason you don't think that CyberDesk anticipates is because the Mail Reader does not allow editing of documents, correct? That was what you testified to a few moments ago.
A. I believe I said that was "a" reason. I didn't say it was "the" reason.
Q. You provided that reason in this Court, correct, that you don't believe that the Mail Reader allowed you to work on editable documents; is that correct?
A. That is correct.
Q. And you concluded from the title "Mail Reader" that it did not allow editing of the document, of the e-mail that's shown in the CyberDesk screenshots, correct?
A. From that and other contemporaneous evidence on the website as well.
Q. And so you watched the testimony of Anind Dey with the jury, correct?
A. Yes.

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Q. And I think you told your counsel that Dr. Dey's was, in fact, inconsistent with your conclusion about Mail Reader; is that right?
A. No. I don't believe I said that. Maybe I did, but I don't believe I did.
Q. Do you recall your counsel asked whether or not

Dr. Dey's testimony about the use of a text editor was inconsistent with your view about Mail Reader?
A. Again, I'm at a loss here. You're talking about a
text editor or are we talking about a Mail Reader?
Q. I'm just asking you, sir --
A. A text editor doesn't say anything about a mail reader.
Q. Sir, do you recall about 20 minutes ago that your counsel asked you expressly whether or not your opinion was inconsistent with the testimony of Dr. Dey?
A. Yes, I do. I understood that as referring to the entirety of his testimony, not to any specific statement within it.
Q. And you agreed that your opinion is inconsistent with the testimony of Dr. Dey, correct?
A. Correct.
Q. Sir, let me ask you a bit about Microsoft Word. As part of your work in this case, you looked at how Mr. Hedloy created the prototype for his products,

21/23 correct?
A. I looked at a few instances of the prototypes of his product. I didn't see -- I didn't look at how he created it. I looked at what he created.
Q. Well, in fact, didn't you state in your report that Mr. Hedloy used Microsoft's Visual Basic Scripting to create the macros that he used for the prototypes; is that correct?
A. Yes.
Q. And so the jury understands, a macro is a feature of Microsoft Word that lets a developer put instructions into a command inside of Microsoft Word, correct?
A. I don't know that I would use the word "inside," but in general, that's correct. I don't know what it means to be inside.
Q. And a Microsoft Word macro is designed to be used with Microsoft Word the program, correct?
A. Yes.
Q. And Visual Basic is a particular language that was developed and offered by Microsoft for people to program into their various applications, correct?
A. I believe it was developed by Microsoft. It was kind of a second-generation macro language that they used with a number of their Office Suite products.
Q. That allowed people like Mr. Hedloy to build program

\section*{Sacerdoti - Cross}
Q. In fact, in your view, that was a well-known feature of Microsoft Word, correct?
A. Correct.
Q. Sir, I believe you expressed the opinion that one of the distinctions between the Apple Data Detectors functionality and the patented functionality was that Apple Data Detectors used the operating system to set up the input device; is that correct?
A. Yes.
Q. And you feel that that is a distinction that meant that the first computer program was not, in fact, setting up the input device?
A. Yes.
Q. Sir, let me ask you, by the way, you pointed out an article -- your DTX-10?

MR. UNIKEL: Can we bring that up, please? Yes. Defense -- sorry. Apologize.
BY MR. UNIKEL:
Q. With your counsel -- you recall looking at this with your counsel?
A. Yes.
Q. You recall you've highlighted a certain -- a few sentences at the beginning of this Paragraph in CHI 97 correct?
A. Yes.
features into Microsoft Word; is that correct?
A. That's correct.
Q. And sir, when reviewing the ' 843 patent, one of the questions you tried to answer was whether a person of ordinary skill in the art reading the patent would understand that the invention could be readily implemented using the macro facility that was well known in Microsoft Word; is that right?
A. I apologize. I lost the beginning of your question by the time you got to the end.
Q. Yes. In reviewing the patent, one of the questions you tried to answer was whether a person of skill in the art reading the patent would understand that the invention could be readily implemented by macros in Microsoft Word?
A. I would agree with that.
Q. And your conclusion was that a person of ordinary skill in the art would, in fact, realize that using the macro facility of Microsoft Word was a natural and easy and direct way to implement the invention; is that correct?
A. Yes.
Q. And you understood that people of skill in the art were aware of Visual Basic to use with Microsoft Word, correct?
A. Yes.
Q. So this article is from March of 1997 that you were quoting from, correct?
A. That's when it was -- that's when the contents was.
Q. Yes. And that's what the publication shows --
A. Yes.
Q. -- as far as the date?
A. Yes.
Q. And I believe you highlighted the first two
sentences; is that right?
A. Yes, I believe so.
Q. And if I'm reading it correctly, you said -- you quoted, "One approach to integration is a tightly integrated suite of tools that take advantage of known services. This approach, available in many commercial personal productivity products, is unsatisfactory for two reasons."

You quoted that language, correct?
A. Correct.
Q. And so you acknowledge that there was one approach to the integration of services to put those services inside a particular program, correct?
A. Correct.
Q. And it's your view that CyberDesk took a different approach; is that right?
A. Yes.
Q. And it's your view that CyberDesk separated the instructions and did not put them inside a single computer program, correct?
A. Depends -- that depends on how you view the CyberDesk architecture.
Q. Do you believe that CyberDesk put all of the instructions into a single computer program under any interpretation of the architecture?
A. Yes.
Q. What is the interpretation of the architecture that leads you to believe that CyberDesk actually put the instructions into a single program?
A. The CyberDesk documents -- this one probably does somewhere, but rather than looking through it, let me just talk about it in general.

The CyberDesk documentation indicates that the CyberDesk system was implemented in a prototype fashion as a collection of what are called Java applets. Those are little chunks of code that are not actually separately runnable programs, that, when loaded into a web browser -and, as they described in the documentation, the web browser served as a model of a desktop.

So they were kind of making believe that the browser screen was the desktop and exploring the integration of these various applications within that desktop. And the

\section*{Sacerdoti - Redirect}
applets were operating within the environment of the browser program.
Q. Thank you, sir.

MR. UNIKEL: I have no further questions.
THE COURT: Any redirect?
MR. LAHAD: Tiny.
REDIRECT EXAMINATION
BY MR. LAHAD:
Q. Doctor, in that last scenario that counsel was talking to you about, when the browser is the first computer program, does that show any kind of anticipation by CyberDesk?
A. No.
Q. Why not?
A. Well, as I have been showing with my waterfall slide and my New Year's Day party slide, you've got to see all the elements practiced within -- with one system for it to anticipate. We haven't seen that, even under the interpretation that the browser is the one first computer program.
Q. That's, like as you testified earlier, because there's no second computer program, no second information; is that correct?

MR. UNIKEL: Objection. Sidebar, please.

CyberDesk with the browser program, correct?
A. Yes. When CyberDesk was running, all of these
(Whereupon, the following discussion is held at sidebar.)

MR. UNIKEL: That was not his testimony
earlier. That would be a new opinion rendered on redirect. It does not answer my question. That was only about the document element, the only expression he expressed on direct. It did not meet the document element, not that there was lack of a second computer program.

THE COURT: Counsel?
MR. LAHAD: I think he testified in the context of if the browser applets running in the browser, why is there no anticipation. He referenced the elements of the slide that weren't met.

MR. UNIKEL: I don't believe he did offer that opinion. If he did, I would have a follow-up question to clarify something.

MR. LAHAD: I am happy to move to withdraw the question.

THE COURT: Let's do that.
MR. UNIKEL: Thank you, Your Honor.
MR. LAHAD: Thank you, Your Honor.
(Whereupon, the discussion at sidebar
concludes.)

THE WITNESS: Thank you, Your Honor.
THE COURT: Ladies and gentlemen of the jury, we have one more phase of this trial to go, and that's the phase where I give you the jury instructions and you hear the closing arguments from the attorneys. It's now almost 6:00 at night on Monday. So it doesn't make a lot of sense for us to start that process tonight because it's going to take approximately two to three hours.

So what I'm going to ask is for you all to appear tomorrow morning at 9:30. We should be ready to go with the jury instructions, and then we'll hear from counsel with their closing arguments. We should have the case to you for your deliberations by lunch. And I understand that we will be providing you lunch tomorrow as well.

Just to remind everyone, until you retire to jury room after the closing arguments to deliberate on the case, you are simply not to talk about the case with each other. Do not do any research or investigate the case on your own, and don't form any opinion about the case until after we've heard the jury instructions and the closing arguments. Okay?
You may be excused for the evening. We will
see you tomorrow at 9:30.
(The jury exits the courtroom at 5:53 p.m.)

Q. There were some questions about money.

Have you been retained by Arendi before as an expert witness?
A. No, I have not.
Q. Do you hope to be retained by Arendi in the future as an expert witness?
A. I'm hoping this is my last time on the stand. I'm turning 75 next month. I'm done.
Q. So you don't want to be retained by anybody in the future, correct?
A. That's a fair way to put it, yes.
Q. There was some talk about macros. At any point during his testimony, did you hear Dr. Fox say anything about macros?
A. I don't remember I don't recall anything that he said about macros, no.

MR. LAHAD: No further questions, Your Honor. Thank you.

THE COURT: All right. Thank you very much. Does Arendi have any other rebuttal witnesses?

MR. LAHAD: No other rebuttal witnesses, Your Honor.

May the witness be excused?
the court: Yes, he may. Please step down.

THE COURT: Please have a seat. Okay, folks, let's spend a little time, if we could, just talking about the jury instructions before we -- let's take a five-minute break. We will be in recess.
(Whereupon, a recess was taken.)
THE COURT: All right. Please be seated.
MR. UNIKEL: Your Honor, may I ask a quick
question?
THE COURT: Yes.
MR. UNIKEL: For 50A motions, how would you like us to do those today? Do we just obviously want to make sure we don't waive them?

THE COURT: Why don't you have everybody come up and put everything on the record that you want to say.

So we had defendant rest, so let's hear from plaintiff.

MS. SRINIVASAN: Yes, we have two 50A motions.
MR. LAHAD: Your Honor, we move under Rule 50A for judgment as a matter of law regarding invalidity. The issue on which defendant bears the burden. There is legally insufficient evidence for a jury to find any invalidity through anticipation of obviousness.

Dr. Fox did not present sufficient, legally sufficient evidence of anticipation of obviousness. There were significant shortcomings in his evidence of anticipation with respect to CyberDesk, did not prove by
clear and convincing evidence that CyberDesk disclosed document, as construed by the court, among other deficient claim limitations.

Likewise, Dr. Fox did not show obviousness by any combinations that he raised, ADD and CyberDesk, CyberDesk and ADD, and those two technologies or systems, combined with Microsoft Word '97.

In particular, Dr. Fox failed to show any kind of motivation to combine those references with each other. And accordingly, we think there's legally insufficient evidence of anticipation and obviousness.

Thank you, Your Honor.
THE COURT: All right. So the Court will
reserve decision on that, and we'll submit it to the jury subject to the Court's later deciding the legal questions raised by your motions.

Go ahead. Did you have another one?
MR. ARD: Yes, Your Honor.
THE COURT: All right. We've got another one.
MS. SRINIVASAN: And I stand corrected. I said
two. We have three, but we will be quick.
THE COURT: Okay.
MR. ARD: Your Honor, on the Samsung license,
we think the contract is unambiguously sort of in our
anticipation.
THE COURT: All right
Did the -- in your view, did the Court not
already rule on the IPR estoppel issue? I know I said that the Court would reconsider to the extent that defendant's only evidence of the CyberDesk system consisted of a prior art publication or patent. That's not my recollection of the evidence that came in.

Are you asking for reconsideration of that or this is just you're going to be preserving your ability to raise this in a JMOL motion?

MR. ARD: Well, certainly the latter, I
suppose. But as to the former -- that we're preserving it -- but as to the former, I think there are two distinct questions, one is whether they can present evidence of the system, and the second is whether the noncumulative aspect of the evidence, the system that they've presented is germane to the invalidity theory.

So if all of their sort of grounds for invalidity are contained in the written publications they presented, we think that's estopped. That's under Judge Stark's summary judgment order in this case.

THE COURT: All right. Your position is noted for the record.

Let me ask counsel for Google if somebody wants
favor for the reasons we discussed previously. I think it's Docket 220. I don't need to belabor the point.

If it's ambiguous, we don't think that they
have submitted any extrinsic evidence to support their
position, so we think that summary judgment would be sort of warranted on that aspect as well.

The case that we would cite for that was cited in our joint jury instructions.

THE COURT: What's the case? Can you just put it on the record.

MR. ARD: Sorry. Need my glasses.
the court: Yeah.
MR. ARD: Weiner v. Anesthesia Associates, it's
203 A.D.2d 455, New York.
the court: All right. Thanks very much.
MR. ARD: That's the Samsung license.
Also, on estoppel, we think the only evidence
that they presented -- that they purport to have presented that it allegedly was not in the publications was a uncorroborated oral statement. So we think that they should be estopped from raising CyberDesk. And for the rest of them, we don't think there is anything they put in the record that was noncumulative to the publications that was germane to their invalidity theories. So we would move on estoppel as well, for obviousness and
to talk to me about the point about apparently under New York law, they have a case that says that if you don't -if the Court ultimately rules that the contract is ambiguous and you don't present any extrinsic evidence that you should grant judgment for the other side?

MR. UNIKEL: Your Honor, there's ample case law cited in our various submissions on this that the best evidence of the intent of the parties is the contract agreements itself, and that actually is the most accurate, most complete, and most on-point indication of what the parties intended.

In addition, Mr. Hedloy, in cross-examination, when taken through the terms did acknowledge that he agreed to those terms voluntarily. When I asked him whether or not he agreed to these on behalf of Arendi, he acknowledged that he did. This is, in fact, evidence of his intent and of what it was that he was agreeing to.

In addition, we pointed out to the court the integration clause of the contract itself, which actually directs anybody to the terms of the contract as the indication of the parties' agreement, as opposed to any oral statements or anything extrinsic to the agreement. So Mr. Hedloy's testimony itself is extrinsic testimony that supports the intent and shows what the actual positions of the parties were when they agreed to

Calse 1:13-cv-00919-JLH Document 601 the terms.

THE COURT: Okay. Your position is noted. I'm going to reserve judgment on the license issue.

Counsel?
MR. ARD: May I respond very briefly?
THE COURT: Very briefly.
MR. ARD: Yes, Your Honor. First of all, the cases they cited are not about ambiguous contracts. They are all about the plain meaning of the contract.

Two, they have the burden of proof here. And under the Wiseman case, it says explicitly if they don't present any extrinsic evidence, they lose as ambiguous.

And three, on the parol evidence rule, under \(\wedge^{\wedge}\) FCHR1 one of the cases they cite, it says explicitly that parol evidence rule, parol evidence is admissible if a Court finds ambiguity in the contract.
the court: Okay. All right. Your position is noted for the record. I'm going to reserve judgment on this no-license issue. I do want to talk about this again in the context of the jury instructions, but we will get to that in a minute.

Any motions to make for the record?
MR. UNIKEL: Yes, Your Honor. I assume that I'm doing a quick recitation now and then we're submitting the papers; is that correct?

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the court: In post-trial briefing, correct.
MR. UNIKEL: Correct.
So, first, Your Honor, we will be filing a
motion for \(102(\mathrm{a})\) and (b), anticipation of the asserted claims in view of CyberDesk, both on the base of public knowledge and in public use before the 102 (b) critical date and certainly before the application filing date of November 10, 1998 or September 3, 1998. We believe there's clear and convincing evidence that CyberDesk system discloses all the asserted elements.

We'll also be making a motion on 103, obviousness of the asserted claims, in view of the combinations of CyberDesk system plus ADD, CyberDesk system plus Word '97 and ADD system plus Word '97. We believe there's been clear and convincing evidence that has been unrebutted that each of these combinations discloses all of the elements.

We also will be renewing, because it is a affirmative defense, the patent exhaustion and implied license defense based on the Samsung license agreement, which the parties both seem to agree is unambiguous.

In addition, Your Honor, I won't go through them all unless you want me to, but we will be renewing our previous 50A motions which were submitted at the close of plaintiff's evidence.

Mr. Toki, Mr. Choc, as well as both sides' infringement and noninfringement experts, Dr. Smedley and Dr. Rinard, and the damages experts, Mr. Weinstein, Mr. Kidder. This was a dispute that we believe the jury needs to decide.
the court: How is it going to help us if we have an answer to that? Because we've still got a dispute about the one guy that downloaded it at midnight when it came out versus when everybody else downloaded it.

MR. LING: Well, we believe the record is clear and the evidence is clear that there was no possible infringement earlier than December 5th, 2017. As to how further allocate that, I think that is a separate issue. But at least the period between August 21, 2017, which is Arendi's asserted earliest possible date and Google's asserted first possible date, there is a several-month gap that was either in or out and without this question in the verdit form, we believe it would not be possible to unwind the damages verdict to the extent that issue is resolved in Google's favor on appeal or either way, really.

THE COURT: All right. Let me hear from the other side on this.

MS. SRINIVASAN: Your Honor, it's a disputed fact issue. We offered a representative product stipulation that Google offered as to when the accused applications -- the devices that should be used that for
all other applications and products to be representative. The jury received an instruction on that, and they heard testimony about it. So it is not an issue they should be asked to determine on the verdict form. They've heard extensive testimony from Mr. Kidder that he started on a different date because he viewed that as the appropriate date. And they heard other testimony from Mr. Weinstein based on his reliance on Dr. Smedley.

So it is not -- you know, it's not an issue of law that should be presented to the jury. It is a disputed fact issue that's obviously relevant for how they calculated different damages. But the jury heard evidence as to why it would be appropriate to select August 2017.

THE COURT: Right. But the jury also heard
evidence that a later date would be appropriate as well.
MS. SRINIVASAN: Correct. And that's part of their apportionment for damages they offered today a methodology if -- as one of many different for reducing damages on that basis. But I don't think that there's -there's sort of a fact finding on that particular question that's needed because Google has explained to the jury, if they believe Mr. Kidder and the evidence that he relied on, then they can make an allocation of how to reduce and offset damages.

But it is a disputed fact issue, and to force
- or not.

If we knew that answer, if they answered "yes" to that question, then we could, if it turns out to be the case that those apps were covered, then we could just -then we know they did include them. If the jury answered "no" and it turns out later that those devices were -those apps were covered, then we could do a pro rata, theoretically, as one way to fix the jury verdict. So it's one way --

THE COURT: I understand your position. I'm not going to say this is my view, but one reasonable observer watching this trial might say there's a lot we're not going to know if the jury comes back in between your number and their number.

Would you disagree with that?
MR. LING: Understood, Your Honor. I take your point. It's just one way we think that we could avoid error and try to streamline things on appeal. I just wanted to preserve the objection.

THE COURT: I appreciate it. Thanks.
Let's hear Arendi's position on that.
MS. SRINIVASAN: Well, first. I think the inclusion of that in the verdict form is asking the jury to decide what they've characterized as a legal issue, question of law. That's been Google's position. So I
the jury to make a fact finding on that date, we don't think is necessary for the verdict form.

THE COURT: All right. So I've let everybody put their positions on the record. So we're going to go with what the Court had proposed not include that question.

Did you have another one you wanted to put Google's position on the record about?

MR. LING: Yes, Your Honor. On the proposed question about whether the damages include Google apps
 been a dispute in this trial based on the record. And again, any damages number that's presented as a lump sum would be impossible to unwind or to fix depending on how that question is answered if we don't know what the jury was accounting for in their verdict.

THE COURT: Well, your expert opined about a lump sum that would be appropriate if \(\square\) were included and if they weren't included, right?

MR. LING: That's correct, Your Honor. But the jury could come back with conceivably a number in between, for example, the damages experts' numbers. If we don't know which party's theories they went with, it would not be possible to tell whether or not they thought the damages included the Google apps \(\square \square \square\)
don't think they should be advocating for the jury to do that in the first instance. And I concur with the court. We went through damages, direct testimony by Google in which there are probably 20 different options of potential numbers that the jury could consider as offsets to a damages calculation, whether it be with respect to the Samsung license or taking off a certain time frame. And the number that they come up with is going to reflect how they weighed the evidence.

But in this case in particular, given what Google has said repeatedly with respect to its Samsung license defense, it would not be proper to ask for a verdict question on that given that they've maintained this question is wrong.

THE COURT: All right. In this issue, I also agree with Arendi, and we are going to not have that question on the verdict form. So, so far, we're sticking with what the Court filed earlier today.

Anybody else have anything else they want to say about this form of verdict?

MR. LING: Not from Google.
MS. SRINIVASAN: Not from Arendi, Your Honor.
THE COURT: Okay, great. Let's turn to the jury instructions.
Okay. Some of these, I don't need to hear going to instruct the jury that Arendi must establish both that it's more likely than not that Google knew of the patent, and also that Google engaged in deliberate or intentional infringement. I think that's covered, and I don't think that what the Court's going to instruct the jury is error. It doesn't leave the jury open to find willful infringement based on mere knowledge.

All right. Prior art?
MR. LING: Your Honor, the parties reached agreement on this we're happy to report. Per your suggestion, we do believe FCBA Model Patent Jury Instruction 4.3a-1, prior art is not in dispute, would be appropriate because I understand there's no dispute over the 1998 priority date. And so we think that instruction would simplify things.

THE COURT: Okay, great. Stand by while I pull it up.

Okay. So we're going to say, "In order for someone to be entitled to a patent, the invention must actually be new and not obvious over what came before, which is referred to as the prior art. Prior art is considered in determining whether Claims 23 and 30 of the ' 843 patent are anticipated or obvious. Prior art may include items that were publicly known or that have been used." Do we need to say "or offered for sale"? I didn't hear any evidence of that.

MR. UNIKEL: Yeah, I think, Your Honor, there was an Apple Data Detectors product that was monetized.

THE COURT: Okay. "So known or have been used or offered for sale."

Any objection on Arendi's side to saying, "or offered for sale"?

MR. DIEHL: No, Your Honor.
THE COURT: Okay. And then I'd be inclined to
cross out "or references such as publications or patents," so it would just say, "Prior art may include items publicly that were known or have been used or offered for sale that disclose the claimed invention or elements of the claimed invention."

MR. LING: That's okay, Your Honor.
MR. DIEHL: No objection, Your Honor.
THE COURT: Okay. Then it would say, "Arendi contends the following is prior art to the 843 patent."

MR. LAHAD: I think it's going Google contends.
THE COURT: I'm sorry. I only do that like
half the time. Let's see here. "Google contends that the following is prior art to the ' 843 patent," and then we have --

MR. LING: CyberDesk system, Apple Data
Detectors system, and Word 97 system -- Microsoft Word 97
typo. The alleged word is not in the Federal Circuit Bar Association --

THE COURT: Oh, I'm sorry. We're talking about a different section here. I'm talking about 5.3 where we changed "each defendant" to "Google."

MR. DIEHL: Oh, we have no objection.
THE COURT: Okay. And then we turn to the next page with the "alleged," that's not going to come in. I agree with you.

MR. DIEHL: Thank you, Your Honor.
THE COURT: All right. 5.5. Is that the next one?

MR. DIEHL: Yes, that's next, Your Honor.
THE COURT: All right. And the last I heard, Arendi was reviewing Google's proposals.

MR. DIEHL: Yes, we did, Your Honor. We noted case that law that Google cites is from the 1800s here. If you look at Footnote 13, they cite case law from 1915, 1884. We don't think this statement is accurate, and federal Circuit has, you know, wasn't even in existence at the time. So we think, we would say that Google's proposed addition there should be stricken

THE COURT: Well, I know you're not saying that the Federal Circuit doesn't have to follow the Supreme Court cases from the 1800 s and early 1900s.

MR. DIEHL: No, I'm not saying that. There's just been a lot of intervening law, Your Honor.

THE COURT: All right. Let me hear from

MR. LING: All right. We also cite the Lucent case from 2009. I don't think this is a controversial point that the plaintiff has the burden to show apportionment. It's also, if Your Honor wants a more recent case cite, there's Finjan v. Blue Coat from 2018, and that's 879 F.3d 1299. That's clearly discussing the burden in the context of apportionment.

THE COURT: All right. We'll take a look at that.

MR. DIEHL: Your Honor, if I may respond briefly.

THE COURT: You may.
MR. DIEHL: We do cover that same point in the Arendi's proposal at the top of the instruction. So right there it says, "Damages must be based on the value attributable at the time to technology as distinct from other unpatented features of the accused product." And we are working from the Federal Bar Association's model.

THE COURT: All right. I'll take a look at that. With respect to the debate at the top, we'll go with Google's proposal that it say, "other market 21/23

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factors," and then we'll look at the dispute at the bottom and get you an answer on that.

MR. LAHAD: Your Honor, it seems like the
dispute at the bottom -- Google's proposed addition at the bottom seems redundant in light of --

THE COURT: Yeah. We'll take a look at it.
MR. LING: Just to clarify, Your Honor, I think
the proposal on the bottom, the distinction is "the burden."

THE COURT: I understand.
MR. LING: Thank you.
the court: Okay. I don't need to hear
argument on 5.6. We're not going to include that instruction.

MR. LING: Google preserves just its --
THE COURT: Yeah. You've made the proposal.
Your objection is preserved.
MR. LING: Thank you, Your Honor.
THE COURT: All right. Let's just skip 5.7 for
a second. Were there any other issues besides 5.7
remaining?
MR. DIEHL: No, Your Honor.
MR. LING: I don't believe so, Your Honor.
THE COURT: Okay. All right. Let me pull up
my notes.
other, but I don't have proposed instructions on this issue.

And so what I was hoping to get from the parties was, to the extent this agreement needed interpretation, sort of like a claim of a patent sometimes needs construction, that you would say which part needed interpretation and then you would say what you thought it meant.

And what I still have from the parties is, "I win," "No, I win." And so I'm in a little bit of a conundrum here, and so I'm -- let's just walk through this license, and you can tell me what you think it means.

MR. ARD: Well, Your Honor.
THE COURT: Let's hear from defendant first.
MR. UNIKEL: Your Honor, I just have to find a
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copy of the agreement.

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Thank you, Your Honor. And is there a
particular question that you --
THE COURT: Absolutely. So let's talk about this.






THE COURT: Okay. So that's another -- that's another ambiguity. Right. So that's another question.

MR. ARD: Yeah, throughout, yeah.
THE COURT: Right. So why don't you have competing proposals in light of the Court's ruling that there are ambiguities in the contract that the jury can decide. And then I'll take what you get. And we'll get you something by tomorrow morning.

What we might do is put up a proposed version tonight that has a placeholder for this particular part, because I think we've ruled on the rest and we have a working document.

So we'll go work on that now while you all discuss the license.

We're almost finished, folks.
We will be in recess.
(The proceedings concluded at 6:56 p.m.)

CERTIFICATE OF COURT REPORTER

I hereby certify that the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.
\(\frac{\text { /s/ Bonnie R. Archer }}{\text { Bonnie R. Archer }}\) Bonnie R. Archer
Official Court Reporter Official Court Reporte
U.S. District Court

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1265/23 1266/2 1266/5
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\hline 1468/14 & witness [35] 1145/12 1145/20 & 1221/20 1228/16 1229/4 & 1281/8 1284/20 1284/20 \\
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\section*{EXHIBIT F}


MR. ARD: The next paragraph, the second sentence, we disagree with because the cases they're citing are cases about unambiguous contracts, and, of course, when you're talking about interpreting the four corners of a contract, the best evidence is the words of the contract. But we cited cases saying that when you are talking about an ambiguous contract that, for example, sworn statements by the parties to the agreement is strong evidence of the parties' intent. And if you're going to comment on the strength of evidence, we think that should be there too.

We think the best solution is just to delete that second sentence, because the first sentence already says you have to interpret the agreement.

THE COURT: Understood. You would just delete the "best evidence"?

MR. ARD: Yes. And the last sentence in that paragraph, it says, "You may also consider." It should be, "you should also consider." Doesn't say what weight to put on it or anything else, but they should be considering evidence presented at trial regarding that. That's the whole point of the instruction.

THE COURT: All right.
MR. ARD: Thank you, Your Honor.
THE COURT: Thank you.
and which are appropriately given to the jury.
MR. ARD: Right. And my whole point is there's nothing on this that is a pattern jury instruction for this issue.
the court: Okay.
MR. LING: Arendi's correct they are
commentaries, but it does come under contract instruction Number 1 in general, and then the language from the commentary is, quote, "A fundamental tenet of contract law is that agreements are construed in accordance with the intent of the parties' and the best evidence of the parties intent is what They express in their written contract."

THE COURT: Where is that? Sorry.
MR. LING: This is Page 33 of the cited New York pattern jury instructions, Civil 4:1, commentary.

THE COURT: Okay. Stand by.
What do you say we take out the statement about the best evidence that Arendi objects to, and we say, "In evaluating the words of the agreement, you should not consider particular words in isolation, but should consider the agreement as a whole in light of the overall intention of the parties to the agreement," and then I'll say, "You should also consider other evidence presented at trial regarding the intent of the parties to the

MR. LING: Good morning, Your Honor.
the court: Good morning.
MR. LING: So let me address Arendi's points first, then I have few additional points to raise. On the first point about "downloaded by users," Google does not object to that.

THE COURT: Okay.
MR. LING: If Your Honor would like to include that language.

On the second point about best evidence, the cases we cited in our proposed instructions, namely the Tomhannock case, the Marin case, as well as the New York Pattern Jury Instructions comments, make it clear the best evidence language comes before even any discussion about ambiguity or nonambiguity. It's a general umbrella rule under New York law.

THE COURT: Can you -- I have the pattern jury instructions here. Hopefully, we've got the same version.

MR. ARD: Your Honor, to be clear, the pattern
jury instructions I think both sides are citing, there is no pattern jury instruction on this issue. What the parties are citing is, you know, dozens of pages of commentary of various issues of law.

THE COURT: Right. So what I'm trying to tease out is which of these statements of law are for the Court
agreement; however, evidence" -- well, what I was thinking about saying is something like "evidence" -- "extrinsic evidence," but we haven't told the jury what that is, but we can explain that to them. "Evidence, basically, outside the contract cannot be used to contradict the language of the contract." Or something like that.

MR. LING: I believe that -- the last sentence, Your Honor, just proposed was in our proposed instructions, so we would be fine with that.
the court: Okay. Let me pull that up.
So I'll say -- so I would say, "But evidence outside the contract regarding Arendi's and Samsung's intent cannot be used to contradict the ordinary meaning of the contract's terms."

MR. ARD: Your Honor, that's -- they're conflating two different issues. What they're citing there when it says you can't use words outside of contract to contradict the unambiguous meaning of the contract, those are cases where you're first trying to determine what the plain meaning of a contract is. We're in a world where the contract is ambiguous, and the whole point is you're supposed to be looking at the statements by the parties to interpret what it means.

> So there is nothing here that's being
contradicted. The point is here that the Court has held

Fil
as ambiguous these provisions, and the jury is being asked to figure out what it is.

THE COURT: Yeah, but we need to say something about the jury can take into account the words of the contract.

MR. ARD: Well, the very first sentence says, "To make this determination, you must interpret," you say "the words of Samsung agreement." It's the very first sentence in this paragraph; it's already there.

MR. LING: Your Honor, it does not say the words "of the Samsung agreement."

MR. ARD: That's fine to put that in. We're okay with that.

THE COURT: So I'm going to say, "To make this determination, you must interpret the words of the Samsung agreement --

MR. ARD: Yeah.
THE COURT: -- "to decide what Arendi and
Samsung intended to agree upon. In evaluating the words of the agreement, you should not consider particular words in isolation, but consider the agreement as a whole in light of the overall intention of the parties to the agreement."

I -- I disagree with Arendi about saying,
"should" instead of "may." I think it should be "may"
of the contract being the best evidence is the correct law, as well as the language about that evidence -- that extrinsic evidence cannot be used to contradict the ordinary meaning on the contract's terms. That is also plain law. And that does apply to ambiguous interpretation -- interpretation of nonambiguous provisions.

THE COURT: So what I'm going to do is I'm going to add the language about "you have to interpret the words of the agreement," and I'm going to tell them "evaluating the words of agreement, you should consider the agreement as a whole." they may also consider extrinsic evidence, and then \(I\) am going to add that "evidence outside the contract can't be used to contradict the ordinary meaning." We're going to add that. And that's the Court's ruling on that. Thank you.

MR. ARD: All right. Thank you, Your Honor. Then let me point -- if we're going to accommodating that, let me point to the other things on pattern jury instruction.

If you look at Page 19 of the pattern jury instruction. First paragraph --

THE COURT: Are we going to be commenting about what -- about the Court's ruling?

MR. ARD: No. We're commenting on what kind of
unless Google is okay with it.
MR. LING: We think it should be "may" as well,
Your Honor.
THE COURT: I'm going to say, "may". "You may also consider other evidence presented at trial regarding the intent of the parties to the agreement."

I don't think it's a legal error for me to say that evidence outside of the contract cannot be used to contradict the ordinary meaning of the contract's terms, so I'm going to add that in because that's from the law.

Is that not a statement of the law?
MR. ARD: There's zero evidence here of any statement outside the contract that is contradicting the plain meaning of the contract. The whole question here is what these provisions mean. You've decided it's ambiguous on that issue, and there's no evidence in the record of anything that contradicts what you said is ambiguous.

MR. LING: Your Honor, that's inaccurate.
Arendi is trying to elevate Mr. Hedloy's testimony as extrinsic evidence over all else, but extrinsic evidence includes also evidence of the ordinary and customary
meanings and customs in the field, and so there is other extrinsic evidence as well.

So I just want to clarify for the record, we stand on our objection that the language about the words 1482
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evidence --

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THE COURT: Okay. We're going to add this language?

MR. ARD: Yeah. On paragraph -- it's Page 19, first full paragraph of the pattern jury instructions.

THE COURT: What -- I don't think I have the same pagination as you do. Do you want to tell me what section?

MR. ARD: Third party beneficiaries.
the court: Okay. Slow down. All right.
Okay, yeah. I have something I can say about that. It's Arendi's position that there's no evidence in the contract to suggest an intent to benefit third party beneficiaries? It specifically talks about folks other than the parties to contract. You're saying there's no intent to specifically benefit Google?

MR. ARD: Right.
THE COURT: Okay. Overruled. On that

\section*{objection.}

Any other ones.
MR. ARD: Yeah, sure. Pattern jury instruction where it says, "Where agreement is ambiguous and extrinsic evidence is introduced to aid in construction, both sworn affidavits by both original parties to the contract and those parties who come in after the contract is formed are
 from the recitals therein, it appears a release is to be limited to only particular claims, demands or obligations, the release will be operative as to those matters only."

MR. LING: Your Honor, that was not in Arendi's proposed instruction.

MR. ARD: What was in our proposed instruction is that they're supposed to look at the whereas clause.

THE COURT: I said we're going to look at the agreement as a whole in light of the overall intentions of the parties. I think that will cover that.

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MR. ARD: Thank you, Your Honor.
THE COURT: Any other? Okay. Thank you
MR. LING: Can I make two comments in addition on behalf of Google?

THE COURT: Does it have to do about construing the contract against the drafter?

MR. LING: One of them actually --
the court: That's not going in.
MR. LING: On the second, I'll just make my objection. On the first, though, the language the Court proposed in the fourth paragraph, "In making this
determination, you should consider whether accused Google
apps \(\square \square \square\) we do \(\square \square \square \square\)
think there's clarification needed on an undisputed point, which is that \(\square\) with Google's Android operating system.

THE COURT: Yeah. That's not going to come in. Go ahead.

MR. LING: And then the second objection, Your Honor, that we would like to make for the record is that the Court's deleted our proposed language that said, quote, "In cases of doubt or ambiguity, a contract must be construed most strongly against the party who prepared it and favorably to a party who had no voice in the selection of this language."
thought it would mess up some of the language because the language right now kind of flows from one to the next.

THE COURT: Okay. Let's take a look at that.
MR. LING: Your Honor, the preamble language for issues 3 and 4 is the same, so \(I\) don't think there's any change in the flow of the language if Your Honor --

THE COURT: Do you have a proposed edit to it just so I can understand what we're talking about?

MR. LING: If I may propose something? If Your Honor would make issue 4, issue 3 , we can take out the word "also" that is currently in issue 4 so it says, "If you decide that any claim of the \(\quad 843\) patent has been infringed by Google and is not invalid, you will need to decide the amount of money damages Arendi has proven by a preponderance of the evidence or to be awarded to compensate it for Google's infringement." And then current issue 3 would become issue 4, and the word "then" could be swapped for the word "also."

THE COURT: Yes.
MR. LING: So "if you decide that any claim of the ' 843 patent has been infringed by Google and is not invalid, you will also need to decide whether Arendi has proven by a preponderance of the evidence that Google's infringement was willful."

THE COURT: So I think that makes sense to me,

Any objection to that?
MR. DIEHL: Your Honor, not in principle, but I

MR. LING: Thank you, Your Honor.
the Court: Yep.
MR. LING: And then there's one more just for punctation and capitalization consistency in Section 4.3, prior art. It should be noncontroversial, but I just wanted to note that for the record.

THE COURT: Great. Any objection to the punctation?

MR. DIEHL: About the capitalization of the system?
the court: Yes.
MR. DIEHL: That's okay either way.
THE COURT: And then was what we talked about in court yesterday, right? 4.3.

MR. DIEHL: Yes.
MR. LING: Yes, Your Honor.
THE COURT: Was there anything else we needed
to deal with on the jury instructions?
MR. LING: No, Your Honor.
MR. DIEHL: Not from our perspective either,
Your Honor.
THE COURT: All right. So we'll get those
changes put in, and given the time, we'll make the copies
as an exhibit, you may recall we had a sidebar. The issue was whether this could be go back with the jury or it could just be used to read the stipulations at appropriate times. Your Honor made the ruling at the time that it could be read and it would be admitted for the record, but that it wouldn't go back to the jury because stipulations typically don't go back to the jury in that way.

And that was the ruling of the Court then, so we believe it should be enforced and not be in the jury book.

THE COURT: Okay. And refresh my recollection. We can go back and look at the transcript as well. This document was on their exhibit list; is that right?

MR. UNIKEL: I believe it was on the exhibit list, but, again, we had objected to it at the time to the extent that it was going back to the jury. We understand why they want it to be a part of the record in case it goes up on appeal. But to go back with the jury, stipulations typically do not go back on the jury. We made the appropriate objection when it was raised.

> The point was they could read it as stipulations are typically supposed to be read, and they read many of them but not all of them. And even redacted form, sending it back to the jury then would be -- it's not really an exhibit; it's something that they were

MR. UNIKEL: Your Honor, I have one exhibit matter to discuss when it's a convenient time.
the court: Yes, absolutely. While it's on my mind, the one other thing I was going to say was this. I have the times from yesterday. We have Arendi at 13:40 and Google at 12:06. I'll give Arendi the extra time so you'll have the full hour to make your closing arguments. But that hour should apply to both your closing and any rebuttal closing that you have. So you need to make sure to reserve enough time.

MS. SRINIVASAN: Thank you, Your Honor.
THE COURT: Yes, absolutely.
And then, of course, Google is welcome to use the remainder of its time, although I can't say I recommend that.

Okay. Let's talk about the exhibit, and this may take a minute to go through, so I'll pull up the trial transcript. I have a recollection we talked about this during the course of the trial.

So we've got PX-67; is that right?
MR. UNIKEL: Correct, Your Honor.
the court: Okay. Take it real slow and tell
me what the problem is.
MR. UNIKEL: When this was originally proposed
allowed to use as read stipulations.
THE COURT: Yeah. All right. I'd like to hear from Arendi on this.

MS. SRINIVASAN: Yeah. Sure.
THE COURT: You can approach the podium.
MS. SRINIVASAN: Thank you, Your Honor.
Obviously, an issue that's been central to
Google's presentation of its damages case is the relevant start date for the infringing products. We think it's important for the jury to be able to have the stipulation because we have a situation where certain things that we were told, Arendi was told to rely on are now being undermined by positions Google has taken.

I understand that there were things read into the record. They're obviously not going to have the benefit of the testimony with them back there. We prepared a redacted version that addresses the Court's question about not having things that are not at issue in this case referenced in the stipulation.

But we think it's quite critical, particularly the way the evidence has come in and the arguments that are being raised by Google in this case, for them to have something to show what Arendi relied on, rather than just the testimony of counsel.

THE COURT: Can someone remind me where we
\begin{tabular}{c||c} 
Ca \\
1 & discussed this during the course of the trial? was it \\
2 & on -- \\
3 & ms. sRINIVASAN: I believe it would have been \\
4 & in Dr. smedley's direct examination because he didn't \\
5 & testify about that. So that would have been on Tuesday.
\end{tabular}
the court: Let me pull that up.
MS. SRINIVASAN: And, Your Honor, I have a copy of the proposed redacted version.

THE COURT: Yeah. Why don't you put that -bring that up at the same time.

Have you shared your proposal with the other side?

MS. SRINIVASAN: Yeah. I don't --
MR. KAMBER: Just now, yes.
THE COURT: Just the second?
MR. DIEHL: No, on Thursday we sent a -- I'm
sorry. I believe it was on Sunday, we sent this same exact thing with redactions proposed, but not actually applied. We applied the same redactions in this document, Your Honor.

MR. KAMBER: Your Honor --
THE COURT: Just give me a second to read
through, unless it's --
MR. KAMBER: I have the cite for the trial transcript.

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the court: You do. That's perfect. That would help.

MR. KAMBER: It's -- I think it starts right about 315, 1 through, I believe, 319, 16.

THE COURT: All right. Let's everybody have a seat. We can all take a look.

Let me ask this narrow question: Does Google dispute that the portions that are unredacted correspond to stipulations that were read at trial?

MR. UNIKEL: I believe that's correct, Your Honor, though I think the Court's -- reading the transcript, the Court was very clear that this would not go back to the jury.

THE COURT: I don't think that's what I said at all. So --

MR. UNIKEL: On 317, Line 16, Your Honor.
THE COURT: Okay. "You all can agree on a set of facts that should go back to the jury, that's what we will do. As of now, although this document has been admitted into evidence, we are not going to have it go back with the jury. And this document," meaning the version that included facts that we weren't going to discuss at trial. "That's my ruling. At this point, we will agree on a form that's going back with the jury before we go to deliberations."

Obviously, we have plenty of testimony that came in on what the right date is and how it is consistent with these representative product stipulations.

And so the concern is if you send this back, they don't have anything in writing about the testimony that's on the same point, it becomes, well, they have this to read and reread, but they don't have the testimony on it that also -- that they could also read and reread. That's why the stipulations are read as part of ordinary other testimony that would come in during the case.

THE COURT: Okay. I understand your objection on that. I think this is a close call. Google's objection will be overruled on that, particularly because it was on Plaintiff's Exhibit list and there was no objection to it, and it was admitted over objection at the trial. We did have a clarification, and I do think this is the best compromise in light of how this happened.

Is there anything we need to say to the jury about why I admitted 67? And this is \(67(a)\).

MS. SRINIVASAN: I don't believe so, Your Honor. I mean, I think we can make clear that that's a substitute exhibit that's going back, if that would be helpful. But I'm not sure that we need to say anything beyond that to the jury.

getting close?
MR. ARD: Yes, Your Honor.
the Court: Yes.
MR. ARD: And I apologize. It's just hard for
me to process exactly what the court had said about the Samsung agreement and the order of it.

I'd just like to say one thing, that we prefer the original language that said, "The best evidence of what Arendi and Samsung intended is the words used in the agreement," than something that says, "You may also consider evidence presented at trial regarding intent of the parties," and then saying, "however, that evidence cannot contradict the plain language of the contract."

And the reason is, that the only evidence
presented at trial regarding the intent of the parties was Mr. Hedloy's testimony. And we would hate for the jury to think that the Court is suggesting that his testimony may have somehow contradicted the plain meaning of the contract.

So we would just prefer the original wording that just says, "the best" -- that they were advocating

THE COURT: Okay. I understand your point.
MR. ARD: Thank you, Your Honor.
THE COURT: All right. Anything else?
MR. UNIKEL: Housekeeping matter about sealing
the courtroom for closings.
So I do believe both sides are going to end up talking about the settlement terms from those various agreements, as well as revenue numbers for Google.

I will say that as far as corporate representative goes, we do have the permission from Apple that our corporate representative, Mr. Choc, can stay in the courtroom for the closings regardless of whether they are sealed or not.

But we did want to raise the issue to Your Honor because I don't know how you want to handle the sealing for the closings or not.

THE COURT: Are both sides intending to seal the courtroom during their closing?

MS. SRINIVASAN: Well, I have a way to circumvent the discussion of the license agreements by doing the same thing we did in opening with printouts. We do plan to talk about some of the Google revenue information that was shown yesterday.

If Google insists the courtroom needs to be sealed for that purpose, then I guess so, but...

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for, that just says "the best evidence of what Arendi and Samsung intended is the words they used in the agreement," and leave it at that.

MR. UNIKEL: Your Honor, once again, I think we have been clear throughout, as is the Court, that the best evidence of the parties intention includes the actual meaning of the contract, and that the stated intent of the party in the testimony isn't by itself enough to contradict or shouldn't be able to contradict or overcome the actual words of the contract.

THE COURT: So I made a ruling on what we were going to have. And then we had an offer by Arendi that said they were willing to put back -- they would rather have me say, "The best evidence of what the parties
intended is the words they used in the agreement," rather than what I added on later.

So which would you rather do, stick with the original ruling or take them up on their offer?

MR. LING: Your Honor, we prefer Your Honor's ruling. We think both sentences should be in, but if only one, we believe Your Honor has already ruled on that.

MR. ARD: And we just think it would be
extremely prejudicial to suggest that Mr. Hedloy's
testimony may have been contradicted by the words in the agreement, which is how it reads now.
the court: Can you do the same thing? It would be -- I don't want to tell you what to do, but interrupting your closing to seal the courtroom...

MR. UNIKEL: Yeah. It's going to be -- maybe give me a couple minutes to figure out if there's something I can do. It is very challenging given how interrelated the revenue is to the actual damages analysis for us, how we could do it without mentioning it. It becomes very challenging.
the court: Okay. All right. Well, I'll have some things to say after we send the jury back with the case about how we're going to do sealing in the future, but it's not going to be like this.

But I understand that we are where we are. So if we need to seal the courtroom for a portion of the closing, that's what we will do.

If there's a way you can figure out, I do think it's what we are required to do under the Third Circuit's Avandia opinion.

MS. SRINIVASAN: Yeah. Your Honor, I think I can -- I can circumvent that, as long as the Court has no objection to me providing the jurors with the slides with the numbers and me not saying them out loud.

THE COURT: Yeah. I think that's fine. And I would just ask that once you finish with the slides that

that the jurors were still looking at slides while you were talking about something else. You probably don't want that either.

MR. UNIKEL: I will see if I can just print out my slides and change the presentation a little bit so they don't have to mention, you know, explicitly our revenue numbers, and maybe we can do it that way. I'll try very hard to do that, Your Honor.
the court: All right. Very good.
All right. We'll be in recess. I'm going to
sit up on the bench here for a minute while I work on some of these changes.

MR. ARD: Thank you, Your Honor.
(Whereupon, a recess was taken.)
THE COURT: All right. Please be seated. All right. So we have copies of the jury instructions.

Ms. Garfinkel, can we hand out copies to
counsel.
THE CLERK: Yes, Your Honor.
the court: Did anyone bring a copy of the
that they don't get distracted. And I also don't want them writing on it while you're doing your closings.

All right. Are we ready to bring the jury out?
MS. SRINIVASAN: Yes, Your Honor.
THE COURT: Yes.
MR. UNIKEL: Yes.
(The jury enters the courtroom at 10:01 a.m.)
the clerk: Your Honor, the jury.
THE COURT: Please have a seat. Welcome back,
ladies and gentlemen of the jury.
Ms. Garfinkel, can we hand out copies of the
Court's jury instructions to the jury, please.
THE CLERK: Yes, Your Honor.
THE COURT: Members of the jury, it is now time for me to instruct you about the law that you must follow in deciding this case. Each of you has been provided a copy of these instructions. You may read along as I deliver them if you prefer.

I will start by explaining your duties and the general rules that apply in every civil case. Then I will explain some rules that you must use in evaluating particular testimony and evidence. Then I will explain the positions of the parties and the law you will apply in this case. And last, I will explain the rules that you must follow during your deliberations in the jury room and verdict form?

MR. UNIKEL: No. We can probably print one.
THE COURT: We can grab it, probably, just as
quick as you all can.
Okay. So counsel, so while we're getting that printed out, so we're going to read up through Page 37, and then the pages actually start again at one. I don't know, if we introduce that. But it doesn't matter because they should start again at one because we're going to break and have the closing arguments go for that.

So then we're going to read the 6.1 through 6.5 instructions. It states, in 6.2, "A form of verdict has been prepared for you. I will review it with you in a moment."

Is there something somebody thinks I should say about it? I will just read it?

Yes?
MS. SRINIVASAN: That's fine, Your Honor.
MR. UNIKEL: That makes sense, Your Honor.
the court: Okay. All right.
So what we'll do is, you will have copies of
verdict form while you do your closings in case either one of you -- either one wants to go with the jury, how you want them to fill it out. But I'm not going to hand copies out to the jury until after I read 6.5, just so 6
the possible verdicts that you may return.
Please listen carefully to everything I say. You will have a written copy of these
instructions with you in the jury room for your reference during your deliberations. You will also have a verdict form which will list the questions that you must answer to decide this case.

You have two main duties as jurors. The first is to decide what the facts are from the evidence that you saw and heard in court. Deciding what the facts are is your job, not mine, and nothing that I have said or done during this trial was meant to influence your decision about the facts in any way. You are the sole judges of the facts.

Your second duty is to take the law that I give you, apply it to the facts, and decide under the appropriate burden of proof which party should prevail on any given issue. It is my job to instruct you about the law, and you are bound by the oath you took at the beginning of the trial to follow the instructions that I give you, even if you personally disagree with them. This includes the instructions that I give you before and during the trial, and these instructions. All of the instructions are important, and you should consider them together as a whole.

Perform these duties fairly. Do not guess or speculate, and do not let any bias, sympathy, or prejudice you may feel toward one side or the other influence your decision in any way.

You must make your decision based only on the evidence that you saw and heard here in court. Do not let rumors, suspicions, or anything else that you may have seen or heard outside of court influence your decision in any way. The evidence in this case includes only what the witnesses said while they were testifying under oath, including deposition transcript testimony that has been played by video or read to you, the exhibits that I
allowed into evidence, matters I have instructed you to take judicial notice of, and the stipulations to which the lawyers agreed.

Certain models, reproductions, charts,
summaries, and graphics have been used to illustrate certain evidence and testimony from witnesses. Unless I have specifically admitted them into evidence, these models, reproductions, charts, summaries, and graphics are not themselves evidence, even if they refer to, identify, or summarize evidence, and you will not have these demonstratives in the jury room.

Nothing else is evidence. The lawyers'
statements and arguments are not evidence. The arguments

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saw it raining outside, and you believe him, that would be direct evidence that it was raining.

Circumstantial evidence is simply a chain of circumstances that indirectly proves a fact. If someone walked into the courtroom wearing a raincoat covered with drops of water and carrying a wet umbrella, that would be circumstantial evidence from which you could conclude that it was raining.

It is your job to decide how much weight to give the direct and circumstantial evidence. The law makes no distinction between the weight that you should give to either one, nor does it say that anyone -- excuse me, nor does it say that one is any better evidence than the other. You should consider all the evidence, both direct and circumstantial, and give it whatever weight you believe it deserves.

You should use your common sense in weighing the evidence. Consider it in light of your everyday experience with people and events, and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, you are free to reach that conclusion.

A further word about statements of counsel and arguments of counsel. The attorneys' statements and arguments are not evidence. Instead, their statements and
your determination of the facts. Their questions and objections are not evidence. My legal rulings are not evidence. You should not be influenced by a lawyer's objection or by my ruling on that objection. Any of my comments and questions are not evidence.

During the trial, I may not -- I may have not let you hear the answers to some of the questions that the lawyers asked. I also may have ruled that you could not see some of the exhibits that the lawyers wanted you to see. And, sometimes I may have ordered you to disregard things that you saw or heard, or that I struck from the record. You must completely ignore all of these things.

Do not speculate about what a witness might have said or what an exhibit might have shown. These things are not evidence and you are bound by your oath not to let them influence your decision in any way. Make your decision based only on the evidence, as I have defined it here, and nothing else.

During the preliminary instructions, I told you about "direct evidence" and "circumstantial evidence." I will now remind you what each means.

Direct evidence is simply evidence like the testimony of an eyewitness which, if you believe it, directly proves a fact. If a witness testified that he 1506
arguments are intended to help you review the evidence presented.

If you remember the evidence differently from the way it was described by the attorneys, you should rely on your own recollection.

You are the sole judges of each witness' credibility. You may believe everything a witness says, or part of it, or none of it. You should consider each witness' means of knowledge, strength of memory, opportunity to observe, how reasonable or unreasonable the testimony is, whether it is consistent or inconsistent, whether it has been contradicted, the witness biases, prejudices, or interests, the witness' manner or demeanor on the witness stand, and all circumstances that, according to the evidence, could affect the credibility of the testimony.

In determining the weight to give to the testimony of a witness, you should ask yourself whether there is evidence tending to prove that the witness testified falsely about some important fact or whether there was evidence that at some time the witness said or did something, or failed to say or do something, that was different from the testimony he or she gave at the trial in person or by deposition testimony played by video or read to you.

You have the right to distrust such witness' testimony and you may reject all or some of the testimony of that witness or give it such credibility as you may think it deserves.

Expert testimony is testimony from a person who has special skill or knowledge in some science, profession, or business. This skill or knowledge is not common to the average person but has been acquired by the expert through special study or experience.

In weighing expert testimony, you may consider the expert's qualifications, the reasons for the expert's opinions, and the reliability of the information supporting the expert's opinions, as well as the factors I have previously mentioned for weighing testimony of any other witness. Expert testimony should receive whatever weight and credit you think appropriate, given all the other evidence in the case. You are free to accept or reject the testimony of experts, just as with any other witness.

During the trial, certain testimony was
presented to you by the playing of video excerpts from a deposition. The deposition testimony may have been edited or cut to exclude irrelevant testimony as the parties only have a limited amount of time to present you with evidence. You should not attribute any significance to
at the time presented, and thus not written down, takes on greater importance later in the trial in light of all the evidence presented. Therefore, your notes are only a tool to aid your own individual memory, and you should not compare notes with other jurors in determining the content of any testimony or in evaluating the importance of any evidence.

Your notes are not evidence, and are by no means a complete outline of the proceeding or a list of the highlights of the trial. Above all, your memory should be the greatest asset when it comes time to deliberate and render a decision in this case.

In any legal action, facts must be proven by a required standard of evidence, known as the "burden of proof." In a patent case such as this, there are two different burdens of proof that are used. The first is called "preponderance of the evidence." The second is called "clear and convincing evidence." I told you about these two standards of proof during my preliminary instructions to you, and I will now remind you what they mean.

Plaintiff Arendi asserts that Defendant Google infringes the ' 843 Patent. Plaintiff Arendi has the burden of proving its infringement claims by a "preponderance of the evidence." That means Plaintiff

Deposition testimony is out-of-court testimony given under oath and is entitled to the same consideration you would give it had the witnesses personally appeared in court.

During the course of the trial, you have seen many exhibits. Many of these exhibits were admitted as evidence. You will have these admitted exhibits in the jury room for your deliberations. The remainder of the exhibits (including charts, models, reproductions PowerPoint presentations, and animations) were offered to help illustrate the testimony of the various witnesses. These illustrative exhibits, called "demonstrative exhibits," have not been admitted, are not evidence, and should not be considered as evidence. Rather, it is the underlying testimony of the witness that you heard when you saw the demonstrative exhibits that is the evidence in this case.

You may have taken notes during trial to assist your memory. As I instructed you at the beginning of the case, you should use caution in consulting your notes. There is generally a tendency, I think, to attach undue importance to matters which one has written down.

Some testimony which is considered unimportant Arendi has to prove to you, in light of all the evidence, that what it claims is more likely true than not.

To say it differently, if you were to put the evidence of Plaintiff Arendi and the evidence of defendant on opposite sides of a scale, the evidence supporting Plaintiff Arendi's claims would have to make the scale tip slightly on its side in each instance.

If the scales should remain equal or tip in favor of Defendant Google, you must find in favor of defendant.

In addition to denying Plaintiff Arendi's claims that it infringes, Google asserts that the asserted claims of the ' 843 Patent are invalid. A party challenging the validity of a patent, in this instance, Defendant Google, has the burden to prove that the asserted claims are invalid by clear and convincing evidence.

Clear and convincing evidence means evidence that it is highly probable that a fact is true. Proof by clear and convincing evidence is a higher burden of proof than by a preponderance of the evidence, is a higher burden than proof by a preponderance of the evidence.

You may have heard of the "beyond a reasonable doubt" burden from criminal cases. That requirement is the highest burden of proof. It does not apply to civil

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cases and, therefore, you should put it out of your mind.
I will now review for you the parties in this action and the positions of the parties that you will have to consider in reaching your verdict.

As I have previously told you, the plaintiff in this case is Arendi S.A.R.L. We have referred to the plaintiff as "Arendi." The defendant in this case is Google LLC. We have referred to it as "Google."

Plaintiff Arendi is the owner of U.S. Patent Number 7,917,843. During this case, we have referred to the patent by its last three digits, the 843 Patent, or as the "patent-in-suit" or the "Asserted Patent."

You must decide the following issues in this case according to the instructions that I give you:
1. Whether Plaintiff Arendi has proven by a preponderance of the evidence that Google infringes one or more of Claims 23 and 30 of the ' 843 Patent;
2. Whether Defendant Google has proven by clear and convincing evidence that one or more claims, 23 and 30 , of the ' 843 Patent is invalid;
3. If you decide that Claim 23 or 30 of the ' 843 Patent has been infringed by Google and is not invalid, you will then need to decide the amount of damages Arendi has proven by a preponderance of the evidence are to be awarded to compensate it for Google's

Therefore, what a patent covers depends in turn on what each of its claims covers.

To know what a claim covers, a claim sets forth in words a set of requirements. Each claim sets forth its requirements in a single sentence. A claim may be narrower or broader than another claim by setting forth more or fewer requirements. The requirements of a claim are often referred to as "claim elements" or "claim limitations." The coverage of a patent is assessed claim-by-claim.

When a thing (such as a product) meets all of the requirements of a claim, the claim is said to cover that thing and that thing is said to fall within the scope of that claim.

In other words, a claim covers a product where each of the claim elements or limitations is present in that product. If a product is missing even one limitation or element of a claim, the product is not covered by that claim.

You will first need to understand what each claim covers in order to decide whether or not there is infringement of the claim and to decide whether or not the claim is invalid. The first step is to understand the meaning of the words used in the patent claim.

This case involves two types of patent claims,
4. If you decide that Claim 23 or 30 of the ' 843 Patent has been infringed by Google and is not invalid, you will also need to decide whether Arendi has proven by a preponderance of the evidence that Google's infringement was willful.

At the beginning of the trial, I gave you some general information about patents and the patent system and a brief overview of the patent laws relevant to this case. I will now give you more detailed instructions about the patent laws that specifically relate to this case.

If you would like to review my instructions at any time during your deliberations, you will have a
copy -- you will have your copy available to you in the jury room.

Before you can decide many of the issues in this case, you will need to understand the role of patent claims. The patent claims are the numbered sentences at the end of a patent. The claims are important because it is the words of the claims that define what a patent covers. The figures and text in the rest of the patent provides a description and/or examples of the invention and provide a context for the claims, but it is the claims that define the breadth of the patent's coverage.

\section*{independent claims and dependent claims.}

An independent claim sets forth all of the requirements that must be met in order to be covered by that claim. Thus, it is not necessary to look at any other claim to determine what an independent claim covers. Claim 23 of the ' 843 Patent is an independent claim.

In contrast, Claim 30 of the 843 Patent is a dependent claim. A dependent claim does not itself recite all of the requirements of the claim, but refers to another claim for some of its requirements.

In this way, the claim depends on another claim. A dependent claim incorporates all of the requirements of the claims to which it refers. The dependent claim then adds its own additional requirements. Therefore, to determine what a dependent claim covers, it is necessary to look at both the dependent claim and the other claim or claims to which it refers.

A product that meets all of the requirements of both the dependent claim and the claims to which it refers is covered by that dependent claim.

It is my job as a judge to define the terms of the claims and to instruct you about the meaning. It is your role to apply my definitions to the issues that you are asked to decide. In this case, I have determined that the meaning of the following terms of the asserted

In this case, I have determined the meaning of the following terms of the asserted claims of the ' 843 Patent:

Claim term: Document. Court's construction: A word processing, spreadsheet, or similar file into which text can be entered.

Claim term: First information. Court's construction: Text in a document that can be used as input for a search operation in a source external to the document.

Claim term: Computer program. Court's
construction: A self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.

Claim term: To determine if the first
information is at least one of a plurality of types of information that can be searched for. Court's construction: To determine if the first information belongs to one or more of several predefined categories of identifying information, (e.g., a name) or contact information (e.g., a phone number, a fax number, or an e-mail address) that can be used search for in an information source external to the document.

Claim term: That allows a user to enter a user
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both the issues of infringement and validity.
You should not take my definition of the
language of the claims as an indication that I have a view regarding how you should decide the issues that you are being asked to decide, such as infringement and validity. These issues are yours to decide.

I will now instruct you as to the rules you must follow when deciding whether Plaintiff Arendi has proven that Google has infringed the ' 843 Patent. A claim covers a product where each of the claim elements or limitations is present in that product. Infringement is assessed on a claim-by-claim basis. Therefore, there may be infringement of one claim but no infringement of another.

In order to prove infringement, Arendi must prove that the requirements for infringement are met by a preponderance of the evidence. That is, that it is more likely than not that all of the requirements of infringement have been proved.

A person or business entity that makes, uses, sells, or offers for sale within the United States or imports into the United States an invention claimed in a patent, infringes that patent. There may be infringement of one claim but no infringement of another.

If you find that an independent claim is not
command to initiate an operation. Court's construction: That allows a user to enter an input or series of inputs to initiate an operation.

Claim term: Providing an input device configured by the first computer program. Court's construction: Providing an input device set up by the first computer program for use by the user.

You must accept my definition of these words as being correct. It is your job to take these definitions and apply them to the issues that you are deciding, including the issues of infringement and validity.

The beginning portion of a claim, also known as the preamble, often uses the word "comprising." The word "comprising," when used in the preamble, means "including but not limited to" or "containing but not limited to." When "comprising" is used in the preamble, if you decide that an accused product includes all of the requirements of that claim, the claim is infringed. This is true even if the accused product contains additional elements.

For any words in the claim for which I have not provided you with a definition, you should apply their plain and ordinary meaning as understood by one of ordinary skill in the field of technology of the '843 Patent at the time of the invention. The meanings of the words of the patent claims must be the same when deciding 1518
infringed, there cannot be infringement of any dependent claim that depends from that claim. On the other hand, if you find that an independent claim has been infringed, you must still separately decide whether the accused products meet the additional requirements of any dependent claim to determine whether that dependent claim has also been infringed.

Arendi asserts that Google infringed the '843 Patent, and further, that Google infringed willfully. If you find that Google infringed one or more claims of the ' 843 Patent, then you must also determine whether or not such infringement was willful.

To show that infringement was willful, Arendi must establish that it is more likely than not that Google knew of the ' 843 Patent at the time of the alleged infringement and also that Google engaged in deliberate or intentional infringement.

To decide whether Google acted willfully, you should consider all of the facts and assess Google's knowledge at the time of the challenged conduct. Facts that may be considered include but are not limited to:
1. Whether or not Google acted consistently with the standards of behavior for its industry;
2. Whether or not Google intentionally copied a product of Arendi that is covered by the ' 843 Patent;
4. Whether or not Google made a good faith
effort to avoid infringing the ' 843 Patent by, for example, attempting to design around the ' 843 Patent; and,
5. Whether or not Google tried to cover up its infringement.

If you determine that any infringement was willful, you may not allow that decision to affect the amount of any damages award you give for infringement. I will take willfulness into account later.

I will now instruct you on the rules you must follow in deciding whether or not Google has proven that the asserted claims are invalid.

Patent invalidity is a defense to patent infringement. The issuance of a patent by the Patent Office provides a presumption that the patent is valid.

A party challenging the validity of a patent -in this instance, Google -- has the burden to prove that the asserted claims are invalid by clear and convincing evidence.

Clear and convincing evidence means evidence that it is highly probable that a fact is true. Proof by clear and convincing evidence is a higher burden than proof by a preponderance of the evidence.
responsibility for deciding whether the claims of the patent are valid or invalid. In making your determination, you must consider the claims individually as you did when you considered whether each claim was infringed or not.

If clear and convincing evidence demonstrates that a claim of the 843 Patent fails to meet any requirement of the patent laws, then that claim is invalid. The fact that any particular reference was or was not considered by the Patent Office does not change Google's burden of proof.

I will now instruct you on the invalidity issues you should consider.

The question of invalidity of a patent claim is determined from the perspective of a person of ordinary skill in the art in the field of the asserted invention as of the time of invention. In deciding the level of ordinary skill, you should consider all the evidence introduced at trial including:
(1) the levels of education and experience of persons working in the field;
(2) the types of problems encountered in the
field;
(3) prior art solutions to those problems;

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Specifically, Google contends that the alleged CyberDesk System anticipates the asserted claims of the ' 843 Patent.

Anticipation must be determined on a
claim-by-claim basis. Google must prove by clear and convincing evidence that all of the requirements of \(a\) claim are present in a single piece of prior art. To anticipate the invention, the prior art does not have to use the same words as the claim, but all of the requirements of the claim must have been disclosed and arranged as in the claim. The claim requirements meet -may either be disclosed expressly or inherently -- that is, necessarily implied -- but must be disclosed in sufficient detail that a person having ordinary skill in the art of the invention, looking at that one reference, could make and use the claimed invention.

Even though an invention may not have been identically disclosed or described in a single prior art reference before it was made by an inventor, in order to be patentable, the invention must also not have been obvious to a person of ordinary skill in the field of technology of the patent at the time of the invention.

Google may establish that a patent claim is invalid by proving by clear and convincing evidence that the claimed invention would have been obvious to persons
having ordinary skill in the art in the field of the
invention at the time the invention was made.

In determining whether a claimed invention is obvious, you must consider the level of ordinary skill in the field of the invention that someone would have had at the time the invention was made, the scope and content of the prior art, any differences between the prior art and the claimed invention, and, if present, so-called objective evidence or secondary considerations, which I will describe shortly. Do not use hindsight; consider only what was known at the time of the invention.

Keep in mind that the mere existence of each element of the claimed invention in the prior art does not necessarily prove obviousness. Most, if not all, inventions rely on building blocks of prior art. In considering whether a claimed invention is obvious, you should consider whether, at the time of the claimed invention, there was a reason that would have prompted a person having ordinary skill in the field of the invention to combine the known elements in the prior art in the way that the claimed invention does, taking into account such factors as: (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known  onsider what amount of damages to award Arendi for its infringement. By instructing you on damages, I am not suggesting which party should win this case, on any issue.

Arendi has the burden to establish the amount of its damages by a preponderance of the evidence. In other words, you should award only those damages that Arendi establishes that it more likely than not has suffered. While Arendi is not required to prove the amount of its damages with mathematical precision, it must prove them with reasonable certainty. You may not award damages that are speculative, damages that are only possible, or damages that are based on guesswork.

Arendi accuses the following 12 Google apps of infringement: Chrome, Sheets, Contacts, Docs, Calendar, Keep, Messages/Messaging, Inbox, Tasks, Hangouts, Slides, and Gmail. Arendi accuses the following Google devices of infringement: Pixel 2, Pixel 2 XL, Pixel 3, and Pixel 3 XL smartphones.

The damages you award must be adequate to compensate Arendi for the infringement. They are not meant to punish an infringer. Your damages award, if you reach this issue, should put Arendi in approximately the same financial position that it would have been in had the
problem in the relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior art teaches away from combining elements in the claimed invention; and (5) whether it would have been obvious to try the combinations of elements, such as when there is a design incentive or market pressure to solve a problem and there are a finite number of identified, predictable solutions. To find it rendered the claimed invention obvious, you must find that the prior art provided a reasonable expectation of success. Obvious to try is not sufficient in unpredictable technologies.

In determining whether the claimed invention is obvious, you should take into account any objective evidence (sometimes called "secondary considerations") that may shed light on whether or not the claimed invention was obvious, such as:
A. Whether the claimed invention satisfied a long-felt need;
B. Whether others in the field praised the claimed invention; and.
C. Whether others sought or obtained rights to
the patent from the patent holder
In determining whether the claimed invention
was obvious, you must consider each claim separately

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infringement not occurred.
Plaintiff Arendi alleges that it is owed a reasonable royalty as compensation for Google's infringement. A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. A reasonable royalty award must be based on the incremental value that the patented invention adds to the end product. When the infringing products have both patented and unpatented features, measuring this value requires you to determine a value added only by the patented features because the royalty you award should be only for the incremental value added by the patented features.

One way to -- excuse me.
One way to calculate a reasonable royalty is through the hypothetical negotiation approach. Under this approach, the reasonable royalty is the amount of royalty payment that would have resulted from a hypothetical negotiation between the patent owner and the alleged infringer just before the infringement began.

In considering this hypothetical negotiation, you should focus on what the expectations of the patent holder and the alleged infringer would have been had they entered into an agreement at that time and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was valid and infringed and that both parties were willing to enter into an agreement. The reasonable royalty you determine must be a royalty that would have resulted from a hypothetical negotiation and not simply a royalty either party would have preferred. Evidence of things that happened after the infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation just prior to the first infringement.

In determining the amount of a reasonable royalty, you may consider evidence on any of the following factors in addition to any evidence presented by the parties on the economic value of the patent:
1. The royalties received by Arendi for the licensing of the ' 843 Patent to the extent those royalties prove or tend to prove an established royalty.
2. The rates paid by Google to license other patents comparable to the ' 843 Patent.
3. The nature and scope of the license as exclusive or nonexclusive or as restricted or nonrestricted in terms of its territory or with respect to whom the manufactured product may be sold.
4. Arendi's established policy and marketing

value of that use.
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the inventions or analogous inventions.
13. The portion of the profit that arises from the patented inventions themselves as opposed to profit arising from unpatented features, such as the manufacturing process, business risks, or significant features or improvements added by the accused infringer.
14. The opinion testimony of qualified experts.
15. The amount that a licensor (such as Arendi) and a licensee (such as Google) would have agreed upon (at the time of the infringement began) if both sides had been reasonably and voluntarily trying to reach an agreement, that is, the amount which a prudent licensee who desired, as a business proposition, to obtain a license to manufacture and sell a particular article or process embodying the patented invention - would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a patentee who was willing to grant a
program, if any, to maintain its right to exclude others from using the patented inventions by not licensing others to use the inventions or by granting licenses under special conditions designed to preserve that exclusivity.
5. The commercial relationship between Arendi and Google, if any, such as whether or not they are competitors in the same territory in the same line of business.
6. The effect of selling the patented product in promoting other sales of Google products, the existing value of the inventions to Arendi as a generator of sales of its non-patented items, and the extent of such derivative or collateral sales.
7. The duration of the \(\quad 843\) Patent and the term of the license.
8. The established profitability of the accused products, their commercial success, and their popularity.
9. The utility and advantages of the patented inventions over the old modes or devices, if any, that had been used for achieving similar results.
10. The nature of the patented inventions, the character of the commercial embodiments of it as owned and produced by or for the licensor; and the benefits to those who have used the inventions.
license.
16. Any other economic factor that a normally prudent business person would, under similar circumstances, take into consideration in negotiating the hypothetical license.

No one factor is dispositive, and you can and should consider the evidence that has been presented to you in this case on each of these factors. You may also consider any other factors which in your mind would have increased or decreased the royalty of the alleged infringer would have been willing to pay and patent holder would have been willing to accept, acting as normally prudent business people.

In determining a reasonable royalty, you may also consider whether or not Google had acceptable non-infringing alternatives to the patented technology that were available to it, the cost of such alternatives, and whether that would have affected the reasonable royalty the parties would have agreed upon. A non-infringing alternative is a way of providing the same or comparable functionality or achieving the same or a comparable result that does not infringe the patent. You may also consider the utility and advantages of the patent technology over any non-infringing alternatives that could be used for achieving similar results.

hearing instructions, so what I think makes the most sense is for us to take a short break, your final break, and then when you come back, we'll hear both sides' closing arguments before we give the case to you.

Ms. Garfinkel, let's take the jury out.
(The jury exits the courtroom at 10:50 a.m.)
THE COURT: All right, folks, please be seated.
So we'll take a ten-minute break. I didn't want to have a break after we heard from one side, but not the other, or before we hear from the rebuttal closings. So let's do that now, and then we'll just plow through until the end into lunch.

MR. UNIKEL: Thank you, Your Honor.
MS. SRINIVASAN: Thank you, Your Honor.
And, Your Honor, are we getting copies of the
verdict form?
THE COURT: Yes. I think -- am I correct that there were no changes that the Court ruled on after we docketed the verdict form last night?

MS. SRINIVASAN: That's correct.
THE COURT: Okay. So we've just changed the caption to "Verdict Form," instead of the "Court's Proposed Verdict Form." And we'll hand that out now.

MS. SRINIVASAN: Thank you.
(Whereupon, a recess was taken.)

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To make this determination, you must interpret the Samsung Agreement to decide what Arendi and Samsung intended to agree upon. In evaluating the words in the agreement, you should not consider particular words in isolation but should consider the agreement as a whole in light of the overall intention of the parties to the agreement. You may also consider other evidence presented at trial regarding the intent of the parties to the agreement. Evidence outside the contract regarding Arendi's and Samsung's intent cannot be used to contradict the ordinary meaning of the contract's terms.

Google bears the burden of proving, by a preponderance of the evidence, that Arendi's license agreement with Samsung reduces the damages to which Arendi is entitled to receive from Google.

Ladies and gentlemen, the rest of the
instructions will be read to you after we hear from the parties with their closing arguments.

We have been going for almost an hour now,

THE COURT: All right. Please be seated.
Have we sorted out what's going to go back to
the jury while they deliberate in terms of the exhibits?
MR. STRAUS: Yes, Your Honor.
THE COURT: We have it? All right. Great.
All right. Are we ready to bring them in?
MS. SRINIVASAN: Yes, Your Honor.
THE COURT: All right.
Ms. Garfinkel, let's bring the jury in.
the clerk: Yes, Your Honor
(The jury enters the courtroom at 11:03 a.m.)
the clerk: Your Honor, the jury.
THE COURT: Please be seated.
We'll now hear closing arguments from the
parties.
Counsel.
MS. SRINIVASAN: Good morning, ladies and gentlemen. I want to thank you, first, for the past ten days that you've spent your attention to the important matters in this case. And I thank you on behalf of myself, the Arendi legal team, and Mr. Hedloy and Arendi. When we started last Monday, I talked to you a little bit about when we're young and we learn about playing fair and sharing fairly and doing things that are fair. And one of the things that I wanted you to think

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about is when you are playing a game, when you're young, to make it fair when the other side does something to throw up the dust to cloud the playing field so that you don't even know where the bases are, that is what has happened over the past ten years as Arendi has pursued happened over the past ten years as Arendi has pu
Google for its infringement of its patents. And, respectfully, that is what has happened over the course of the trial that you've had before you.

Now, our job is to clear away that dust to focus on the issues that are here for you to decide in this case. And you're going to be asked to decide four issues in particular: Whether Arendi has proven that issues in particular: Whether Arendi has proven that
Google infringed the ' 843 Patent, whether Google has shown by clear and convincing evidence that the ' 843 Patent is invalid, whether Arendi has demonstrated that Google's infringement was willful, and the amount of damages to which Arendi is entitled to from Google if infringement is found.

At the same time, you're going to be hearing about and thinking about the various excuses and defenses that Google has raised over the course of this case.

You've heard Google say that it used a different approach, that it went a different way from the patent.

You also heard Google say that if, in fact, the

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analyzing infringement in this case. He looked at source code. He looked at documents. He did testing of the devices on his own independently to assure himself that the claims were practiced.

He was cross-examined for about 40 minutes in this case because what he attested to under oath on the stand was not disputable. He did the technical work to meet Arendi's burden. Step by step, one by one.

Now, Google's expert actually really doesn't contend or contest the work that Dr. Smedley did. He says he did it the right way. What Dr. Smedley undertook to prove and help show infringement in this case was the right way to do it.

And Dr. Rinard, Google's expert, he actually agreed with Dr. Smedley for the vast majority of the limitations in the claims. He said he didn't dispute it. So where did that leave us?

Dr. Rinard focused on two limitations in the claim, and those limitations centered around this term "computer program." The Court has given a definition of what that term means.

But when Dr. Rinard was asked a very simple question, "Do the applications accused in this case, are they computer programs," he could not give you an answer. And you will hear and have heard over the

Arendi patent covers what Google does, then the patent is invalid.

You've heard Google say that the Patent Office just got it wrong, and the ' 843 Patent should be invalid.

And, finally, you've heard Google say that
well, if the patent is valid and it's infringed, it's just not worth that much.

And I want you to be thinking about those
issues as we talk about the evidence that's been before you in this case.

One of the very first things that Google told you, when it opened last week, was to look under the hood, that we needed to look under the hood. And perhaps the idea was that Arendi was not going to do that with you over the course of this case. But you all know now that that is not true. Arendi and its expert, Dr. Smedley, went through each limitation of the patent. One by one, step by step.

In fact, Dr. Smedley even covered limitations of the patent that Google doesn't dispute. Why? Because it is our burden to show you that the patents are infringed, and Arendi takes that burden extremely seriously.

Dr. Smedley testified for five and a half hours on the stand. He told you all that he spent 900 hours
course of this case Google's experts telling you, again and again, that they do not have an answer for you, or that it wasn't their assignment to look at these questions. But these are the very fundamental and hard questions in this case.

Dr. Rinard, he was asked, "Are Google Docs, is it a computer program?" And he said, "I -- I'm not going to answer that question. I was asked to respond to Dr. Smedley's analysis." Could he answer that question on the stand? "I would prefer not to. I prefer to do my analysis and take the time I need."

But the truth, ladies and gentlemen, is that Dr. Rinard didn't want to answer the question because he knew the answer was "yes, of course, the applications that accused in this case are computer programs."

If he answered "yes," then that would be inconsistent with the positions Google has taken in this litigation. And if he answered "no," he couldn't do that credibly. He's obviously very experienced and educated in his field.

So instead, he declined to give an answer. His refusal to answer that question tells you everything you need to know about Google's infringement theory.

Dr. Rinard and Google, they know that the two issues -- the two limitations they dispute are really not
in dispute after all, and that he agrees with Dr. Smedley, the applications accused in this case absolutely are computer programs and every limitation is met.

And, in fact, when we started to pick through and work through the definition the court had given us, then Dr. Rinard slowly had to concede that. He doesn't dispute that Google Docs, as an example of an application, is a set of instructions. It's not a routine or library, and it is an application that is performing some task. So at the end of the day, when asked, when pushed to look at this issue, the one issue that Dr. Rinard identified as being in dispute was not in dispute after all.

Google told you next that it was taking a
different approach by going in another direction. And the primary way that they did this is by showing you these boxes. You saw them many times over the course of the trial.

Now, surely Google didn't think that you all were going to believe that this case was just about these boxes and these diagrams after all this time. This is a very simplistic approach to trying to present what is at issue in this case.

And what did Google tell you? They said Arendi follows Approach 1, and we do it Approach 2. And we have
a tool that sits outside and away from the applications, totally apart from them. That's what they told you. That's what they showed on you this diagram. But then you heard from their own witnesses, their own executives, and their own expert that that is really not the case at all.

You heard from Mr. Elbouchikhi, Google's
director of product management, and he testified about this document where it says the Android framework code runs inside an apps' process, not out here, but inside the apps process.

And when he was asked under oath about this interaction between the Android framework code and the applications, he had to admit the processes run together for a period of time. Again, not a tool out here, and applications over there, they must run together to enable the functionality in the application, and that is where it's happening.

Mr. Toki, he is the software engineer at
Google, played a critical role in STS. He came here from London, and he testified as well that once you have the TextView inside the application, in the app, that that will eventually lead to the features like Smart Text Selection. It starts in the app. It is in the app. And that is Mr. Toki's own admission under oath before you all.
did that before he even heard the witnesses that Google brought to this court to testify. And their testimony is absolutely consistent with what Arendi's expert said.

And, in fact, Google's own expert, Dr. Rinard, he landed in the same place. He says nothing happens without the app around it. The code, the Android framework -- nothing happens until the app is around it. It is critical. And that is what we are talking about today.

Dr. Rinard also recognized that they are not separate. You need them both. So the app is what is calling out to the framework. It's coming in to the application. And that is exactly what the diagram fails to show.

Now, these applications that are accused in this case, they pull a lot of tools from the Android framework. And if they didn't do that, they would be not operational. You'd have Gmail with no messages. You you'd have Calendar with no entries. You'd have Google Maps with no maps.

The point is, the applications are there. They pick up tools from the Android framework, but they operate in the application.

And under Google's theory, you would have applications that didn't do anything if they weren't able
doesn't change that they're applications just because they go and get a tool. They need them to function. And they use them to be able to pick up the Smart Text Selection functionality that is accused in this case.

Dr. Rinard said the same thing. You can't have a workable product with the way the current Android platform is set up without being able to go pick up a tool. You'd end up with what I just showed you, devices and applications that didn't have anything on them. And he said again, it doesn't happen without the app. You need both.

So again, where does that leave us? We come back to the approach that Google said it was taking, where there was a box out here and applications out here, and it's just not the case. Every witness has testified consistently that is not the case. That is not what is happening. And the functionality that's being accused is absolutely part of the application.

Now, recognizing that maybe this argument -and I'll tell you one other thing. This idea about there being an operating system, that's not unique to Google. Apple has an operating system, and Samsung has an Android operating system. Apple has ioS. Microsoft has a word operating system. They all have operating systems. It

I want to talk to you about this system. It is Google's burden to prove their is a system, to start, before then showing, by clear and convincing evidence, that it invalidates the patent. That is their burden.

But you heard Dr. Fox, there is no system. He's unaware of when it was last available. It was done more than two decades ago. It's -- the system doesn't exist. He didn't examine it because there's no copy of it that exists today.

And as with the other Google experts you heard from, he has no answer for you. Where is the system? And how could he rely on a system that he couldn't see?

He said that once he realized it didn't exist, he didn't investigate further.

I want to remind you that, you know, Dr. Smedley did this claim-by-claim-by-claim analysis. That is what Dr. Fox should have done, but with a higher burden because he's trying to invalidate the patent. But that is not what we got.

We heard him say that we should rely on a system, a phantom system that existed. He's never seen and maybe it was available 25 years ago, and that should invalidate the patent.

He was very careful to say, "The system. Why?" Because the articles around the system, he admitted that

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doesn't mean they don't infringe or they don't use the patent.

I urge you to use what you've been instructed to do, your common sense, your everyday experience. This is not a defense to infringement in this case.

I think that when Google started this case, they anticipated that we would say this different approach argument doesn't work. So they told you something else. They said, if Arendi can show that its patents cover the Google products, well, then the patent's invalid.

And this is a little bit of a "heads, I win; tails, you lose" approach. If the patent covers the products, well, then the patent has to be invalid.

I really hope that we can walk through exactly
how Google has come to this argument, because when they started last week, they told you something different. They actually said that CyberDesk and Apple Data Detectors, the two big systems they're relying on -- they told you a week ago, that they were different than the Arendi approach. If they're different than the Arendi approach, then they can't invalidate the patent. That's what they told you a week ago Monday.

Dr. Fox, their invalidity expert, he took a different approach. He said, well, no, the CyberDesk system invalidates the patent.
those do not anticipate the patent. He was asked, "You agree that the capabilities disclosed in these publications on the face of the CyberDesk, on the face of the '843 Patent -- you agree that those publications don't anticipate the patent, correct?"

And he said, "It's the system that I'm arguing it's anticipating, right. Not the publications."

So he's relying on a system. All those articles that he looked at, we showed you, that Dr. Dey testified about, he doesn't say those anticipate the patent. And he couldn't. They're on the face of the patent.

The examiner studied all of those articles about CyberDesk before it issued the patent in this case in 2011. Examiner had before it all of the articles. It had the website link. It had before it extensive information about CyberDesk. And it -- the Patent Office elected to issue the patent anyway.

And that is why Dr. Fox is trying to say there's something else you should think about, this system. But he can't tell you what it is, he can't tell you where it is because it doesn't exist.

And the CyberDesk system, or that he says now has something else, it's important know that in 1999, it lacked a full e-mail client that could edit text. That's

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really important, because there is no distinction there. There's nothing in this system that shows that it was doing what was in the Arendi patent.

You can see here, a document -- you'll have this back before you, DTX-28, and it's talking about desktop services to be added. They're not there in the 1999. This is something they think they might add in the future, which is to have a full e-mail client with editable text. Somewhere down the road, they might add it. But in 1999, it wasn't available. And it can't invalidating when it is missing critical features like that at the time that CyberDesk was available.

Dr. Fox then says, well, if CyberDesk doesn't anticipate, you can also look at these combinations. A little bit of this and that. You heard Dr. Sacerdoti say, that's not the right way to do it. You can't just -- it's not a grab bag and pick little pieces and cobble them together to invalid the patent. It doesn't work that way.

But let's look at what Dr. Fox is even relying on. He then talked to you about this Apple Data Detectors, another system. Where is that system? He said that it was on a laptop. It was added to that laptop in 2014, years after the patent issued.

And Dr. Fox has no way of telling you when that software was developed, when it was actually properly

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available, the chain of custody of that. He is relying on Mr. Miller, a former Apple employee, who said that he put together the laptops years after the patent issued during litigation.

That is not enough for Google to meet its extraordinary burden to show clearly and convincingly that there is something that invalidates this patent. He's simply relying on Mr. Miller's testimony without doing any investigation himself as to whether this system existed, what was in the system, and whether it was available before the patent issued.

And, again, Apple Detectors -- Apple Data
Detectors, whatever it is, it was an Apple product. You saw the Apple witness, you saw the presentation at Macworld. Surely Apple was aware of that. And it was aware of it when it took a license to the Arendi patent portfolio. It knew about it. That's its product.

If this was such a slam-dunk argument about invaliding the patent, would Apple have paid to license the patent, or would it have said, look, we had Apple Data Detectors and we did it first?

Dr. Fox also noted -- and we'll look at -- we heard the testimony from Mr. Miller -- every publication that Mr. Miller talked about in his testimony is on the face of the patent. What does that mean?

It was before the Patent Office, before the patent was issued in 2011. The Patent Office had before it extensive information about Apple, the Data Detectors, and still issued this patent with the presumption that the patent was valid.

Dr. Fox also, and you heard Google and you'll hear Google talk about Microsoft Word. There are 27 references to Microsoft Word on the patent, meaning that the Patent Office looked at Microsoft Word and it looked at whether that, too, was invalidating prior art. The Patent Office has the ability to put together all these combinations. It has the ability to look at system.

It considered a wealth of information before deciding the patent should issue as something new and novel with a presumption of validity.

Of course, when Dr. Fox was asked if he had gone through all the references cited on the face of the ' 843 Patent, he admitted he did not. And, yes, it's a huge volume, because what Arendi put before the Patent Office and what the Patent Office reviewed to issue this patent was extensive and they spent years reviewing it.

Dr. Fox, he said, "I didn't review all the documents. That would have taken months and months." Another example of Google's expert not having an answer for you.

He said he looked at what was given to him by the attorneys, and he didn't have a reason and felt no need to go investigate further to give you the answer about whether those references on the face of the patent, all of those references, were considered and how they were considered by the Patent Office.

You heard from Arendi's expert, Dr. Sacerdoti, who said and told you that, even though there's all these presentations of these bits and pieces, that is not enough. You need to show that there would be a motivation to combine them in order to create something that would invalid the patent.

And what he found was the opposite. The Apple Data Detectors system and the CyberDesk system were going in different directions. And so a person of ordinary skill in the art, they wouldn't look at those two systems say, "How do we combine them?" They'd say, "Well, these are different from one another; we're not trying to combine them."

And that's a fatal, fatal to the question of whether Google has met its burden to show obviousness of the patents. You must show that there was a motivation to combine these different references. Google couldn't do it, and, in fact, that evidence was disputed by Dr. Sacerdoti, who is the person of ordinary skill in the

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invalid as obvious in view of prior art?

You have heard in the jury instructions about
the burden that Google bears on trying to invalidate this patent, clear and convincing evidence, highly probable that the facts underlying that are true. The fact that there's a system, that the system does what Google says it does when nobody has seen that system.

And again, I would ask you all to consider your own life experience, common sense. This patent has been around for 12 years now. It has been through litigation. It has been involved in licensing with many other companies, savvy technology companies. After all this time, has Google come up with something new to try to invalid this patent? They have not. They have brought you right back to where the patent started in the Patent Office looking at the same thing the patent examiners did. They want you to believe the Patent Office made a mistake and that everybody else along the way missed it too. And that's simply not the case. The patent stands after all of this time. It has withstood the test of time, and it remains valid.

If you find -- and you will have the verdict form before you as to these questions. There are two questions on invalidity. You will be asked: Was the invalidated as anticipated by the prior art? And was it

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knowledge of the ' 843 Patent. That's right, Google legal would have known. That's undisputed that at the time that the Smart Text Selection functionality was released, that Google had knowledge and would have known of the patent, the asserted patent here.

What did it do? Did it go find another path, a different path? Google offered no evidence of that. When asked, its corporate representative said that he couldn't provide guidance on that. He was asked, "Did Google try to develop an alternative to avoid infringing the ' 843 Patent?" He had no facts to offer about what Google did or could have done.

He was asked whether, in 2017, when Google released its Smart Text Selection feature, did it have a reason to think that the patent was valid -- invalid. And he couldn't point to any facts.

So in 2017, when Smart Text Selection is launched into all of these Google applications, Google didn't look for a way to avoid infringing, and it didn't have a basis to believe the patent was invalid.

As you heard -- and you -- as you heard in the Court's final instructions, there are a list of factors to consider. And what we've heard about are directly related to those factors.

Did Google act consistently with the standards
those questions should be, "no." There is nothing to
demonstrate by clear and convincing evidence that the ' 843
Patent has been validated by what Google has put before you in this trial.

If you find the patent has been infringed and it is not invalid by -- Google has not proven, met its burden, you will also be asked whether or not that infringement was willful? Was it intentional? And was it deliberate?

A lot of the facts that you heard about this are unrebutted. It is unrebutted that Arendi filed suit against Google and put it on notice of its claims back in 2013 and that Google released its Smart Text Selection in 2017. You heard from Google's corporate representative that the complaint that Google filed in 2013, it referred to Gmail and the Google -- other Google products way back in 2013.

And in 2017, when Google launched and released the Smart Text Selection feature, it knew about the '843 Patent. It had known about it for years. There was someone on the Google legal side aware of this. And they understood the accused technology in this case, released in 2017, and at the time it was released that Google had
of behavior for its industry, technology industry, where others pursue and take licenses? Did Google reasonably believe it did not infringe the patents or that the patent was invalid? You heard corporate testimony that they didn't have any of those beliefs at the time they launched STS in 2017. Did Google make a good faith effort to avoid infringing the ' 843 Patent by like trying to design around it, figure out a way not to use it? Google could offer no fact showing that it did this.

These are the factors to consider whether, when Google launched the Smart Text Selection in 2017, not only did it infringe, but that its infringement was willful.

The timeline is clear on this. You will be asked in Question 5 of the verdict form: Did Arendi prove by a preponderance of the evidence that Google's infringement of any of the claim of the 843 Patent was willful? And, again, given the unrebutted, undisputed evidence in this record, we believe the answer to that should clearly be yes.

Finally, Google told you that, even if the patent is valid, even if the patent is infringed -- and it must assume that for purposes of coming up with a damages number -- even with all of that, the amount that Google should have to pay is \(\$ 500,000\). And it's shown to you all this chart, and it pointed to the other settlements, and

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it showed Google's damages claim from Arendi in this case relative to those.

What it didn't include in this chart was its
own rebuttal damages number and how that stacks up against the license agreements Arendi has received from other major players in the technology industry and its damages number in this case.

And when Google's expert yesterday, when he was talking about these different numbers, he made them sound like they should all be looked at the same way, the three settlements and the damages number in this case. But as he admits, settlements are just that. They're a deal. They are a discount to avoid continuing with litigation to avoid the risk, to avoid having to proceed all the way to trial like we are today.

And Mr. Weinstein explained to you that
real-world negotiations where you end up settling something in a license, they are always going to have a lower outcome than a hypothetical negotiation. The hypothetical negotiation, you have to assume the patents are valid and infringed.

And Mr. Kidder, Google's damages expert, he agrees that's the same thing. There's always going to be a downward pressure on a settlement agreement compared to what they're supposed to assume for damages.

Mr . Weinstein accounted for that discounting; Mr. Kidder did not when he came up with his \(\$ 500,000\) damages number in this case.

There were a lot of issues by Google throwing up what I would consider clouds of dust about whether or not the multiplier was okay, whether the apps install base was okay, whether the start date was right. Challenging even whether another license agreement with Samsung relieved them of some damages. Many issues and questions that Google raised. But I want to focus on three that I think are very tell in this case.

The first is that Google challenged the data that Arendi's expert, Mr. Weinstein, relied on. He looked at the number of downloads, the hundreds of millions of downloads of the accused applications on Android devices. That's what Mr. Weinstein looked at, and Google implied that there was something wrong with that. Maybe that data wasn't right, the very data that it supplied.

And Google's expert raised questions about it, too, during his direct examination. He did that, but as became clear when he was examined on cross, he relied on the exact same data for his analysis. He took those downloads and he used it to apportion the revenue that Google makes on these applications. It's the same data, and he relied on it himself. He said, "We used the same
data available. He didn't ask the Play Store. There could be reasons that it's available, and there could be reasons why it's not. He wasn't able to get that information, even though he is the corporate representative that came from California to testify.

So I would submit to you all that the data that Google provided for Mr. Weinstein, for Mr. Kidder to rely on, is the best available data. That's why they produced it. And if there was something else, there some reason not to rely on it, they could have made that available and known before.

> And you'll see here, just as Mr. Kidder testified, a one-to-one match for 2018 in the units and the installations of the Android applications that were downloaded. One-to-one.

In 2017, there's a difference because
Mr. Kidder starts in December and Mr. Weinstein starts in September. There's no dispute that the underlying data is the same, and it is relied on by both of them.

The next issue that I want to raise is with respect to what Mr. Kidder did rely on. And I'm going to ask the Court if -- so I don't publish this on the screen, if you could.

Since we're not sealing the courtroom, I'm not going to say these numbers out loud, but I wanted you to
information from Google for each of the applications. And one of them was Chrome. And that's what you have before you. This is the revenue data he said he got from Google. And I ask you, again, to look and to apply your own understanding, because the last number there, the revenue is negative. Not the profitability, the revenue. And it doesn't make any sense at all how Chrome, an application, a popular web browser used and for which advertising is served alongside with it, could have negative revenue.

Again, we're not even talking about
profitability. Where did these numbers come from? How could they be reliable for using a revenue apportionment when Mr. Kidder didn't even ask the questions? It is a web browser, and many of you know using them, advertising is a critical part of what is served with those search engines. It doesn't make sense. It defies logic to think that Google is losing revenue on one of the cornerstone features of its properties, its own browser.

Dr. Kidder -- or Mr. Kidder never asked the
questions. He doesn't have an answer for you. Did he dig in to how these how Google generates revenue from its applications? No, he didn't do it. He relied on the summaries that he got from Google to come up with his numbers. That is correct. That is what he said.

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He didn't make an effort to determine the
different revenue streams that Google might earn on its accused applications. He didn't do it. He said he didn't ask anybody, he didn't try or attempt to do it, even though he has served as an expert for Google ten times, he did not reach out to anybody to try to figure out what the revenue base should be.

He didn't ask Google about advertising revenue
and whether advertising revenue was included in the numbers like in the Chrome data you have before you. He admitted he never asked those questions. He knows that advertising data could be relevant. He mentioned that it might be relevant to Gmail, but for these other applications, he didn't look at it. He said, "I accepted them at face value; I didn't try to understand the components."

Again, no answer for you. And as you heard in the jury instructions, expert testimony, these are people who are supposed to be skilled, who are there to offer an analysis of facts that they want and investigated in an unbiased fashion. Mr. Kidder did none of that like
Google's other experts. He relied on data provided to him by Google without questioning it, and, again, if you look at the numbers, they simply don't make sense.

Google then offered yet another argument, and
are PX-456 and 458.
Dr. Smedley did the work. He established when an appropriate date to consider damages and infringement would be, and it was August 2017. Google is trying to change the playing field again by saying now the date should be later. It should December. Maybe it should be 2018, pushing it out further and further, when, during the course of this case, they made clear that Arendi could rely on their representations about a representative product that was released in August of 2017.

Google also wants to say that Arendi's damages against it should be limited because of an agreement that


And you heard testimony from Mr. Hedloy for the obvious point that \(\square \square \square \square \square \square \square \square \square \square \square \square \square \square \square\) Why would it do that when it was in the middle of litigation with Google? It wouldn't. And it didn't.

And Mr. Hedloy's testimony is the only testimony you're going to hear from a party to that agreement.

be considered in this hypothetical negotiation that happens between Arendi and Google, different than the settlements between Arendi and Samsung and Apple and Microsoft.

And they're probative. They are highly
relevant, but they need to be modified to address what happens when the parties agree the patent is valid and infringed. That's the analysis Mr. Weinstein did in this case.

He then looked at the installed application units to figure out a per unit and per device rate. 48 cents per device for the phone devices, the Pixels. And you see the total number he reached for the devices, 1,155,235.

And then he did an analysis for the applications, for 10 cents, a dime, per downloaded application. And the installed applications, again, those are the same numbers Mr. Kidder relied on. Mr. Weinstein applied a dime, a 10 -cent per unit royalty, and came up with 44,349,601 for that portion of the damages.

Taken together, Mr. Weinstein put together total damages of \(45,504,836\). And that's the question you will be answering on the verdict form Number 4, the amount of damages that Arendi has proven by a preponderance of the evidence that it is entitled to as a reasonable

It's absolutely not an alternative. When you tell your developers to put it down, it's not a viable alternative, and it wasn't, which is why Google wanted to move on to something new

On damages, you heard Mr. Weinstein's testimony about the license agreements in this case. In lieu of publishing those numbers, we're going to pass the slide out that has them on there.

MR. UNIKEL: And, I'm sorry, may I get a copy as well, please?

MS. SRINIVASAN: Sure.
You heard Mr. Weinstein analysis of how he used
these three license agreements, these three settlements.
He took into account that they were settlements, and he thought about what would happen if you had to assume they were valid and infringed. And that allowed him to modify the numbers in those agreements to make them
apples-to-apples, to make them consistent with the
hypothetical negotiation that has to happen for damages in this case. Not a settlement where validity and
infringement are disputed, but a hypothetical negotiation where everybody agrees the patent has been infringed and it's valid, and people are willingly licensing. That is what you were instructed on earlier today as to what must

\section*{royalty}

I want to very quickly leave you with just a few thoughts. One is that you heard from Google itself, doesn't matter whether a company makes a product for its intellectual property to be infringed. Somebody can step on your property whether or not you have a product. He acknowledged that. That's a true fact. That is an aspect of the law.

Second, valuable patents can come from
anywhere. They can come from big companies. They can come from small companies. They can come from inventors. And it doesn't matter as between those two, the fact that the invention is important, useful, and new, that is what gives it its value, not who it comes from.

And finally, you heard Mr. Elbouchikhi say, if you do something great, you should be paid for it. And that is what Arendi is seeking here. Mr. Hedloy invented something great 25 -plus years ago. It stood the test of time. It proved to be valuable through its life. And, in fact, companies are still using that technology today, but now he has made it available to the world. That's the trade-off he made with the Patent Office.

But he invented something great, highly
valuable, useful, and that was recognized by Microsoft, Apple, and Samsung, and should be recognized by Google in

We thank you for your time and appreciate your attention to help holding Google accountable for paying its fair share for its use of the ' 843 Patent. Thank you.

THE COURT: Thank you. Ms. Garfinkel, can we collect the demonstratives from the jury.

You may proceed, counsel.
MR. UNIKEL: Thank you, Your Honor.
Good morning, everyone. I think we're still morning. Before I begin, I wanted to thank all of you for your time and attention over the last week. I know it's been a long ten days. I know you've heard a lot of facts, a lot of evidence, some of them many, many times. But your focus, your hard work \(I\) know is appreciated by everybody in the courtroom, especially by me and everybody on the Google team. So, thank you.

Last Monday -- let me get my clicker -- I asked you to focus on one question as were you listening to all the evidence over the last week. What exactly did Arendi invent? If you think back to the testimony of Mr. Hedloy, to the opening statement with pictures of Mr. Hedloy in his Harvard dorm room, I think you're going to find it difficult to put your finger on what exactly Mr. Hedloy came up with that was new, that was different than CyberDesk, than Apple Data Detectors.

And then you heard from the designer himself. You saw the website. It's not a phantom system. It was a real system that was displayed for more than two years before the patent application was filed.

The Apple Data Detectors was demoed at Macworld in August of 1996. Again in January of 1997. You saw the system in action. It wasn't a phantom system.

These were long before Mr. Hedloy says that he even thought about the idea of OneButton Contact Manager.

So once again, I want to ask you to take a moment and really ask yourselves: What exactly did Arendi invent? What was new?

I'm confident that, based on the evidence that you've heard over the last week, you now understand that the only thing that Arendi can even possibly point to in the patent claims to say it was somehow different from CyberDesk, or different from Apple Data Detectors, are the elements that require the first computer program to do three very specific things. And they're called out expressly in the patent.

The first one is to display the document. The second one is to set up the input device. The third is to receive the user command from the input device and cause a search.

Over the last week, Arendi itself, you saw, had
did not invent the idea of shortcuts, they did not invent the idea of analyzing text, of finding names, e-mails, phone numbers, street addresses, because you saw these exact types of shortcuts had already been disclosed and were well trod ground in CyberDesk, for example. Here is just a screen shot from March of 1997.

And we know that the same types of shortcuts and more were publicly disclosed by Apple Data Detectors in 1996, 1997. You saw the videos yourself that showed how it analyzed text, how it found the information, how it looked up additional information, how it put it in a word processor. You even saw how Apple Data Detectors could implement the exact same write-a-letter feature, put an address in a word processing feature, that appeared in the one example that is in the patent itself. Here you see on the screen the result of the write-a-letter feature from Apple, which was almost a year and a half before
Mr. Hedloy ever filed the U.S. patent application. And the figure from the patent itself.

And just to remind you, CyberDesk was publicly demonstrated starting in the fall of 1996 at demo days, at conferences, through papers. When they say there was no system, they also point to you all of the papers that were delivered about the system.
emphasized the critical importance of this first computer program element to the Patent Office in trying to get the patent issued in the first place.

You saw Arendi's clear statement in the Accelerated Examination Support document, the document that Mr. Hedloy specifically told the patent examiner he should read because it was of particular interest.

And he explicitly told the Patent Office about Apple Data Detectors. For example, that it did not disclose configuring -- providing an input device configured by the document editing program, the same element that you see in the claims, because ADD itself is a part of the operating system, and is a part of the operating system which is separate from the document editing program. ADD does not do what the claims require because it was part of the operating system.

You saw that Arendi, when trying to get the patent, made a very similar statement about CyberDesk. It says, CyberDesk is separate from the document editing program.

So Mr. Hedloy confirmed to the Patent Office and made very clear that in order to get his patent, the first computer program elements were the key. They were what supposedly differentiated his invention from Apple Data Detectors and CyberDesk.

You may recall that Mr. Hedloy expressly
testified that his claim is focused on the invention where the first computer program is configuring the input device.

In fact, Mr. Hedloy agreed that there's a particular advantage to having the configuring of the input device done by the first computer program, as opposed to having it done by the operating system.

You'll also recall that Mr. Hedloy specifically acknowledged that one of the advantages of having the first computer program receive the user command was that the programmer of the first computer program could have control instead of putting the control into the operating system or whoever was designing the tool in the operating system.

So if Arendi invented anything -- which, as you've heard, is one of the key questions you're going to be asked to answer in the next few hours -- is to take -is to put well-known shortcut tools inside a word processing program or spreadsheet program. There's nothing else that the claims even arguably specify that could have been new in 1998.

And this is consistent with the only example that Mr. Hedloy gave of his invention in the patent, his OneButton Contact Manager product. You see a picture of
see how it operated.
Make what you will about the fact that Arendi's own lawyer seems to think this is an indication of something significant. But the reality is, is Mr. Hedloy did not save that, not even a single copy of it for you to look at.

But what we know for certain, even without a working copy of the product, is that it was built to work with only one program, Microsoft Word.

By contrast, you've heard now, time and time again -- and you've seen Google's design documents, you've heard from their engineers -- Google went in a different direction, then putting the instructions in a single program. Google created Smart Text Selection to be separate from any individual program. The entire point of Smart Text Selection, as you have heard, is to make sure it could be used by many different applications, as opposed to just one.

Google's approach and Arendi's approach are not just opposite, they're actually incompatible with one another. If you take the instructions and you put them inside of one program just to serve that one program, it's not possible for it to serve many others. And if you deliberately make it able to serve many others, it will never be captive or just for a single program.
it here from the patent.
There is no dispute that Mr. Hedloy created this program exclusively for Microsoft Word using a tool from Microsoft Word called "Visual Basic for Applications." A language that they provided.

Mr. Hedloy admitted to you that oneButton Contact Manager could not operate in any other program or with any other program other than Microsoft Word. And as he also told you, it can only act on names. It couldn't detect and act on phone numbers. It couldn't detect and act on e-mails. It couldn't detect and act on street addresses.

OneButton Contact Manager certainly could not be used with any other program. It certainly could not be used with many programs operating at the same time.

Consistent with the patent claims, the
instructions for OneButton were entirely within Microsoft Word. That was the testimony.

Interestingly, yesterday and a little bit just before, Arendi's lawyer made a big deal about the fact that the CyberDesk system is not in existence today, so you couldn't see how it actually worked.

But you may recall that Mr. Hedloy told you that he didn't save a single copy of oneButton Contact Manager. Not a single copy of it exists today. You can't

You have to choose one path or the other. These were two basic paths that were well known in the art, but you have to choose one or the other when you're designing a tool. Google went one way, and Arendi went the other.

It's not just a clever slide with a car. It really is the fact that Google took one approach that was incompatible with the approach that Arendi chose in its patent.

As we dig into the critical questions in the case, the ones you have to answer for the verdict form, let's start by looking at some of the key points that we really don't have any dispute on. Arendi essentially agrees with us on it.

First, everybody agrees that the claims require you to look under the hood. And that's because the claim specifies how the system must operate; not just what the user has to see, how the system must operate.

Obviously, Arendi thought this was true, because their own expert adopted that phrase in his own testimony, and they agreed, just in their closing argument, that we all do need to look under the hood.
So all the screenshots that show what a user sees, that shows the menu bar on top of a screen, those obviously don't tell you what's under the hood. We all

Calse 1:13-cv-00919-JLH Document 601 agree: You've to get into the system, you've got to look at the code, you have to really understand how it was designed. It's not enough just to look and say, oh, it creates a shortcut.

Second, the other thing that we now all agree on is that in the 1990s, and today, there are two basic approaches to creating a shortcut tool. One, is to put the instructions inside a single program; the second, is to put the instructions separate where it can help serve all different programs at the same time.

Both of these approaches were basic. They were well known in the 1990 s, and well before. There is nothing new or remarkable about either of these approaches. Nobody in this courtroom invented these approaches.

And, certainly, Arendi didn't come up with the idea of Approach Number 1. It was just a question of, if you wanted to create a shortcut tool, like a CyberDesk or an Apple Data Detectors, do you put it in one program so it's only usable by that one program, or do you let it do a lot for a lot of programs.

Mr. Hedloy recognized these contrasting approaches when he explained the important difference between putting the instructions in the first computer program or putting them in the operating system where it

> Filed 08 \(21 / 23\) Page 722 of 775 PageID \#: 61301 could serve many programs.

> Dr. Smedley was very explicit about

acknowledging that these were two different approaches in his own recognition about the difference between putting the instructions in a single program versus putting them in the operating system.

And just yesterday, Dr. Sacerdoti pointed you to the CHI March 1997 article which acknowledged the two opposite approaches in the art. And as he confirmed for you, these two approaches, to put the instructions totally into one program or to keep them separate, were
acknowledged in 1997, and they continue to be acknowledged today. He recognized that for you.

Furthermore, virtually every Google witness you heard from -- Mr. Elbouchikhi, Mr. Toki, Mr. Choc, Dr. Rinard -- they explained to you that the reasons, there are real reasons why you choose one of these approaches over the other.

In Approach Number 1, you would put the instructions into a single program to create a customized tool. If you want to have a tool that is only available to your program -- and maybe that's a great selling point for some reason -- that you can do that with Approach Number 1.

But if you want to use Approach Number 2, the 1578

So the parties, at the end of the day, essentially agree that there were two approaches. And that Arendi's was different than the approach of putting it in the operating system. It took Approach 1. It put the instructions in a single program.

The next thing that we all agree on is that the Court has given us a very specific definition of what "computer program" means in this patent.

In lots of different ways, "computer program" is a term that can be used in different ways, different contexts. But in this patent, the Court has told us what it means. It means "A self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task."

Now, as the experts all recognized, some were explicitly than others, it's not enough that there's a group of different instructions that all work together. It's not that it's mostly self-contained with some of it being outside of the container.

In this patent, according to the Court's definition, there must be a self-contained set of instructions that performs the task. If you need instructions in more than one place, you know it's not self-contained.

So the question, of course, is, what's the

Well, we know what the task is because the patent tells us. The task for the first computer program includes three things that it has to do. All of them has to display the document, it has to set up the input device, it has to receive the user command to cause the search.

That's the task for the first computer program. There must be a self-contained set of instructions that does all three of those things.

As we'll talk about, even if you could say, oh, well, maybe it does two of the three. That's not enough. The task is to perform all three, and it must be a self-contained set of instructions. The fact is that there's different code that does each one of these things, so there is no self-contained set of instructions.

The other thing that that we know -- and we don't really disagree on at this point -- is that the instructions for Smart Text Selection and for the intents handling mechanism, are all located in the operating system, in the framework code of the operating system.

Despite all the different theatrics at trial, there wasn't any dispute about this point.

Mr. Toki, who is the Google engineer who
Filed \(08\left|\left\lvert\, \begin{array}{c||c}\text { actually } \\ \text { 21 created this product, he designed it, he built }\end{array}\right.\right.\) it -- he told you that he personally put the Smart Text Selection code in the framework of the operating system, and he explained to you why.

He showed you this diagram, from the time that he was designing Smart Text Selection, that clearly shows how he built Smart Text Selection code to be in the framework so that it would be separate from the app, hence the reason for two different color boxes.

And he told you that he wanted it to be
available to developers through something called a
"TextView," which is the screen that they use to display text. And he said to you that he didn't want developers to have to do any work at all; just to show their text and then Smart Text Selection would be operable from the operating system. That's how he created it. That's why it's available to all the different apps.

Mr. Toki also explained to you that the intents handling instructions are also in the framework. You saw the documents that show there is not a single set of instructions that even perform intents handling. There's three separate set of instructions that you need.

Bless you.
Mr. Choc, the director of engineering who's
been here throughout the trial, had confirmed for you that
there are no instructions for Smart Text Selection in Chrome. And he explained that the intents handling is put in the framework deliberately.

Dr. Rinard told you something that nobody else in the case bothered to analyze. He looked at, what is the container for the app? The container for the app was the APK, which was undisputed. The APK file contains all the contents of an Android app.

And he was able to look, using a tool, the package analysis tool that he showed you, to confirm that none of the Smart Text Selection or intents handling instructions are in the container for the app. He showed you how -- where there was regular text that appeared for something, that showed that there was no code inside of -that there was code inside of the APK. And if you saw a number in the "Defined Methods" column, that showed you also, there was code running in the APK.

But when he went through all of the APKs for all of the apps, what he saw was that the TextView, which is the thing they're pointing to that has the Smart Text Selection running on it, was in italic text, which showed that it was not in the APK, it was running from an external source.

And the fact there was no entry in the column for "Defined Methods" confirmed there was no code, no
lines of code that were being run inside the app to make that happen.

He did the analysis for you. He looked at the containers. The code wasn't in there.

When Dr. Smedley himself, their expert testified, for the input device step, what he cited to was not app code, he cited to you Android framework code. This is the code from Android 8.0.0. That's framework code. He showed you for the same step in Android 9, the framework code. This is not code that's in any one app. This is code that's in Android, in the operating system.

And if there's any remaining doubt in your mind, you need only consider the fact that everyone in the case, every single witness in the case agrees, you need to have Android 8 or Android 9 downloaded to your device to make the apps work with Smart Text Selection. Why?

Because it's an Android where the Smart Text Selection resides. If you didn't need Android -- if you didn't have Android, you couldn't work Smart Text Selection with any of the apps. It's Android that is the key to the functionality. You need to have the app code to display the document. You need the Smart Text Selection code to set up the input device. It is not self-contained.

And if there was really any shred of doubt
left, I want you to consider this one fact which should make it clear. They are accusing 12 different apps in the case. But they're only pointing to a single set of instructions in the operating system for Smart Text Selection. That's because Smart Text Selection serves all of these different apps from its location in the operating system.

If they could have pointed to just the code for the apps, they would have. They can't because the code for the apps doesn't contain Smart Text Selection. It doesn't contain intents handling instructions. Those are in the operating system so they can be used by all the different apps.

So there's really no dispute at the end of the day, that the instructions are in -- for Smart Text Selection and intents handling are in the framework, and then you've got a separate group of code for the apps.

And as you've seen, these various birthday cake-colored diagrams over the course of the last week, you've seen that this is how the operating system is set up. And each different area of the operating system is given its own color, so you can understand where it is.

This isn't just made up by us. This is actual documents that are given to developers so they know where to put code for different things.

\section*{1 And what you saw was that in the green}
framework area, was the code for Smart Text Selection and intents handling; in the blue area for the system apps, was the code for the actual app for displaying. And they are separate. If they were the same, they wouldn't be in different colors. They would be called out in different areas.

So what does all this mean for your analysis of whether or not Google practices the ' 843 Patent claims?

Well, let's just briefly look at the elements that are at the center of this.

As a starting point, we know that Arendi and Dr. Smedley have specifically said to you that the app is supposedly the first computer program. So that's what we all agree. As a starting point for testing this, the app is the first computer program according to Arendi. And they've identified the app as being what displays the document. On that, we all agree.

So we know that each app now has to be the container that doesn't just display the document, it also sets up the input device, and it also receives the user command to perform a search.

So we next look at the requirement providing an input device configured by the first computer program. And, again, not to belabor the point, but we know from the

Court's construction that the first computer program must be a self-contained set of instructions that performs the task.

There can't be different groups of instructions that work together. Again, there can't be a mostly self-contained set of instructions. It has to be a self-contained set of instructions.

If there is no self-contained set of
instructions, there is no infringement. It's as simple as that. It's an easy question for you to ask yourself as you contemplate infringement.

You've seen all the evidence. You know, as a matter of undeniable fact, that in the Google products, there is no single container. Not one that contains the Smart Text Selection instructions, the intents handling instructions, and the app instructions for displaying the document. You need them all.

And if you need instructions from two different places, you know they're not self-contained. That's sort of the opposite of being self-contained.

Mr. Toki, Mr. Choc, Mr. Elbouchikhi explained to you why Google set it up this way, why they wanted to have separate instructions that could serve many apps, rather than a single program that had one tool that was specific to that one particular program. Google wanted

Approach 2. They wanted to keep theirs separate.
There is a broader point that I'd like you to think about as you're deliberating as well. Google brought here, for trial, the engineers and the product manager who actually were responsible for building this product, the way they designed it, the way they implemented it, when they launched it, and why they launched when they did.

And we brought them here so they could explain to you the technical details of the actual product, and when it exactly launched.

Arendi asked Google's witnesses very few questions about the technical details of the product. And they certainly did not want to get the accurate information about when it became available to users. Instead, Arendi spent a lot of its time asking the engineers about legal issues.

And admittedly, as engineers, they are not lawyers. They don't know about the patent issues. That's not their role at Google. They were here to answer questions about how they built the product. Why did they design it the way they did? Why did they make the instructions separate?

So when Arendi tells you that they also wanted to look under the hood, I'll ask you whether that rings work or not.

Ultimately, Arendi and its expert tried to
confuse the issues and obscure the basic facts of how things work. So let's look at how and why that is.

First, they tried to suggest because the apps use what's called a "TextView" to display the text -- and as we know, the TextView had the Smart Text Selection functionality that was part of it -- that somehow that caused the instructions for Smart Text Selection to be pulled into the app. That it was -- essentially, they became part of the app, I think was the word that their expert used, when they were running.

You may recall that an effort to cause some confusion about this, they tried to show Mr. Toki a black and white version of this colored diagram that he had discussed, to suggest, oh, the TextView is running inside the app.

But Mr. Toki quickly had corrected them on that and said, if you look at the colored version, what you see is that the TextView is blue because it's part of the framework code, and it's running at the same time as the app, but it doesn't become a part of the app.

There's no magical cutting and pasting of the
didn't have to make any special arrangements in their app to pull it up. It would be operational because it was part of the operating system. It works with every app; developers don't have to build it into their own app.

Now, the second way that Arendi, I think, still tried to confuse issues is, even though they said they weren't, they and their expert consistently tried to get you to look at just what the user sees. How many videos and screenshots did we see from Dr. Smedley in his five hours showing what the user sees on the device? A lot.

And why? We've already talked about the fact that what the user sees doesn't tell you anything about what's under the hood; we all agree with that. The critical question is, what instructions are causing these things to happen, not what happens on the screen. And we know where those instructions are.

Arendi and its expert finally suddenly suggest that you can ignore the requirements that there be a self-contained set of instructions because they point to the fact that Smart Text Selection runs at the same time as the app.

Arendi does this by pointing to Mr. Elbouchikhi's testimony about his view of what happens when the apps are running at the same time. Now, set aside the fact that Arendi started its questioning of

Filed 08 \({ }_{1} \mid \underset{\text { Smart text selection instructions that causes those to be }}{21 / 23}\) Page 725 of 775 PageID \#: 61304 pulled into every app every time it's running. That's just not the way it operates.

And Mr. Toki explained to you that TextView is also in the framework. And he used the colored diagram to explain that it's the same color precisely because it never becomes a part of the app.

And please remember, TextView is not Smart Text Selection. TextView is the window that is displaying your text. Smart Text Selection is essentially made a part of the TextView, and as Mr. Toki told you, that means that developers don't have to do anything, nothing, to get Smart Text Selection to work on their apps. They just have to go ahead and use a Text View and Smart Text Selection would be operational on it.

But all apps were using TextViews even before Android 8 or 9, and if you used it on an Android 7, you wouldn't have Smart Text Selection because Smart Text Selection wasn't in that Android framework.

How can Arendi honestly suggest that the apps are somehow making a specific call-out to Smart Text Selection to pull it into the app, when they don't even call out to Smart Text Selection. They use TextView.

And as Mr. Toki -- he created Smart Text
Selection so that it would be separate, so the developers

Mr. Elbouchikhi by saying he was not a source code guy. I think they said he was the commerce guy because he was the guy in charge of deciding when the product would be launched and under what circumstances it would be launched.

Set aside the fact that Arendi didn't really want to focus on Dr. Rinard's testimony, who made clear that, in actuality, when the app and Smart Text Selection are running at the same time, there's transfer in and transfer out of information because they are not running together, they are not actually run set of code, they're two sets of code that are running alongside each other and they have to communicate with each other. That's certainly true.

But ultimately, Arendi's emphasis on this point is nothing more than a distraction, and the reason is, the critical question in the claims is, is there a container? Is there a single container that does all three things: Display the document, set up the input device, receive the user command? Even if you could say that they were running together and that somehow made them interact at that moment in time when they are setting up the input device, that, first, wouldn't create a container that they would be part of.

And second of all, it wouldn't tell you that

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they did anything on the intents handling part because the intents handing part runs separately. There is not a single container that does all three of the required things, even if they try to convince you that they're running at the same time. And, yes, they run at the same time. That's why you get a menu bar that appears while you are working in the document. But that doesn't mean that the instructions are all in the same place.

And let's be honest, Arendi didn't even try to identify a container for you. Right? They tried to say, "Well, they run at the same time. They interact with each other. They communicate with each other." But did they ever say, "Here's the container. Look at this container. It's in here that all the instructions are?" No, because they can't. It doesn't exist.

We know the instructions for the Smart Text Selection and Intents handling are in the framework. We know the app code is in the APK. They're not in the same container.

So ultimately, we know that the actual evidence indicates that Google does not practice providing an input device configured by the first computer program.

Now, there's one more element that is, again, the third part of what the first computer program needs to do. And that's in consequence of receipt by the first
involved in Intents handling that are in the operating system framework, and Dr. Rinard and Mr. Choc confirmed that a receipt of the user command by the app, by the instructions that are in the APK, don't cause anything to happen. The only way they cause something to happen is if the Intents handling system in the operating system takes that intent, does something with it, sends it to another program, and then the other program makes a decision about what to do with it.

Mr. Choc explained why Google doesn't want to place the instructions for this into any individual app precisely because you want to give users choice. You don't want to give the app control over what other programs might be able to run.

And even Mr. Smedley accidentally confirmed that it's coded from the framework rather than coded from the app that is involved in Intents handling. You might remember this slide on the bottom right, which Dr. Smedley had titled "Google's Public Source Code for Chromium," but in fact, as Mr. Choc, who is the director of engineering for Chrome, confirmed, this is actually code from the framework. This is not code from inside Chromium.

Ultimately, there really is no dispute that the Intents handling instructions are in the operating system; they're not in the app. So when we look under the hood,
computer program of the user command from the input device, causing a search for the search term.

I'm not going to belabor this because we've talked about it a lot, but you've seen the Google documents showing that Intents handling instructions are in the operating system -- you can see the purple box here -- and those are responsible for receiving and processing any user command that comes through the STS menu bar.

And the Intents handling instructions are ultimately responsible for deciding what's activity \(B\), what second program might get that intent. And then that second program is the one that will decide, is a search going to be performed, or am I going to be opening a phone dialer, or what's going to happen? The app, which starts at activity A, has no idea where that Intent is going to go, how it is going to be processed, or what the end result is going to ultimately be. It doesn't know, is there going to be a searched performed or not a search performed by the program that eventually receives it.

You heard from Mr. Toki that the Intents
handling instructions are deliberately placed in the operating system framework precisely so they can be used to service every different app that wants to use them.

Dr. Rinard took you through the instruction
really look under the hood, it's clear that Google products simply don't have a self-contained set of instructions that do the three things that are required for the first computer program; and, therefore, Google does not infringe.

No matter how hard Arendi tries to twist the facts, get you to think about them in a different or confusing way, the simple truth is that Google adopted Approach 2 in designing its products. It separated the instructions so they could be used by many different apps, not just one.

It's the complete opposite of Approach 1. To give you the -- to bring you back to the example I used in the opening, it's kind of the difference between a restaurant that has a central kitchen where the central kitchen is making food for all of the different tables, or the Benihana restaurant of the world, where you have a cooktop at the individual table. At the end of the day, each diner get food on their plate, but the way it gets there, the design of the restaurant is completely different, as anybody who's seen the Onion Volcano before knows, it's a different thing when the cooktop is at the table than when you're dealing with a central kitchen that is serving all the different tables at once.

And again, if you had any doubt that Google is

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using Approach 2, just remember, there's 12 different apps in this case, but they're only pointing to one group of instructions for Smart Text Selection in the framework and another group of instructions in the framework for Intents handling. That's because Intents handling and Smart Text Selection serve all the different apps.

And please remember that Arendi bears the burden of proof on infringement. They have to prove to you that Google practices every one of those elements of the claim. If any one of them is missing or if Arendi has not proven to you that the Google is practicing those elements, there is no infringement.

So this is what the question you're going to be asked on the verdict form: Did Arendi prove by a preponderance of the evidence that Google directly infringed any of the following claims of the ' 843 Patent?

Based on all the evidence you've heard over the past week, you can confidently check "no." Remember that Google can't infringe Claim 30 if it doesn't first infringe Claim 23 because Claim 30 depends on Claim 23. It has to have all of the same elements that are part of it, and you know that Google does not have a self-contained set of instructions.

Of course, there's one more major problem with the Arendi's claim in the case. As you've now seen, in
video, sometimes this happens because the patent examiner has incorrect information for some reason, or it just didn't know all of the relevant information.

Remember that the process of getting a patent is one that only the applicant, who in this case was Mr. Hedloy, and the patent on office are involved with. Nobody else can be involved in that process. Google certainly couldn't be involved in that process.

So the patent understandably -- Patent Office, understandably, relies heavily on the information and the arguments they're getting from the applicant. That's how they evaluate is there an invention here? Is there not an invention here? And it's precisely because of the possibility that the Patent Office might issue a patent on the basis of something incorrect that litigants who are being accused of infringement, like Google, are allowed to come to you with the full group of evidence and ask you to make an evaluation as to whether the patent should have been issued in the first place.

During opening, and then just in closing again, Arendi made a big show about the fact that there are some written materials about CyberDesk and Apple Data Detectors that were closed to the Patent Office. And that's a hundred percent right. The problem is, Arendi wanted you to believe that the Patent Office had everything it needed
order to make the infringement claim against the Google products, Arendi must argue that the first computer program elements are broad enough to cover the Smart Text Selection code and the Intents handling code that are in the operating system. It has to be. They have to say the first computer program is that broad.

But if Arendi is right in that litigation position, if the claim elements can really be covered -can be included in a first computer program even though the instructions for Smart Text Selection and Intents handling are in the operating system, then Arendi's arguments to get the patent in the first instance are flat wrong.

If Arendi is right, that you can disregard the features in the operating system because they all work together, which seems to be their current assertion, then CyberDesk and Apple Data Detectors did exactly the same thing. They did it years before any patent application was filed. And the patent can't possibly be valid.

Let's start by making sure that we all, again, understand what's involved with patent invalidity. As you heard in the Federal Judicial Center patent video, in what seems like many moons ago at this point, sometimes the Patent Office issues a patent because it claims something that is not really new and not obvious. As stated in the 1598 to know about those systems as a result of just getting those publications. But you know now that is not true, and there's two reasons why.

The first is that the Patent Office did not know of Arendi's current litigation position. As you're aware -- and we looked through this and we'll look at it again -- Arendi clearly and very explicitly told the Patent Office that CyberDesk and Apple Data Detectors were different from its claimed invention because they used instructions that were separate from what set up the input device, and they were -- it used instructions that were in the operating system. That's what they told the Patent office.

You'll start by recalling this submission that was made by Arendi to the examiner of the ' 843 patent. This is actually part of the file history for the ' 843 patent. And the applicant, Mr. Hedloy, pointed the ' 843 examiner to what's called the AESD. He said, "The prior art references analyzed in the accelerated examination support document are of particular interest in relation to the present application." He wanted the examiner to look at that AESD.

Then what did he say in the AESD? Well, about CyberDesk, he said that CyberDesk is separate from the document editing program. That was the distinction that
was made. CyberDesk is separate, and you need them to be together. More explicitly about Apple Data Detectors, once again, he cited to the same claim limitation that we're dealing with here: "ADD does not disclose providing an input device configured by the document editing program as required by the claims."

Why? Because Mr. Hedloy said ADD is a part of the operating system. And as part of the operating system, it's separate from the document editing program. That was the position in front of the Patent Office to get the patent issued.

But now, you know something that the Patent Office didn't know. Then, Mr. Hedloy was very clear that he covered Approach 1 but not Approach 2. That's how he got the patent issued. He said about Approach 2 through Apple Data Detectors and CyberDesk, those are separate. If you put the code in the operating system, it's separate. If you use the CyberDesk tool, it's separate. But now, when it comes to Google's products, which also put the code in the operating system, which also used code that is separate, he says, "Well, now the patent covers any approach. Approach 1 or Approach 2." Because without saying that, Google's products are not covered by the claims. So instead, what he's now saying is, "My patent covers both." And, therefore, what we know

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> for a fact is that it also covers Apple Data Detectors and it also covers CyberDesk, because the distinction that Mr. Hedloy made no longer holds up if it covers both approaches.

> And additionally, the other reason that the Patent Office did not have all the correct and full information is that it had limited information about the CyberDesk system and the Apple Data Detectors system. As to CyberDesk, we know the patent examiner was presented with some printed publications; that is true. But the examiner did not have a chance to consider, and there's no evidence that he considered, the Georgia Tech website and all the materials that are on that, including some code snapshots when you look at the website, which is in evidence.

> And the Patent Office certainly did not have the extensive information provided by Dr. Dey, who actually was the person who created it and displayed it and presented it at a variety of conferences. Dr. Dey told about many public demonstrations of features that you can't tell from the publications alone.

> Features like the ability of CyberDesk to
> retrieve a map for a given address. When you go to the website and you look at all of the network services that were available in CyberDesk, there are four entries for
retrieving a map for a street address. Interestingly, that's just like they're accusing now of us using a street address to look up a map in Google Maps. It's the same functionality, and it was disclosed by CyberDesk two years before Mr. Hedloy filed his application.

The network services that are on the website also looking -- include look up things that are not contact information: Look up a definition, look up an interesting event in history, look up a definition of a selected word.

That's similar to what they are accusing now of Google with flight numbers. They're saying you can identify a flight number and look that up to see what the status of the flight number. But that kind of search was already disclosed by CyberDesk two years before.

You are the first people ever to hear and be able to consider the validity of the ' 843 Patent in light of all the information about the CyberDesk system. The Patent Office did not have all of that.

The same is true for Apple Data Detectors. We know the patent examiner had some printed publications; that is true. But unlike you, the Patent Office did not have the testimony of James Miller, who actually designed the program, and who explained at length how the program actually worked, how developers could actually build their
own pattern matching so that Apple Data Detectors could match with any kind of pattern it wanted to.

More importantly, the Patent Office certainly did not have the Macworld videos in front of it like this from January of 1997 before Mr. Hedloy filed his first US patent application. And because it's a piece of evidence in the case that really is important to answer the core question, I'd like us to take a moment and actually rewatch that two minute.
(Video played.)
MR. UNIKEL: That video was not before the Patent Office. Those examples of all that Apple Data Detectors could do was not in front of the Patent Office. The write-a-letter demonstration was not in front of the Patent Office. And you can see that what's displayed here is the result of the write-a-letter feature from Apple Data Detectors. It results in the exact same sort of document, ready to go letter, that Mr. Hedloy said was the principal advantage of the OneButton contact manager.

You are the first people to hear all of this information about the Apple Data Detectors system, especially in connection with evaluating the ' 843 Patent. You are the only people to have the information that the Patent Office did not have about the full details of the CyberDesk system, the full details of Apple Data Detectors
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its patent claims in this litigation. In particular, its notion that it doesn't matter if you put instructions in the operating system because it all works together.

If you ultimately agree with Arendi's new litigation position that the claims cover both Approach 1 and Approach 2, instructions in the operating system because it all works together, then there is no question that Apple Data Detectors system and the CyberDesk system taught all of those things.

Yesterday morning, Dr. Fox took you through the claims element by element and showed you where each of those elements was met. And I'm going to short-circuit this by saying the one thing that their expert said was missing from the CyberDesk, the one thing was that it wasn't working on an editable document. That was the one thing. We see in the top left in just this screen shot, that there is an e-mail. Their expert presumed that because it was called "mail reader," that it wasn't editable.

But we know from Dr. Dey, who testified, that he actually -- he did come up with a version of CyberDesk that he would demonstrate that allowed you to insert the information back into the text as a text editor. You know from Dr. Dey that he also provided a prompt for updating which is the one thing that's added by Claim 30.

So the reality is, is the one thing that their expert said is missing, that the document isn't editable, the actual person who devised the system, who practiced the system, who demonstrated the system at demo days and conferences told you that his -- Dr. Sacerdoti's assumption was wrong. It was not just a reader. You could also edit the text, and it would work on any kind of document.

Arendi just -- at the end of the day, Arendi can't have it both ways, ladies and gentlemen. For infringement, Arendi want to say that the patent covers the use of Smart Text Selection and Intents handling instructions that are in the operating system.

But to save its patent from invalidity, Arendi suggests to you that CyberDesk and Apple Data Detectors were different because they put their instructions in the operating system and they were separate. You can't have both.

Simply put, if you accept Arendi's litigation position on infringement, that the claims can cover the use of instructions for Intents handling and Smart Text Selection in the operating system, then the argument that they made to get the patent doesn't hold up anymore. And

Apple Data Detectors and CyberDesk did it first. They did the years before Mr. Hedloy filed his application. Because there's not a single element that's missing from CyberDesk once you pierce this notion that it was somehow separate from the system. Arendi can't have it both ways.

Dr. Fox took you through every claim element and explained to you how, if you accept Mr. Smedley's theory, every element is unquestionably shown by clear and convincing evidence.

The ' 843 Patent claims, though, are unquestionably obvious, even if you're not sure that they -- that CyberDesk teaches every element based on CyberDesk plus ADD. And here's the reason why. There's only one thing that their expert told you was missing. That's the use of an editable document.

Well, you just saw the demonstration of Apple Data Detectors that taught. You could do a write-a-letter shortcut. You could use your text edit and insert information back into the document. Given what Dr. Dey testified, that CyberDesk was -- you could add multiple different kinds of shortcuts, multiple different kinds of activities, it would have been an obvious addition to the shortcuts of CyberDesk to just say, "Just add the write-a-letter feature."

Instead of just reading an e-mail, if you're
not sure it was editable, add the editability feature so you can use CyberDesk on an e-mail that you're drafting, not just one that you're reading. This was not a big leap of technology to add that to CyberDesk.

And, in fact, we know that people who were using CyberDesk were being pointed to Apple Data Detectors for learnings. In fact, on the website for CyberDesk, there's actually links to the Apple Data Detectors site. And Jim Miller, who you saw the testimony from, actually came to demo days for CyberDesk and he and Dr. Dey would talk and share ideas.

So as Dr. Fox took you through, if there's any elements that we're missing in your mind from CyberDesk, and in particular the one element that their expert said was missing on editable document, that would have been obvious by combining CyberDesk and Apple Data Detectors.

Lastly, we have the Microsoft Word plus CyberDesk and ADD. Dr. Fox explained to you that, regardless of Arendi's litigation position on infringement, the ' 843 claims were obvious because you could have added any of these shortcut features to Microsoft Word.

Recall that Mr. Hedloy testified himself that he created the OneButton product using the very simple Visual Basic for Applications language. He admitted that

1 it was easy to create the so-called macro inside of
2 Microsoft Word, and he said that any person of skill in
the art would have known how to do it at the time. That was his testimony. That's why he didn't provide detailed instructions in the patent about how you could build this kind of thing for Microsoft Word.

Arendi's expert, Mr. Sacerdoti, yesterday,
agreed, if you'll recall, that it would have been natural and easy for a person of skill in the art to create a shortcut tool inside of Microsoft Word. And, in fact, you might remember this memo that Mr. Hedloy sent to an investor the day before he filed his patent application in Norway where he wrote to the investor, "The invention is that it is so easy and obvious."

It did not require much of a stretch for Dr. Fox to explain that, just as it was easy and obvious for Mr. Hedloy to add this to Microsoft Word in 1998, it would not have been difficult, once you knew the shortcuts of CyberDesk or you knew the shortcuts of Microsoft Word, to add similar shortcuts into Microsoft Word -- I'm sorry. Between CyberDesk and Apple Data Detectors, if you knew those shortcuts, it would not take too much effort to put them into Microsoft Word just as Mr. Hedloy did.

As to the OneButton product that Mr. Hedloy put into Microsoft Word, you'll recall that he indicated that
their litigation position, that the difference between code in the operating system and the app code doesn't make a difference because it all works together.

And you've seen that even if you're not sure whether CyberDesk worked on an editable document or not, despite the fact that Dr. Dey told you that he had demonstrated that, it would have been obvious to add that functionality through -- from Apple Data Detectors.

It's up to you to determine whether Arendi can run away from the very arguments that it made to the Patent Office to get the patent issued. And it's ultimately up to you to compare what Arendi did put in its patent with the prior art. And please ask yourselves again, what exactly did Arendi invent?

Obviously, Arendi has asked you to consider the right amount of damages in the case as well. In fact, I think it's fair to say Arendi spent a vast majority of its time over the past week delving less into the specifics of the technology, and more into how much it thinks Google should pay.

Arendi doesn't mention the fact that before it filed this lawsuit, it never bothered to reach out to Google to identify the patents. Not a phone call, not a letter, nothing.

It's not -- perhaps it's not surprising because

1 product couldn't detect phone numbers or act on them, they 2 couldn't detect or act on e-mail addresses, it could not
pull up a map for a street address.
But CyberDesk had all of those things available
to it. Apple Data Detectors had all of those things that were suggested.

So taking even just the suggestions from
CyberDesk and Apple Data Detectors and implementing them in Microsoft Word, as Mr. Hedloy did for a name, would not have been a difficult stretch.

Ladies and gentlemen, you are the first and only people to consider the ' 843 Patent with all of this information.

When you see the questions on the verdict form, you will see there's a Question 2: Did Google prove, by clear and convincing evidence, that any of the following claims of the ' 843 Patent are invalid as anticipated by the prior art, CyberDesk in particular;

And Question 3: Did Google prove, by clear and convincing evidence, that any of the following claims of the ' 843 Patent are invalid as obvious in view of the prior art?

You can confidently answer those questions
"yes" because you've seen that CyberDesk, in particular, taught everything, everything, especially if you accept 1610
we know that after Arendi stopped making any products in 2000, its business became all about managing and exploiting patents. But the lawsuit certainly came as a surprise to Google.

I think you've seen, over the past week, that Google genuinely and fervently believes that it took a different approach than what is claimed in the patent. That it used the Approach Number 2 which separated the instructions from the apps so that every app could use it, which is the opposite of what was claimed in the patent. This belief was cemented by Arendi's own statements to the Patent Office about Apple Data Detectors and CyberDesk.

There's not a shred of evidence, not a shred that we somehow developed our products with Arendi's patent or products in mind. In fact, the engineers all told you that they built these things from scratch using their own hard work and technology, and that none of them were aware of Arendi, Arendi's technology, or the OneButton Contact Manager.

Ladies and gentlemen, Google has stood up for its convictions in this lawsuit, rather than just settling like other companies did to avoid the expense and uncertainty of a trial because Google does believe that if you build the technology yourself, if you put in the hard work, if you go your own technological direction, that you
shouldn't have to give in just because trials are expensive and uncertain.

Google went an entirely different way. We went with an entirely different technological approach. And we're relying on you and the process to show that we were right.

Which, unfortunately, leads me back to damages. The reality is, you've heard, if you think Google doesn't infringe, or if you think the patent is invalid, you don't even have to think about damages. That will end the case, and damages will become something you don't even have to consider.

But if you do bother to think about damages, now that you've heard all the evidence, please ask yourself, how much Google really would have paid, how much they value a technology that went in an opposite direction of the one that they wanted.

As I mentioned a week ago, it's kind of like asking how much somebody would pay to drive on a road that they didn't want to drive on and never did drive on. Doesn't make any sense

But you've now heard that Arendi is asking for more than \(\$ 45\) million as a reasonable royalty for the period from December 2017, when users were first able to use Smart Text Selection, until November 10, 2018, when

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And by the way, think about one thing. They're
trying to justify a four-times multiplier because
Mr. Hedloy thought that there was a 25 percent chance that

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the patent expired. It's a period of 11 months. Arendi's asking for \(\$ 45\) million for this, for 11 months.

To recap the evidence as to why this demand makes no sense, and is completely untethered from the facts, let's start with, perhaps, the most misleading thing you've been told by Arendi in the entire trial.

In its opening argument with you a week ago, Arendi told you the following: You will hear that Apple and Samsung and Microsoft all paid because they had used or wanted the right to use the asserted patent.

Well, you know now, because you've seen the agreements, and I'm going to give you some slides that show the recitals from those agreements, that this statement was false.

In every one of those agreements, the companies acknowledged that they thought the patents were invalid, that there was no infringement by them, and that they were settling to avoid the uncertainty and expense of litigation. And every one of those \(\square\)

\section*{\(\square \square\)}

If I may, may I ask that the slides be handed to the jury.

For confidentiality reasons, we have to do it this way, rather than publishing them.
he would win the cases. He thought that the likelihood was that he was going to lose the cases, which would have resulted potentially in the invalidity of the patents or findings of infringement. Rather than potentially lose the cases, he and the other parties, they settled those cases.

Mr. Hedloy says that entitles him to four times the amount that was paid against Google, but ignore the fact that the odds were that, according to him, he was likely going to lose those cases.

Does that indicate that the parties to those agreements thought that the patents were valid, wanted the technology from those patents? It does not.

The other thing that we know is that the patents -- \(\square\) And so the notion that it's the ' 843 Patent that accounted for all of those payments -- \(\square\) - -- absolutely makes no sense.

And yet Mr. Weinstein used the entire amount of the settlement payments to calculate his per units as a starting point. He didn't take off anything from those for the other patents or for the settlement of the litigation.

And this is just the tip of the iceberg when it

Fil comes to the problems with the damages theory from Mr. Weinstein. And remember, the entire damages theory is based on Mr. Weinstein and what is his analysis.

But you've heard from Mr. Weinstein and
Mr. Kidder that there are some serious problems with his analysis. Let's start with, he used the wrong number of units.

First, he used August 21, 2017, as the starting date for when Smart Text Selection would have been available to users. But we know the absolute fact -- it's not an opinion. It's a fact, demonstrable fact, that you heard from all the engineers on, is that Smart Text Selection was not actually turned on for users until December 5th, 2017. And if -- that accounts, that difference, accounts for 149 million -- 149 million app downloads, and 900,000 million devices.

That is a problem with his counting.
They seem very bothered -- you'll notice, they talk about this representative product stipulation. The stipulation, when you read it, simply says you can treat the code that was downloaded onto an Android 8 device as representative so you can study the code and understand how it works.

Nowhere in that stipulation does it say, by the
way, we started this for customers in August 2017. We
information that Google gave. But the way that a litigation works is, we don't just, you know, open up and give them a billion documents that we have because there's litigation. They ask us for specific information. We respond to their specific requests, and give us what we specifically asked for. If they need something more, they come back to us and ask for it.

For whatever reason, what they asked for was total number of downloads, total number of installs. We provided that.

Apparently Mr. Weinstein used it under the assumption that that was for ever -- that was only for 8 and 9. That was incorrect assumption. But he never asked us for more information. Had he asked us for that information, we could have tried to provide it.

What he used and what they asked for was information that does not correlate the downloads to any operating system. So we know there's a massive overcounting, but Mr. Weinstein didn't do anything to fix it.

Next, Mr. Weinstein included a four-times multiplier. He took the actual effective rate that he thought Apple, Samsung, Microsoft applied and he said multiply it by four. Based on what?

Based on his conversations with Mr. Hedloy,
didn't. We couldn't say that. We know that when it was turned on, that code, was December 5th, 2017.

Arendi doesn't like the reality, but that's what the evidence is. And this alone accounts for a massive overcounting on the part of Mr . Weinstein. Next, Mr. Weinstein fails to account for the time it took to roll out distribution of Android 8 and 9, which everyone agrees at this point, that 8 and 9 are the operating systems that you have to have on the device for there to be infringement. If you can't say that an app was downloaded to an Android 8 or Android 9 device, if it went to a 7 or a 6, then there can't possibly be infringement. So there has to be some attribution to say, yeah, you downloaded it to right devices.

But you heard from the Google witnesses that because of the amount of time, even after you release O-MR1 in December of 2017, it takes a while for the carriers and for the other device manufacturers to approve that so it actually gets download -- could even be downloadable to devices. That process takes a minimum of three to six months. And according to Mr. Choc, it might not ever happen for some pockets of devices. But
Mr. Weinstein didn't account for that. Now, they say, well, he was just relying on the
who's Arendi. That's it. That's the only reason he said you should multiply by four. That is about as flimsy a basis to say Google should pay four times the right damage amount as \(I\) can conceive of.


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what came before, and you would decrease because Linkify and Smart Linkify were available at the time.

And so he told you that the right number would be \(\$ 500,000\), which makes a significant more amount of sense given what we're talking about as to the advance that they're claiming, the available alternatives, and the amount of time.

But, again, you don't even have to get to damages. You don't even have to think about all of this if you decide that Google is not infringing or that the patent is invalid.

In the end, ladies and gentlemen, you've seen the evidence that I think now, at the end, allows you to answer this question. What exactly did Arendi invent?

I'm confident that you've seen that while Mr. Hedloy might have been very excited about the OneButton Contact Manager product, he didn't really invent anything.

Had the Patent Office known everything you know about the current litigation positions, about the full features of CyberDesk, about the full features of Apple Data Detectors, it's not -- it's likely that the patent would not have issued in the first place. But you now have the ability to consider it from scratch in light of all the information.

More importantly, I'm confident that you now see that Arendi, in its patent claims, required a self-contained set of instructions that did three things. There is no container, and there's certainly no container that includes the code that does all three things.

Their patent covers Approach 1, which was
already a known approach. We went with Approach 2. We went with a system that separated the code so it could be used by all the apps, including the 12 apps that they're accusing in this case.

If Arendi invented anything, it was to use the first computer program to do the three things. That is an approach that Google went the entirely opposite way on.

Arendi went one way; Google went the other way.
They went left; we went right.
It's now up to you to answer the critical
questions in the case based on the evidence that you've heard, based on the direct testimony you heard about the technology from the Google engineers. And I ask that based on the evidence, you answer those questions in favor of Google.

Thank you very much for all your time and
attention. I know it's been a long week. Thank you.
THE COURT: Thank you.
Ms. Garfinkel, I'm going to have you collect
nothing in the claims or in the construction offered by the Court about storage, about source code. It speaks in terms of instructions to execute and perform a task.

And here, it is undisputed that the task to be performed, to be enabling that Smart Text Selection technology, requires the code -- the execution to perform that task. That is what we're focused on.

And Mr. Toki -- pardon me, Mr. Elbouchikhi, his testimony on this is also clear. It is undisputed. He said that those instructions have to join and do join together to perform the task that we're here about.

And, Mr. Boles, if you can bring up Mr. Elbouchikhi's testimony again. Slide 17.

Dr. Rinard, he actually tried to walk back Mr. Elbouchikhi's testimony. And you saw it. And they have no response, they have no response for their own documents that say the Android framework code runs inside an apps process, which is consistent with the Court's full definition. Not choosing the words and saying that there's a container. "I heard the reference to a container" appears nowhere in the claims.

Now, Dr. Rinard, he tried to walk back what Mr. Elbouchikhi said. He said that he preferred his characterization as a transfer in and a transfer out. But his characterization doesn't control over the admission of

And I would submit to you, this is one of those situations where you need to look closely at the words, because every time Dr. Rinard and Google have been up here showing you the Court's construction, they have focused on a portion of the claim term.

And we already know, because Dr. Rinard
indicated when asked, well, is the application a computer program? He didn't answer the question because he knows that it is.

If you read the entirety of the Court's
construction, it plainly is a computer program. Those are the applications in this case. That is exactly how the systems are designed. And it is exactly consistent with Arendi's patent.

Now, you heard what I also expected to happen, which is this argument that, well, if the Arendi patent happens to cover the way Google does it, then it's also invalid. Heads, I win; tails, you lose.

Google told you that there were things that you saw that were not before the Patent Office. What are those things?

The video from Macworld, everything captured there were in papers that were before the Patent Office. And the implication from Google is that somehow
atent.
Mr. Boles, if we can go back to our original
slide on that.
It was different. Last week, the -- last week the prior art that we're now relying on had nothing to do with the patent claims. It was different. This week, we're told that the CyberDesk reads on every element of the patent claims. Which is it?

When Google wants to avoid the ability to find that its claims -- the claims have been infringed as to its systems, it then tells you that that automatically means that these claims have been -- that are now invalidated.

What Google said last week was that those systems, CyberDesk and Apple Data Detectors, they don't practice the claims because they did it with separate instructions rather than the self-contained instructions that are required by the claims.

Again, I urge you to consider why these positions shift day to day in the course of a week. CyberDesk, Apple Data Detectors, Microsoft Word heavily vetted before the Patent Office, and it is Google's burden by clear and convincing evidence to show you that there is something new there that is going to disclose every element of the patent claims in order to invalidate this
nobody, in all of these years of litigation, has been able to raise issues as to the invalidity or validity of the ' 843 Patent. That this is the first time these issues are being raised is just wrong.

The Patent Office had before it -- they can't point to one thing that is new before you. Because of a video that shown in Macworld? Well, all of these individuals -- Mr. Dey, Mr. Miller -- they put their best foot forward in their printed publications.

Google counsel said, well, the patent examiners didn't have before it the CyberDesk website. Well, you know that's not the case. It was referenced in the papers that went before the patent examiner.

I understand that they're here arguing that you have a chance to do something new. But they have not given you one thing that is different above and beyond what the Patent Office had before it when it spent years rendering this decision, one thing that's new from the dozen years since that time when other parties have been able to contest the validity of the patent too. And they can't.

And I bring you back to where we started a week ago. Because a week ago, as you'll recall, Google took the position that the approach done by Apple Data Detectors and CyberDesk was different than the Arendi
patent. They can't do that. They can't tell you what is different.

They spoke about OneButton. That is another distraction. We're not here about whether or not we should compare OneButton to the -- Apple's or to Google's or Microsoft's or Samsung's programs and devices. We are here as to whether Google's applications practice the claims, not whether they can be compared to OneButton.

And you heard repeated reference to OneButton as a way to try to limit what these claims are about. It's improper. And Google tried to suggest the fact that there isn't OneButton system available anymore that's the same as the fact that the CyberDesk system is not available anymore? Those are two separate things. Arendi is not here asserting that somebody copied OneButton. It's here asserting that somebody has practiced its patent claims.

But Google, Google is here asserting that the CyberDesk system that it cannot show you, that it cannot tell you why it's different from any of the art before the Patent Office, it's here to prove that to you, and that system is completely unavailable to it.

Now, I want to come back to this issue about the motivation to combine. It is critical. Our expert explained to you, you just pull different pieces together
and say, "Oh, somebody would have come up with that." Google offered no evidence of how these combinations would possibly be used in order to invalidate the patent. It can't, and it's not going to do that for you.

In the end, what Google has said to you is, "We want to be able to escape liability in this case." Even though others have been found to use the patents.

And I've heard Google counsel say that we had somehow misrepresented what happened in those license agreements. We didn't. It's very clear that, on the face of those license agreements, the parties disputed invalidity and infringement. Of course they did. They settled. And that's exactly the reason that those license agreements undervalue the actual technology if two parties sat down to do a license agreement today, assuming the patents are valid and infringed, the value of those license agreements understate what was at issue.

But those parties had before it a massive amount of evidence. They had the patent prosecution history. Apple surely had the Macworld videos and ability to look at Apple Data Detectors, as did Samsung, as did Microsoft. They, Microsoft had the ability to analyze Microsoft Word. And what Google wants to you to believe, different from what it told you last week, all of this is somehow a new reason to invalidate the patent, a patent
ave stopped infringing? Or would they have done one of the things it could have done, which is to turn around and sue Arendi itself?

Google wants to make it sound like Arendi should have come forward, and it did give them notice by bringing a complaint in this case by identifying the products at issue. That is how it did so, and Google had years to remedy their infringement, to address their concern. Google tells you today, "Well, we believe we had a good faith understanding. We weren't infringing and the patent wasn't invalid."

They can't point to anything that demonstrates, when they launched their product in 2017, that they had undertaken that analysis and that they were confident when they brought this product out into their accused applications. It is a position that they're taking today, but one they cannot support from when they launched their product and were aware of it at this time -- google also.
the Court: Counsel, we need to wrap it up.
MS. SRINIVASAN: Google, finally, wants you to think about the revenue that was made by other companies. Companies and whether they had phones and tablets and other kind of devices. Google is a software company. The ability to enhance its application with functionality is critical to its business. I urge you to consider again
that has been -- stood the test of time and been through these litigations and through these years. It is simply not plausible, and their burden is extremely high to make that showing today.

I told you at the beginning about these clouds of concern, these dust-ups. And the definition the Court has given us must be followed and must be paid attention to, and their own expert concedes that their applications meet it. So don't be distracted by words that are not in the claim limitations. And don't be districted by Google's position that there is something new about a video or about a deposition or somebody describing something that are all contained in papers that the Patent Office examined extensively.

I heard Google counsel say --
THE COURT: Counsel.
MS. SRINIVASAN: That -- that they were not
approached before the litigation, that they -- nobody came to them and said, "I want to take a license. I want to talk to you about it."

Can we go to Slide 85, Mr. Boles.
Google's own corporate representative, what did
he say? What would Google have done if Arendi had gone to Google and said this was an area that they thought was of concern? Would Google have taken a license? Would they
whether it's plausible, whether it's common sense that they don't benefit in ways that are not reflected in the revenue that they have shared with you today. They draw comparisons to companies that have all kinds of other products, but as a software company that serves consumers and wants the best technology, is it worth it for them to spend a dime -- a dime -- per application to give their consumers a better experience for 48-cent per phone. Our expert has explained why that is absolutely the case to benefit from the ' 843 invention. Thank you.

THE COURT: Thank you.
Ladies and gentlemen. Let's just take a brief stretch. I just have a couple more things to tell you before I send you back. Feel free to stretch if you like.

MR. UNIKEL: May we stretch as well, Your
Honor?
THE COURT: Yes, please.
We're taking up just the final couple pages of instructions. It says Section~6, deliberation and verdict. It says Page 1. It follows just where we ended off.

Now let me finish up by explaining some things about your deliberation in the jury room and your possible verdicts.

Once you start deliberating, do not talk to the
about the case. If you have any questions or messages, you must write them down on a piece of paper, sign them, and then give them to the jury officer. The officer will give them to me, and I will respond as soon as I can. I may have to talk to the lawyers about what you've asked, so it may take some time to get back to you. Any questions or messages normally should be sent to me through your foreperson, who by custom of this court, is Juror Number 1.

One more thing about messages. Do not ever write down or tell anyone how you stand on your votes. For example, do not write down or tell anyone that you are split four to four or six to two or whatever your vote happens to be. That should stay secret until you are finished.

Your verdict must represent the considered
judgment of each juror. In order for you as a jury to return a verdict, it is necessary that each juror agree to the verdict. Your verdict must be unanimous.

It is your duty as jurors to consult with one another and to deliberate with a view towards reaching an agreement, if you can do so without violence to your individual judgment. Each of you must decide the case for yourself, but do so only after an impartial consideration

What the verdict shall be is your sole and exclusive duty and responsibility.

Now that all the evidence is in and the arguments are completed, you are free to talk about the case in the jury room. In fact, it is your duty to talk with each other about the evidence, and to make every reasonable effort you can to reach unanimous agreement. Talk with each other, listen carefully and respectfully to each other's views, and keep an open mind as you listen to what your fellow jurors have to say. Try your best to work out your differences. Do not hesitate to change your mind if you are convinced that other jurors are right and that your original position was wrong. But do not ever change your mind just because other jurors see things differently or just to get the case over with. In the end, your vote must be exactly that, your own vote. It is important for you to reach unanimous agreement, but only if you can do so honestly and in good conscience.

No one will be allowed to hear your discussions in the jury room, and no record will be made of what you say. So you should all feel free to speak your minds. Listen carefully to what the other jurors have to say, and then decide for yourself.

During your deliberations, you must not communicate with or provide any information to anyone by
erroneous. But do not surrender your honest conviction as to the weight or effect of evidence solely because of the opinion of your fellow jurors or for the purpose of returning a verdict. Remember at all times that you are not partisans. You are judges of the facts. Your sole interest is to seek the truth from the evidence in this case.

A form of verdict has been prepared for you. I will review it with you in a moment. You will take this form to the jury room, and when you have reached unanimous agreement as to your verdict, you will have your foreperson fill in, date, and sign the form. You will then return to the courtroom and my deputy will read aloud your verdict. Answer each question in the verdict form based on the facts as you find them to be following the instructions that the Court has given you on the law. Do not decide who you think should win this case and then answer the questions accordingly.

It is proper to add the caution that nothing said in these instructions and nothing in the form of a verdict is meant to suggest or convey in any way or manner any intimation as to what verdict I think you should find.
any means about this case. You may not use any electronic device or media such as telephone, cell phone, smartphone, iPhone, iPad, blackberry, tablet or computer, the Internet, any Internet service, any text or instant messaging service, any Internet chat room, blog, or website such a Facebook, LinkedIn, YouTube, Instagram, WeChat, WhatsApp, Snapchat, or Twitter to communicate to anyone any information about this case or to conduct any research about this case until I accept your verdict. In other words, you cannot talk to anyone on the phone, correspond with anyone, or electronically communicate with anyone about this case. You can only discuss the case in the jury room with your fellow jurors during deliberations.

> Of course, you may examine the various devices entered into evidence in this case -- just as you may examine other evidence from this case. But you should not use those devices to perform Internet research about this case or to communicate with anyone outside the jury room.

Let me finish by repeating something I said to you earlier. Nothing that I have said or done during this trial was meant to influence your decision in any way. You must decide the case yourselves based on the evidence presented.

Ms. Garfinkel, can we hand out the jury verdict

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the clerk: Yes, Your Honor.
THE COURT: I'm going to read it to you. It says, "Verdict form."

Instructions. When answering the following questions and completing this verdict form, please follow the directions provided and follow the jury instructions that you have been given. Your answer to each question must be unanimous. Some of the questions contain legal terms that are defined and explained in the jury
instructions. Please refer to the jury instructions if you are unsure about the meaning or usage of any legal term that appears in the questions below.

As used herein:
"Arendi" refers to Plaintiff Arendi S.A.R.L.;
"Google" refers to Defendant Google LLC. The "'843 Patent" refers to U.S. Patent
Number 7,917, 843 .
Question No. 1. Did Arendi prove, by a
preponderance of the evidence, that Google directly infringed any of the following claims of the 843 patent? "Yes" is a finding for Arendi.
"No" is a finding for Google.
And then it says Claim 23 and Claim 30.
Question 2. Did Google prove by clear and
"Yes" is a finding for Arendi.
"No" is a finding for Google.
You have now reached the end of the verdict
form, and you should review it to ensure that it entirely reflects your unanimous determinations. The foreperson should then sign the verdict form in the space below and notify the Court security officer you have reached a verdict.

The foreperson should retain possession of the verdict form and bring it to the courtroom with the jury.

I will now ask the courtroom security officer
to come forward.
Ms. Garfinkel, please administer the oath.
THE CLERK: Please raise your right hand.
(Courtroom security officer sworn.)
the clerk: Thank you.
THE COURT: At this time, you can retire to the jury room to deliberate. Your lunches are waiting for you there.
(The jury exits the courtroom at 1:45 pm.)
the court: Please be seated. I don't want to keep all of you from your lunches, so just make sure that we have numbers that we can reach you at if we have a question or if we get a verdict.

I want to discuss when we get back to make sure
convincing evidence that any of the following claims of the ' 843 patent are invalid as anticipated by prior art?
"Yes" is a finding in favor of Google.
"No" is a finding in favor of Arendi.
Then it says Claim 23 and Claim 30.
Question 3. Did Google prove by clear and
convincing evidence that any of the following claims of the ' 843 patent are invalid as obvious in view of prior art?
"Yes" is a finding in favor of Google.
"No" is a finding in favor of Arendi.
And it says claims 23 and 30 .
Instructions. Only answer Questions 4 and 5 if
you answered yes for any of the claims in Question 1 and answered no for any of those same claims in Question 2 and Question 3. Otherwise, skip and do not answer Questions 4 and 5, and instead, please proceed directly to the final page of this verdict form and sign and date that page.

Question 4. What amount of damages has Arendi proven by a preponderance of the evidence that it is entitled to as a reasonable royalty for Google's infringement of the ' 843 Patent?

Question 5. Did Arendi prove by a
preponderance of the evidence that Google's infringement
of any of the claims of the ' 843 Patent was willful?

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we're all on the same page about what we need to do regarding the sealing of the transcripts and/or the exhibits.

We will be in recess.
(Whereupon, a recess is taken.)

THE COURT: Please be seated. Thanks for your patience. I was in another hearing. I understand that we have a verdict.

Is everyone convened that needs to be here from plaintiff's side?

MS. SRINIVASAN: Yes, Your Honor.
the court: And how about from defendant's
side?
MR. UNIKEL: Yes, Your Honor.
THE COURT: All right. I'm going to ask the courtroom security officer to have the jury enter and assume their seats in the jury box.
(The jury enters the courtroom at 3:38 p.m.)

THE COURT: Please be seated. Welcome back, ladies and gentlemen of the jury.

Madam Foreperson, has the jury unanimously
agreed upon its verdict?
THE FOREPERSON: Yes, Your Honor.
the court: Okay. I'm going to have you hand that verdict form to Ms. Garfinkel to bring to me.

Ladies and gentlemen of the jury, your verdict will now be published; that is, read aloud in open court. I want to instruct you to pay close attention to the verdict as it is published. And after publication, I'm going to ask you, potentially, whether it represents the verdict in all respects. So please pay close attention. Ms. Garfinkel.
THE CLERK: Yes, Your Honor.
Question 1: Did Arendi prove by a
preponderance of the evidence that Google directly infringed any of the following claims of the ' 843 Patent?

Number Claim 23. Answer: No.
Claim 30. Answer: No.
Question 2: Did Google prove by clear and convincing evidence that any of the following claims of the ' 843 Patent are invalid as anticipated by prior art?

Claim 23. Answer: Yes.
Claim 30. Answer: Yes.
Question 3: Did Google prove by clear and
convincing evidence that any of the following claims of ' 843 Patent are invalid as obvious in view of prior art?

Claim 23. Answer: Yes.
Claim 30. Answer: Yes.

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the court: Okay. Any requests from plaintiff?
MS. SRINIVASAN: Yes, Your Honor, to poll the
jury, please.
THE COURT: Ms. Garfinkel, please poll the
jury.
THE CLERK: Yes, Your Honor.
Members of the jury, is this the verdict you
have agreed upon?
Juror Number 1, is this the verdict you have agreed upon?

JUROR: Yes.
THE CLERK: Juror Number 2, is this the verdict you have agreed upon?

JUROR: Yes.
THE CLERK: Juror Number 3, is this the verdict
you have agreed upon?
JUROR: Yes.
THE CLERK: Juror Number 4, is this the verdict you have agreed upon?

JUROR: Yes.
THE CLERK: Juror Number 5, is this the verdict you have agreed upon?

JUROR: Yes.
THE CLERK: Juror Number 6, is this the verdict you have agreed upon?

Where are we with proposing redactions to the transcript?

MS. SRINIVASAN: From our perspective, we don't have anything to redact. So it's not our confidential information --

THE COURT: Okay. Understood. Thank you.
MS. PALAPURA: Your Honor, on behalf of Google, we have a few small limited redactions on the main first transcript, and the portions that were discussing some confidential financial information of Google. So we will be happy to -- just finishing up those, and we will send it to the other side to see if they have any objections, and we will get a motion.
the court: Okay. Yep. And the motion should comply with the case law that I mentioned earlier. When do you think we'd be able to have that?

MS. PALAPURA: Yes. And I forgot to mention, there's also two exhibits. I think, PTX-36 and 37, if I'm not mistaken. So we'll just put all of that into one motion. We should be able to get that on file tomorrow.
the court: All right. Thank you very much.
And I see we have a representative from Apple here. Your motion is still pending. And we'll get that reviewed and ruled on.


Your Honor. Not for Arendi.
MR. UNIKEL: I don't believe so, Your Honor.
THE COURT: And if there are any outstanding issues with respect to post-trial briefing, to the extent there is any, if you could give me an update on the status on that by the end of the week. Just let me know what you're thinking is, and we'll expect to hear from you, and then we'll go on from there.

I have a recollection that we might have had an agreement about what the post-trial briefing would be, but it's in the pre-trial order. And I've got a big stack of papers now. They're bigger than the stack was at the beginning of last week.

So why don't you let me know where we are in that, if there's anything that the court needs to address.

MS. SRINIVASAN: Sure. We'll review it and
discuss with the other side.
THE COURT: I wanted to thank you all for your professionalism this week, and your skill in presenting the case. I was so impressed by, not only the outside counsel, but also the Delaware counsel.

I'm sure we've all had enough of each other,
but I could go on forever because it was a great, great pleasure watching you all. So I think we'll leave it at that.

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\hline apportionment [2] 1531/10 & 517/8 1517/15 & 1533/4 1534/14 1596/12 & \\
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\hline /8 1575/17 1576/7 & 1539/24 1544/9 1544/20 & & 9/5 \\
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\hline /14 1599/15 1599/22 & 1563/15 1565/2 1565/3 & 1524/10 1549/10 1550 & attorneys [3] 1506/4 1550 \\
\hline 1599/22 1599/22 1603/6 & 1565/24 1566/17 1567/19 & 1551/1 1551/25 1552/1 & 1645/16 \\
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\hline & & & \\
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\hline 1490/23 1495/13 1496/1 1496/12 1509/22 1509/23 &  & [2] 1513/9 1517/12 assessing [1] 1527/9 & 1493/4 1493/15 1493/1 \\
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\hline 1494/23 1496/13 1498/11 & 1498/9 1588/7 & 1489/14 149 & bottom [2] 1593/18 16 \\
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\hline 1541/25 1543/14 1547/5 & 149 & 21 1496/21 14971 & - \\
\hline 1551/15 1552/14 1552/18 & 1492/19 1496/5 1496/2 & 1504/24 1505/1 1505/16 & 1642/18 \\
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\hline 1594/13 1603/24 1605/19 & 1503/17 1506/12 1507/8 & 1551/17 1553/20 155 & 1541/15 1580 \\
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\hline base [2] 1556/6 1560/7 & 1536/9 1541/14 1544/3 & beneficiaries [2] 1482/9 & 1594/13 1626/12 1628/22 \\
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\] & 1551/9 1551/10 1551/11 & 1482/14 & 1641/10 1643/2 1645/19 \\
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\hline & 1627/4 1628/1 1628/19 & 1494/18 1495/12 1495/25 & 1559/19 \\
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\hline & 1602/5 1602/11 1605/2 & bigger [3] 1622/3 1622/21 & 1529/20 1530/3 1530/13 \\
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\hline 1589/2 1589/19 1590/2 & beginning [7] 1474/4 1502/20 1508/21 1512/7 1516/12 &  & \\
\hline 1590/10 1591/1 1591/14 & \[
\begin{aligned}
& 1508 / 211512 / 7 \\
& 1632 / 51648 / 13
\end{aligned}
\] & blog [1] 1638/5 & Iculate [2] 1526/15 1614/21 \\
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\hline 1595/20 1596/15 1596/24 & 1646/8 1647/4 & Boles [3] 1626/12 1629/2 & Calendar [2] 1525/16 1542/19 \\
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\hline 1603/19 1604/18 1605/3 & 1516/9 1517/5 1539/12 & 1482/24 1488/9 1496/20 & call-out [1] \\
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\hline 1609/25 1610/23 1611/1 & 1543/22 1578/19 1582/1 & 1514/16 1514/19 1517/ & 1509/18 1523/8 1524/15 \\
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\hline 1627/4 1627/7 1627/9 1628/6 & belabor [3] 1584/25 1592/3
1622/9 & 1603/6 1604/12 1604/20 & \[
\text { Is [1] } 1541 / 4
\] \\
\hline \[
\begin{aligned}
& \text { 1628/23 1629/16 1636/5 } \\
& 1637 / 14 \text { 1648/23 } \\
& \text { become [3] 1486/17 1587/24 }
\end{aligned}
\] & BELGAM [1] 1471/25 belief [1] 1610/11 & \[
\begin{aligned}
& 1603 / 6 \text { 1604/12 1604/20 } \\
& 1605 / 5 \\
& \text { bother [2] 1611/13 1619/19 }
\end{aligned}
\] & came [12] 1485/5 1494/3 1521/6 1540/19 1556/2 \\
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\end{tabular}
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\hline 1486/8 1486/10 1489/12 & 1538/5 1538/15 1539/2 & 1533/18 & 1545/16 1545/16 1545/16 \\
\hline 1490/5 1490/25 1492/6 & 1539/20 1539/23 1540/5 & character [1] 1528/23 & 1554/16 1555/1 157 \\
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\hline 1498/1 1498/6 1498/17 & 1543/16 1543/17 1544/5 & 1626/25 & 1595/20 1595/20 159 \\
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\hline 1615/22 1618/4 1621/3 & 1638/9 1638/12 1638/12 & 1560/10 1581/2 1593/21 & 1522/25 1523/3 1523/8 \\
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\hline 1624/4 1625/12 1627/20 & thing [35] 1488/5 1491/18 & 1598/2 1599/16 1602/12 & 1620/6 1623/2 1623/7 \\
\hline 1627/24 1629/23 1629/24 & 1495/11 1497/21 1498/1 & 1603/10 1603/13 1607/22 & 1624/22 1625/8 1627/4 \\
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\hline 1498/5 1498/17 1545/8 & 1604/3 1605/14 1607/6 & 1627/2 1627/12 1627/22 & 1618/3 1618/17 1622/3 \\
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\hline 1551/6 1555/23 1557/11 & 1614/14 1622/5 1628/6 & 1631/11 1631/13 1631/16 & tip [3] 1510/6 1510/8 1614/25 \\
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\hline 1587/25 1590/9 1591/23 & 1527/6 1534/24 1534/25 & 1560/5 1589/6 1596/9 & 1576/13 1631/15 1632/4 \\
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\hline 1624/4 1625/25 1626/20 & 1603/10 1608/4 1608/5 & 1612/16 1613/5 1613/11 & 1548/3 1549/11 1565/21 \\
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\hline /15 1484/15 1493/20 & 1479/25 1480/2 1480/7 & 1555/10 1556/10 1564/14 & 587/16 1587/20 1588/4 \\
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\hline 1547/14 1549/11 1550/8 & 1547/7 1553/15 1556/11 & 1566/19 1568/23 1580/11 & 1572/9 1572/23 1577/19 \\
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\hline 1575/11 1575/13 1575/14 & 1613/13 1613/23 1623/9 & 1580/25 & \[
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\] \\
\hline 1575/22 1576/3 1576/10 & 23/13 1633/21 1636/20 & & \\
\hline 1576/17 1577/14 1579/16 & 636/25 1646/17 1646/19 & throwing [1] 1556 & Tomhannock [1] 1476/12 \\
\hline 1583/6 1583/18 1589/14 & 1636/25 1646/17 1646/19 & throwing [1] 1556/4 & Tomhannock [1] 1476/12 \\
\hline 1606/21 1610/16 1614/18 & 1647/15 1648/24 & thus [2] 1509/1 1514/4 & tomorrow \\
\hline 1620/2 1620/21 1620/24 & thinking [4] 1478/1 1535/20 1536/8 1648/7 & \[
\begin{aligned}
& \text { thus [2] 1509/1 1514/4 } \\
& \text { time [71] } 1487 / 25 \text { 1488/3 }
\end{aligned}
\] & too [6] 1475/11 \(1549 / 10\)
\(1551 / 191556 / 201607 / 22\) \\
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\end{tabular}





\section*{EXHIBIT G}

\section*{Redacted in Its entirety}```


[^0]:    ${ }^{1}$ As Samsung received trial transcripts that have been previously redacted for confidential information related to third parties (D.I. 572), its proposed redactions are shown as highlighted, rather than redacted.

[^1]:    ${ }^{2}$ Samsung has received versions of trial transcripts that contained third-party redactions from Arendi's counsel, in accordance with the Court's order. D.I. 573. To the extent that those transcripts differ from the sealed transcripts filed as D.I. 577-585, Samsung requests that the confidential information highlighted in Exs. A-F control.

[^2]:    

[^3]:    

[^4]:    

