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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOYOTA MOTOR CORP and KIA CORPORATION,

Petitioners,

v.

EMERGING AUTOMOTIVE LLC,

Patent Owner.

Case No. IPR2026-00059

US Patent No. 11,104,245

Thursday, August 13, 2026

9 a.m. (PDT)

REMOTE DEPOSITION OF SAM MALEK, PhD

(This proceeding was conducted via Zoom.

All participants appeared remotely.)

STENOGRAPHICALLY REPORTED BY:

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Thursday, August 13, 2026

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9:00 a.m. (PDT)

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Remote deposition of SAM MALEK, PhD,

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held via Zoom videoconference, before

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Deanna J. Dean, a Registered Diplomate

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Reporter, Certified Realtime Reporter,

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and licensed stenographic court reporter

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of the state of New Hampshire.

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1 I N D E X

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3 Examination Page

4 SAM MALEK

5 By Attorney Skoyles 7

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9 E X H I B I T S

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11 Number Description Page

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13 (No new exhibits marked)

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

2 THE STENOGRAPHER: Here begins the remote
3 deposition of Dr. Sam Malek, taken in the matter
4 Toyota Motor Corp. and Kia Corporation,
5 Petitioners, v. Emerging Automotive LLC, Patent
6 Owner, before the Patent Trial and Appeal Board,
7 Case No. IPR2026-00059 for US Patent No.
8 11,104,245.

9 Today's date is August 13, 2026. The time
10 is now 9 a.m. PDT.

11 This deposition is being held remotely by
12 Zoom videoconferencing. I am the licensed court
13 reporter, Deanna Dean, presenting on behalf of
14 Henderson Legal Services.

15 Will counsel please introduce themselves
16 and state whom they represent, beginning with
17 the party noticing the deposition.

18 ATTORNEY SKOYLES: Aidan Skoyles from
19 Finnegan Henderson for the Toyota petitioners,
20 and with me is Nick Eitsert.

21 Also on is Quincy Lu for the Kia
22 petitioners.

23 ATTORNEY ENTZMINGER: Good morning.
24 Brenda Entzminger for patent owner, Emerging
25 Automotive.

1 THE REPORTER: At this time, do all
2 parties agree to waive any objection, now or in
3 the future, to me swearing in the witness
4 remotely?

5 ATTORNEY SKOYLES: No objection.

6 ATTORNEY ENTZMINGER: Agreed.

7 SAM MALEK,
8 a witness called for examination, having been first
9 duly sworn according to law, was deposed and
10 testified as follows:

11 EXAMINATION

12 BY ATTORNEY SKOYLES:

13 Q. Good morning. Could you please state and
14 spell your name.

15 A. Good morning. My first name is Sam,
16 S-a-m. My last name is Malek, M-a-l-e-k.

17 Q. And where are you located today, Dr.
18 Malek?

19 A. I'm in Irvine, California.

20 Q. Are you at home?

21 A. Yes.

22 Q. Anybody with you in the room today?

23 A. No.

24 Q. Anybody with you at your home today?

25 A. My family's at home, yes.

1 Q. You understand you're under oath?

2 A. Yes.

3 Q. Is there any reason that you would not be
4 able to provide truthful testimony today?

5 A. No.

6 Q. Okay.

7 I know you've been deposed many times, so
8 you know how this goes. But if at any point you
9 need clarification for a question, please ask.

10 Is that okay?

11 A. Yes.

12 Q. You need to give verbal responses to my
13 questions, particularly because there is no
14 videographer today. Understand?

15 A. Yes.

16 Q. Since we're on Zoom, can I ask that you
17 turn off your cell phone and don't communicate with
18 anyone during the deposition, other than via this
19 Zoom session?

20 A. Sure.

21 Q. Do you have any programs other than Zoom
22 open on your computer?

23 A. I have Adobe Acrobat, and I have several
24 PDF documents related to this case, like the patent
25 and my declaration, and the petition and some of

1 **the prior art. These are all clean copies.**

2 Q. Okay. Great.

3 Those are all exhibits entered in the
4 present proceeding?

5 A. **Yes.**

6 Q. And they're -- you said they're clean
7 copies? No markup or anything like that on those?

8 A. **That's correct.**

9 Q. Okay. Great.

10 Okay. Let's dive into it, then.

11 You submitted a declaration -- well, two
12 declarations -- in this matter. The declaration
13 that we'll focus on is Exhibit 2012.

14 That's one of the files you have open?

15 A. **Is that my declaration -- is that my**
16 **second declaration?**

17 Q. I'm sorry. I think it's 2013. That's
18 your second declaration.

19 Do you have 2013 open?

20 A. **Yes.**

21 Q. That is your June 12, 2026, declaration.
22 Right?

23 A. **Right. And I should have added that I**
24 **have a printed copy of my declaration, and it's**
25 **clean and unmarked as well.**

1 Q. Okay. That's fine. You can use the
2 printed copy or the PDF if you want to.

3 A. **Okay.**

4 Q. Whatever is easiest for you.

5 First I want to start off talking about QR
6 codes. That's where you start in your declaration.
7 You cite a website titled "How are QR codes
8 generated?"

9 Do you recall that? It's Exhibit 2012.

10 A. **Yes, I see that.**

11 Q. You cite it beginning at paragraph 44 of
12 your declaration?

13 A. **Yes.**

14 Q. How did you identify that QR code website,
15 Exhibit 2012?

16 ATTORNEY ENTZMINGER: Objection. Form.

17 A. **I don't recall the details of how I found
18 this website. It was --**

19 Q. Did you find it or did somebody else find
20 it?

21 A. **I believe, if I remember correctly, I
22 found it.**

23 Q. Did you notice it having a publication
24 date?

25 A. **I don't have the exhibit in front of me.**

1 **I was looking at paragraph 44 of my -- my report**
2 **where I've cited to it.**

3 Q. Okay. If you want, I can drop it in the
4 chat.

5 A. **Yeah, that would be helpful.**

6 Q. Then you can open it.

7 Did that come through?

8 A. **Yes. Okay. I have it.**

9 Q. Exhibit 2012 is a website printout from
10 QRCodeKit.com. Right?

11 A. **Yes.**

12 Q. And I've scrolled through it. I don't see
13 any kind of publication date on it.

14 Are you aware of a publication date?

15 A. **I don't recall off the top of my head. I**
16 **mean, I could check the web archive to see what's**
17 **the date associated with it, but I don't remember**
18 **right now. I don't think I have it in my report.**

19 Q. Okay. It's not in your report. I mean, I
20 checked the Wayback Machine and it looks like it
21 was published in 2025.

22 Will you accept that representation?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. **I don't have the web archive to check it**
25 **myself, but if that's what you're telling me now,**

1 **I'll accept it.**

2 Q. You're not contending that Exhibit 2012 is
3 prior art. Right?

4 A. **I'm not -- I'm not asserting that this**
5 **specific page is prior art, but the QR code**
6 **technology has been around for many years, many**
7 **years prior to the -- prior to these times as well.**

8 Q. Let's take a look at Exhibit 2012.

9 The headline there is "How are QR codes
10 generated?" Right?

11 A. **Yes.**

12 Q. And underneath that first picture, the
13 final sentence of that first paragraph says, "In
14 this guide, we'll walk you through the process of
15 generating a QR code, the tools involved, and what
16 makes each code unique."

17 Do you see that?

18 A. **Yes.**

19 Q. But your position is that QR codes are
20 not, in fact, unique. Right?

21 ATTORNEY ENTZMINGER: Objection. Form.

22 A. **Well, I mean, as I show in the rest of my**
23 **report, my position is that QR codes -- I**
24 **understood that Dr. Almeroth is saying that QR**
25 **codes are inherently or essentially unique, and I**

1 **don't necessarily agree with that.**

2 Q. Okay. Even though the article that you
3 cited says they are unique. Right?

4 ATTORNEY ENTZMINGER: Objection. Form.

5 A. Well, I mean, I think this sentence
6 doesn't describe the level of analysis that I've
7 done in my report. This is just describing at a
8 high level.

9 So QR codes could be used to represent
10 unique information, but it's not inherent or
11 essential that they are unique.

12 Q. Sure. If you start with the same kernel
13 of data and generate a QR code from it, it's going
14 to be the same QR code. Right?

15 A. I'm sorry. Can you repeat that question?

16 Q. Sure.

17 The same input will generate the same
18 output. Right?

19 A. The same --

20 ATTORNEY ENTZMINGER: Object to form.

21 A. So a QR -- yeah. A QR code generated -- I
22 mean, like these terms that I have in my report, if
23 I generate a QR code with the name "Sam," you know,
24 you get the same QR code output, basically,
25 assuming you're using the same technique to

1 **generate the QR code.**

2 Q. That's right. So if you were to generate
3 a QR code with "Sam," the next day, it would give
4 you the same QR code. Right?

5 **A. That's fair.**

6 Q. Unless for some reason you took into
7 account the time at which the QR code was
8 generated, and then it would be possible to
9 generate a different QR code for "Sam." Right?

10 ATTORNEY ENTZMINGER: Objection. Form.

11 **A. I mean, if the input that you are**
12 **including says "Sam" and then it has a date or a**
13 **time, assuming that you're not generating the QR**
14 **code as the same exact time as, let's say,**
15 **yesterday, then you would get a different QR code**
16 **if you include that -- that different time or date**
17 **in the code that you are generating.**

18 Q. And, likewise, if you generated a QR code
19 that used not just "Sam" but "Sam Malek" and your
20 date of birth and your home address, you would get
21 a different QR code than a Sam Malek born on a
22 different date or who resides at a different
23 address. Right?

24 ATTORNEY ENTZMINGER: Objection. Form.

25 **A. I mean, you -- so if you are generating --**

1 so you're generating -- the QR codes are presenting
2 some information. Right? The information that is
3 being coded is different than the QR code would be
4 typically different.

5 As far as the Sam Malek example goes, I
6 mean, I know there are other Sam Maleks when I
7 Google my name on the web. So you will probably
8 still get -- yeah, it is possible to still be
9 getting QR codes that would be similar for
10 different people. But, yeah. Of course, as you
11 add more information like date or time and date of
12 birth and things like that, then you are likely to
13 get different QR codes.

14 Q. Fair to say there's no other Sam Maleks
15 with the same birth date at the same address as
16 you?

17 ATTORNEY ENTZMINGER: Object to form.

18 A. If you add the address, I would hope that
19 that is the case, yes.

20 Q. In fact, it's certain that any other Sam
21 Maleks who had a QR code generated based on their
22 name and their birth date and their place of
23 address would result in a QR code that was
24 different from a QR code generated using your name
25 and your birth date and your place of address.

1 Right?

2 ATTORNEY ENTZMINGER: Objection. Form.

3 A. I mean, basically I read that if the data
4 that you are encoding is unique itself, then --
5 then what you get in the form of QR code would
6 be -- would be specific to that unique data code --
7 unique data that you're encoding.

8 Q. The way QR code generation works is by
9 converting data into some binary form -- right? --
10 according to the article that you cited?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 A. That's -- I mean, every data is binary in
13 computers, so that's why I'm hesitating to frame it
14 like that. But I would say that a QR code is a
15 representation of the data. I mean, it would
16 be like -- maybe a way to put it is a visual
17 representation of the encoded data.

18 Q. Sure. Well, let's use the article that
19 you've cited to the board here, Exhibit 2012, on
20 page 2.

21 Let me know when you're there.

22 A. Okay. I'm there.

23 Q. There is a title that says "How are QR
24 codes generated from data?"

25 Do you see that?

1 **A. Yeah.**

2 Q. And then five steps. The first one is
3 titled "Encoding the data."

4 Do you see that?

5 **A. Yes.**

6 Q. And it says, "The input (e.g., website
7 URL) is encoded into binary format." Right?

8 **A. Yeah, it says that.**

9 Q. Do you disagree with that or do you agree
10 with that?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 **A. I mean, the context of what is being**
13 **described here, my only clarification is that the**
14 **website URL initially is -- if it's already in the**
15 **computer, it is also in binary format, because**
16 **every piece of data is in binary format.**

17 **But I'm not disagreeing with what -- what**
18 **the article is saying overall here in terms of**
19 **describing how the QR code is generated.**

20 Q. And the point of that conversion into
21 binary is to sort of take all data to a similar
22 format, and then from that format generate the QR
23 code. Right?

24 ATTORNEY ENTZMINGER: Objection. Form.

25 **A. Well, I would say the reason you have**

1 **binary format in computers is because that's what**
2 **computers process. Computers process binary data.**
3 **And so any form of data at the end of the day is**
4 **transformed to something binary.**

5 Q. If we go a little bit further down in this
6 article to page 7, the bottom of page 7 has a
7 heading titled "How is a unique QR code generated
8 for each use?"

9 Do you see that?

10 A. **Yes.**

11 Q. And then the description continues on
12 page 8. It says, "A QR code becomes unique when
13 the data inside it is unique. For example, one
14 code might link to example.com/page1 and another to
15 example.com/page2."

16 Do you see that?

17 A. **Yes.**

18 Q. That's consistent with what we've just
19 been talking about. Right? Different data in
20 results in different QR code out. Right?

21 ATTORNEY ENTZMINGER: Objection. Form.

22 A. **That's consistent with my understanding,**
23 **yes.**

24 Q. And that, at least according to this
25 article, is what makes a QR code unique. Right?

1 ATTORNEY ENTZMINGER: Objection. Form.

2 A. Well, this describes how to -- how a QR
3 code becomes unique, which also confirms my opinion
4 that QR codes by their nature are not necessarily
5 unique, but they become unique if the underlying
6 data that they're encoding is unique.

7 Q. We talked before about how a QR code
8 generated using a name, a birth date, and an
9 address would almost certainly be unique. Right?

10 ATTORNEY ENTZMINGER: Objection. Form.

11 Q. Unless there are two people with the same
12 name, the same birth date, and the same address.
13 Right?

14 ATTORNEY ENTZMINGER: Objection. Form.

15 A. I would agree that if -- again, if the
16 underlying data that you're encoding is unique,
17 then the resulting QR codes would be unique. And
18 if you're encoding someone's first and last name,
19 date of birth, and the address, very likely that
20 that is unique unless the same person with the same
21 birthday -- two people with the same name and the
22 same birthday are living at the same house.

23 Q. Yeah. In fact, my driver's license on the
24 very back of it has a very complicated QR code. I
25 don't know if yours does in California.

1 But this QR code is unique. Right?

2 ATTORNEY ENTZMINGER: Objection. Form.

3 A. That, I actually don't know. I don't know
4 how they are generated, that QR code.

5 Q. Do you think my QR code on the back of my
6 driver's license might be the same as somebody
7 else's?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 A. I -- I don't know what is encoded in that
10 QR code. I haven't investigated that.

11 Q. The code for generating the QR code that
12 you cited in your report, where you generated a QR
13 code from "Sam," where was that code running?

14 ATTORNEY ENTZMINGER: Objection. Form.

15 A. You mean the source code or the website
16 that generate the QR code for my experiment?

17 Q. Yeah. Well, let me put it differently.

18 You went to a website. Right? I think
19 QR.io. Is that right?

20 A. Yes.

21 Q. And on that website, it gave you the
22 option to provide the seed data, and then you can
23 choose some formatting options, and then you click
24 "generate" and then it gave you a QR code. Right?

25 ATTORNEY ENTZMINGER: Objection. Form.

1 **A. Yeah. Generally speaking, I would agree**
2 **with that.**

3 Q. So somewhere in there, there is some
4 source code that converts the data to the QR code.
5 Right?

6 **A. Yeah, there is some piece of code that**
7 **does that.**

8 Q. And that code is running on a server.
9 Right?

10 ATTORNEY ENTZMINGER: Objection. Form.

11 **A. I actually don't know that. I didn't**
12 **investigate that. It could be running on the**
13 **server or it could be running in the -- as a**
14 **JavaScript in the browser.**

15 Q. But it's certainly possible that it could
16 be on a server. Right?

17 **A. Yeah, the code could be on the server or**
18 **it could be in the client. It could be in either**
19 **place.**

20 Q. Okay. Let's shift our QR code
21 conversation to the context of Kleve. Okay?

22 **A. Okay.**

23 Q. So Kleve discloses potential use of a QR
24 code. Right?

25 **A. Kleve talks about matrix barcode, and I**

1 **believe he may have given an example of a QR code**
2 **as an example of a matrix barcode if I remember**
3 **correctly.**

4 Q. So if we look at the first page of Kleve,
5 the cover, there is a QR code shown right there.
6 Exhibit 1005.

7 Do you have that?

8 **A. Yes.**

9 Q. So that QR code -- well, let me ask you a
10 question. What is the purpose of the QR code?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 **A. You mean in the context of Kleve?**

13 Q. Yes.

14 **A. So my understanding is that in the context**
15 **of Kleve, a QR code is something that the temporary**
16 **user enters into their profile when they create**
17 **their profile. So it's part of their profile.**

18 Q. And how would they use that QR code?

19 ATTORNEY ENTZMINGER: Objection. Form.

20 **A. Well, I mean, it's a long reference. You**
21 **have to go through it to try to find different**
22 **places where he talks about it. I -- I don't know.**
23 **I didn't memorize the reference.**

24 Q. You didn't -- I'm sorry. I didn't mean to
25 speak over you.

1 **A. Yeah. So I think we can step through the**
2 **reference and see places where it's referring to**
3 **matrix barcode and see what disclosures it has. I**
4 **don't want to give you an answer without reviewing**
5 **the text from it because it's a long reference and**
6 **I haven't memorized the whole thing.**

7 Q. If you go to paragraph 44 of Kleve, which
8 is on PDF page 16.

9 **A. Okay.**

10 Q. The final sentence of paragraph 44 says,
11 "Once the temporary user has the matrix barcode
12 scanned by the vehicle, a smartphone may be able to
13 connect with the VCS and may be used to enter and
14 enable the vehicle drive-away event."

15 Do you see that?

16 **A. I see that, yes.**

17 Q. Does that refresh your recollection of how
18 the matrix barcode is used in Kleve?

19 ATTORNEY ENTZMINGER: Objection. Form.

20 **A. Yeah, that's one -- yeah. That's one**
21 **disclosure where he talks about how the matrix**
22 **barcode can be scanned by the vehicle.**

23 Q. And once that scan takes place, then you
24 can use your smartphone to enter the vehicle and
25 drive it away. Right?

1 A. Well, I mean, the explicit disclosure is
2 that the smartphone may be able to connect with the
3 VCS and be used to enter and enable the vehicle
4 drive-away event.

5 Q. Which, in layman terms, means get in and
6 drive the vehicle away. Right?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 A. Well, I mean, I think what it's disclosing
9 is what I just described, is that once a temporary
10 user has a matrix barcode scanned by the vehicle,
11 the smartphone may be able to connect with the VCS
12 and be used to enter and enable the vehicle
13 drive-away event.

14 So -- so I think it's fair to say that
15 once a temporary user has a matrix barcode scanned
16 by the vehicle, the smartphone may be able to
17 connect with the VCS is what is being said in this
18 sentence.

19 Q. And a different matrix barcode may not
20 enable the smartphone to make that connection.
21 Right?

22 ATTORNEY ENTZMINGER: Objection. Form.

23 A. It doesn't disclose that.

24 Q. Sorry. Say that again?

25 A. I don't think it discloses that in the

1 **sentence you're referring to.**

2 Q. Do you think a different matrix barcode
3 could also unlock the vehicle, permit the vehicle
4 to be unlocked from the smartphone?

5 ATTORNEY ENTZMINGER: Objection. Form.

6 A. Well, it doesn't say any of what you just
7 said. I don't see the word "unlock" here. And it
8 doesn't disclose -- at least in this part, I'm not
9 seeing it disclosing that it requires the matrix
10 barcode to match anything here.

11 Q. So you think two different matrix barcodes
12 could enable the same temporary user to use their
13 smartphone to enter and enable the vehicle drive
14 away event?

15 ATTORNEY ENTZMINGER: Objection. Form.

16 A. Well, I mean, it doesn't matter what I
17 think. What matters is what the reference
18 discloses. And in the part we're looking at, the
19 reference doesn't disclose that.

20 Q. You've reviewed Kleve, though. Right,
21 Dr. Malek? You understand how Kleve works and
22 you've rendered an opinion on Kleve.

23 So you're here to tell the Patent Trial
24 and Appeals Board judges what Kleve discloses and
25 how it works and why. And in your opinion, it

1 doesn't invalidate the '245 patent. Right?

2 ATTORNEY ENTZMINGER: Objection. Form.

3 A. I mean, I've reviewed Kleve, and there are
4 certain disclosures within Kleve. And what I'm
5 saying is that in this part that you're looking at,
6 it doesn't disclose what you were just asking me.

7 Q. So my question is whether you recall any
8 portion of Kleve discussing the same user using
9 different QR codes to achieve this unlocking
10 feature?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 A. I don't recall Kleve describing the same
13 user using different matrix barcodes.

14 Q. Okay. Let's turn to Kleve paragraph 63, a
15 little bit further down.

16 A. Okay.

17 Q. PDF page 18. Are you there?

18 A. Yes.

19 Q. Kleve talks about using temporary user
20 identification. Right?

21 A. Yeah, it does talk about temporary user
22 identification.

23 Q. And the reason it does that is because
24 Kleve is designed to disclose a car-sharing system.
25 Right?

1 ATTORNEY ENTZMINGER: Objection. Form.

2 A. Well, I mean, I know Kleve is describing
3 some form of a car-sharing system, but I don't know
4 if the reason it's talking about temporary user
5 identification is because of that.

6 Q. Well, the idea is that a vehicle owner
7 might permit their vehicle to be temporarily used
8 by a temporary user. Right?

9 ATTORNEY ENTZMINGER: Objection. Form.

10 A. Generally speaking, it's talking about
11 vehicle owners being able to have others or
12 temporary users be able to use their vehicle.

13 Q. And the vehicle owner wants to have some
14 assurance that the temporary user that they're
15 giving their car to is a temporary user. Right?
16 They don't want to just make their vehicle
17 available for anybody to use?

18 ATTORNEY ENTZMINGER: Objection. Form.

19 A. I mean, I do remember that Kleve is
20 talking basically about verifying various sources
21 of things, but I don't remember talking about --
22 explicitly talking about providing assurances like
23 the way you described it. But it does talk about
24 checking certain things.

25 Q. But it checks to make sure that the

1 vehicle is not just made generally accessible to
2 anybody. Right? The temporary user is a specific
3 temporary user that the vehicle owner has approved
4 and given access to. Right? That's the whole
5 point of a car-sharing system like Kleve?

6 ATTORNEY ENTZMINGER: Objection. Form.

7 A. Well, I mean, I don't recall language or
8 discussion about a specific temporary user. But as
9 I said, it does -- there are certain checks and
10 verifications that are being performed in Kleve.
11 But I don't recall any discussion of a design that
12 would provide assurances that it's the -- that it's
13 specific to -- you know, there's -- that the system
14 prevents necessarily like -- or the system assures
15 that only one specific user can use a car. I don't
16 remember disclosures in that way. But I do
17 remember that it does talk about certain checks
18 that it does perform.

19 Q. And in paragraph 63, Kleve discloses
20 different forms of a temporary user identification.
21 Right? In the final sentence, it says, "The
22 temporary user's information for vehicle
23 authorization credential verification 516 may
24 include but not limited to fingerprint recognition
25 of the user, photos of credit cards, photo of forms

1 of ID, facial recognition, voice print recognition,
2 matrix barcode, ex. two-dimensional code, code word
3 or code phrase for speech recognition, temporary
4 mobile web login IDs and password, or other types
5 of unique temporary user identification."

6 Do you see that?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 **A. I see that. I see that sentence, yes.**

9 Q. What's your understanding of why Kleve
10 discloses these different forms of temporary user
11 information?

12 ATTORNEY ENTZMINGER: Objection. Form and
13 foundation.

14 **A. Well, I cannot speculate as to why Kleve**
15 **says what it says. But I can confirm that it says**
16 **what you just read, and I would just add that some**
17 **of the items that are listed there are not unique.**
18 **For example, photos of credit cards or a matrix**
19 **barcode, I don't think those are unique.**

20 As far as why this discloses the way it
21 discloses, that's, I would have to speculate as to
22 why it discloses things the way it does. But the
23 disclosure is what you just read.

24 Q. Okay. But a photo of your credit card
25 would look different than a photo of my credit

1 card. Right? We don't have the same credit card?

2 ATTORNEY ENTZMINGER: Objection. Form.

3 A. Well, I mean, I guess what I would say is
4 that sometimes photos of credit cards are the same.
5 So, for example, my wife and I have a joint credit
6 card, and we both have our physical credit cards,
7 but the photos of the credit cards are the same.

8 Q. But that would be two photos of the same
9 card. Right?

10 A. Well, no.

11 ATTORNEY ENTZMINGER: Objection. Form.

12 A. We have -- we have two separate cards, but
13 it's a joint account. So the credit card number is
14 the same and the, you know, the security code is
15 the same. The expiration date is the same. Our
16 names are on both cards. So the photos of the
17 credit cards are the same.

18 Q. Besides you and your wife, does anybody
19 else have the same credit card?

20 ATTORNEY ENTZMINGER: Objection.

21 Relevance.

22 A. No. I mean, that -- I'm assuming -- I
23 mean, I know a lot of couples that have joint
24 credit cards for the family. So I think I don't
25 think this is unique to my family. But I was just

1 giving you an example from my own personal
2 experience.

3 Q. I mean, as to the credit card that you and
4 your wife share, nobody else other than you and
5 your wife have that credit card. Right? It's
6 unique to you and your wife?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 A. I would say it's not unique to either one
9 of us in the sense that we both have the same
10 credit card, and photos of it would be the same.

11 Q. That's not my question, sir.

12 It's unique as to you and your wife
13 because there's nobody else other than you and your
14 wife who have that credit card. Right?

15 ATTORNEY ENTZMINGER: Objection. Form.

16 A. I mean, there are two different issues
17 here. One is, is the data itself unique versus the
18 system ensures uniqueness. So I would say in the
19 context of Kleve, there is nothing that I saw that
20 prevents multiple users uploading photos of one
21 credit card, even if that credit card is not a
22 joint credit card. So I honestly think that
23 prevents multiple temporary users uploading photos
24 of the same credit card.

25 Q. That's not my question at all, Dr. Malek.

1 Please answer my question.

2 My question is that, as to you and your
3 wife, your credit card is unique because there's
4 nobody else other than you and your wife who have
5 that credit card. Correct?

6 ATTORNEY ENTZMINGER: Objection. Form.

7 **A. I would say it's not unique because both**
8 **of us have the same credit card.**

9 Q. That's not my question, Dr. Malek.

10 Does anybody else have that credit card
11 other than you and your wife?

12 ATTORNEY ENTZMINGER: Objection. Form.

13 **A. I mean, presumably others don't have the**
14 **same credit card. But it is not unique.**

15 Q. Not presumably, Dr. Malek. It's true,
16 isn't it, that nobody else other than you and your
17 wife have your credit card? Right?

18 ATTORNEY ENTZMINGER: Objection. Form.

19 **A. I mean, I'm not a banking expert, but**
20 **based on my understanding is that others would not**
21 **have the same exact credit card number.**

22 Q. And the conclusion of paragraph 63
23 suggests that other types of unique temporary user
24 identification could be possible. Right?

25 ATTORNEY ENTZMINGER: Objection. Form and

1 foundation.

2 A. I mean, I would agree that the sentence
3 ends with "or other types of unique temporary user
4 identification."

5 Q. And that certainly suggests that at least
6 Kleve believes that all of the preceding types that
7 it identified are also unique temporary user
8 identification. Right?

9 I understand you might disagree with that,
10 but at least Kleve is under the impression that
11 those previous examples are, in fact, types of
12 unique temporary user identification. Right?

13 ATTORNEY ENTZMINGER: Objection. Form and
14 foundation.

15 A. Again, I can't speak for Kleve the
16 inventor, but I can speak, based on my own
17 understanding of what is disclosed in Kleve, that
18 the patent is that -- some of what is listed in
19 that list is, you know, not unique, for example, if
20 there was a credit card and matrix barcode. And
21 that is also informed by what is described in
22 paragraph 69 where Kleve describes how a matrix
23 barcode is derived. And that discussion informs my
24 opinion that matrix barcode is not unique.

25 Q. Okay. But I think as a matter of the

1 English language, if I say my children like to eat
2 apples, bananas, pineapples, and other types of
3 fruits, that's an indication that at least I
4 believe that apples, bananas, and pineapples are,
5 in fact, types of fruits. Right?

6 ATTORNEY ENTZMINGER: Objection. Form.
7 Foundation.

8 A. I mean, first of all, the language doesn't
9 say "and other types of unique temporary user
10 identification." It says "or other types of unique
11 temporary user identification." So it's a little
12 different from the question you're asking me.

13 But, again, my understanding based on what
14 is disclosed in Kleve and what I just explained to
15 you is that some of what is listed in that list,
16 like photos of credit cards and matrix barcode, are
17 not unique. Photos of credit cards, I gave you
18 examples. Matrix barcode, I discuss in my report,
19 and I'm also looking at paragraph 69 where it
20 describes it separately from the other items that
21 are in that list, and it describes how it's
22 derived. And that doesn't seem to me to result in
23 something that is unique.

24 Q. Let me ask my question again.

25 If I say that my children like to eat

1 apples, bananas, pineapples, or other types of
2 fruits, that's an indication that at least I
3 believe that apples, bananas, and pineapples are,
4 in fact, types of fruits. Right?

5 ATTORNEY ENTZMINGER: Objection. Asked
6 and answered. Form.

7 A. I mean, you're asking me a sentence that
8 is not in the patent, and you're asking me in this
9 hypothetical in the abstract, just that sentence,
10 would that imply that those are fruits, I would
11 agree with that.

12 But when I reviewed Kleve, I didn't review
13 each sentence in isolation in the abstract like
14 that. I reviewed the entirety of Kleve. And when
15 I reviewed the entirety of Kleve, it talks about,
16 for example, what is a matrix barcode, in detail,
17 in some other parts of the reference. And so that
18 informs my opinion about that sentence.

19 But I would agree with you in the
20 abstract, you know, talking about fruits, that in
21 the English language, that would imply that those
22 are all fruits.

23 Q. Okay. Let's turn to paragraph 69. That's
24 on PDF page 19.

25 Let me know when you're there.

1 **A. Okay. I'm there.**

2 Q. You also have copied paragraph 69 into
3 your report at the conclusion of paragraph 49. We
4 can use your highlighting for our discussion.

5 So do you want to flip to that?

6 **A. Sure.**

7 Q. Let me know when you're there.

8 **A. Okay.**

9 Q. Okay. So in paragraph 69 -- oh.

10 What are you trying to convey with the two
11 highlights you've made at paragraph 69 and
12 paragraph 49 of your report?

13 **A. Well, my understanding is that Dr.**
14 **Almeroth has relied on this paragraph for arguing**
15 **that the matrix barcode is unique. And I'm**
16 **pointing to -- and I think he's relying on some of**
17 **the -- what is being described in another**
18 **embodiment, the embodiment that is in blue**
19 **highlighting. And I'm pointing out here that his**
20 **reliance on paragraph 69 and the conclusions that**
21 **he arrives at are flawed because paragraph 69 is**
22 **talking about two different embodiments, and he's**
23 **mixing those embodiments in offering his opinion.**

24 Q. The sentence that follows the two that you
25 highlighted, beginning at step 616, in your view,

1 which embodiment does that sentence apply to? Is
2 it, let's call it, the yellow embodiment or the
3 blue embodiment?

4 ATTORNEY ENTZMINGER: Objection. Form.

5 **A. I mean, he doesn't disclose it**
6 **specifically here. So I think it could apply -- it**
7 **could potentially apply to both embodiments.**

8 Q. It does apply to both embodiments. Right?
9 It talks about what happens after the virtual key
10 is generated?

11 ATTORNEY ENTZMINGER: Objection. Form and
12 foundation.

13 **A. I think when he's pointing to step 616,**
14 **it's at a point where the key has already been**
15 **generated, yes.**

16 Q. So in step 604 in yellow, Kleve talks
17 about generating a virtual key based on a password
18 generated by the vehicle owner. Right?

19 **A. Kleve says that step 604, the vehicle**
20 **owner may then generate the virtual key based on a**
21 **password, yes.**

22 Q. And then in the following sentence, it
23 describes other ways of generating a virtual key.
24 Right?

25 ATTORNEY ENTZMINGER: Objection. Form.

1 **A. Sorry. You're saying in the rest of that**
2 **sentence or the next sentence?**

3 Q. The blue sentence describes other ways of
4 generating a virtual key. Right?

5 **A. Yes. Yes. He describes a different**
6 **embodiment, yes.**

7 Q. Such as using fingerprints, credit cards,
8 et cetera. Right?

9 ATTORNEY ENTZMINGER: Objection. Form.

10 **A. I see that.**

11 Q. And it concludes "or other type of unique
12 temporary user identification." Right?

13 **A. Yes, I see that.**

14 Q. So why, in your view, is that blue
15 embodiment inconsistent with the use of a matrix
16 barcode?

17 ATTORNEY ENTZMINGER: Objection. Form.

18 **A. I don't follow that question.**

19 **So, here, in yellow is describing how a**
20 **matrix barcode is created or arrived at, and I'm**
21 **describing that in this paragraph, paragraph 69.**

22 **Kleve is not describing a matrix barcode**
23 **as being -- as being unique.**

24 Q. That's not quite my question.

25 Isn't it true that the login and password,

1 for example, could be used to generate a QR code?

2 ATTORNEY ENTZMINGER: Objection. Form.

3 A. I think it is possible to use a login ID
4 and password to generate a QR code, but that is not
5 what is disclosed in paragraph 69.

6 Q. Or a photo of a credit card could be used
7 to generate a QR code. Right?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 A. A photo of a credit card could be input to
10 QR code generation. But, again, that is not what
11 is disclosed here.

12 Q. A fingerprint could be used to generate a
13 QR code. Right?

14 ATTORNEY ENTZMINGER: Objection. Form and
15 foundation.

16 A. I mean, it depends a little bit as to what
17 is being modeled as part of that fingerprint. But,
18 you know, let's presume that fingerprint is being
19 modeled as some text. Then that text could be
20 presented as a matrix barcode or a QR code,
21 although that is not what is described in Kleve.

22 Q. In fact, any of those things in your blue
23 highlighted text in paragraph 69 could be converted
24 into a QR code. Right? Because they're all just
25 data?

1 ATTORNEY ENTZMINGER: Objection. Form.

2 A. It kind of depends on how you present this
3 data. But if you present it, let's say as some
4 kind of text data or potentially some kind of
5 binary data as an input to a QR code generator,
6 then you can generate the QR code using that
7 information. But that is not what is disclosed in
8 Kleve. And in this section you can see that the
9 matrix barcode generation is described separately
10 from those embodiments that mention those elements.

11 Q. That's because the matrix barcode is
12 referred to in the yellow sentence but not the blue
13 sentence?

14 ATTORNEY ENTZMINGER: Objection. Form.

15 A. Well, partly that and partly the fact that
16 the blue sentence starts by saying "Another
17 exemplar embodiment of generating virtual key," and
18 then goes on to list those things that we talked
19 about.

20 So I think Kleve makes it explicit that
21 these are other embodiments of generating a virtual
22 key.

23 Q. Okay. It does not explicitly say that any
24 of those other temporary user credentials are not
25 converted to a QR code, though. Right?

1 ATTORNEY ENTZMINGER: Objection. Form.
2 Foundation.

3 **A. It doesn't disclose that those other items**
4 **are on that list in blue. The items that are on**
5 **that list in blue are used for generating a QR**
6 **code, because it disclosed that.**

7 Q. It doesn't say anything about it. Right?
8 It just says these are other forms of temporary
9 user credential, and they're all potentially used
10 to generate a key. Right?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 **A. I mean, the disclosure is that another**
13 **exemplary embodiment of generating a virtual key**
14 **may be done by using temporary user's credentials,**
15 **and then it lists things like fingerprint, photos**
16 **of credit cards, you know, all the stuff that is in**
17 **the blue highlighting.**

18 Q. Yeah. And certainly converting those
19 things into a QR code would be an example of
20 generating a virtual key. Right?

21 ATTORNEY ENTZMINGER: Objection. Form.

22 **A. Well, when he talks about generating a QR**
23 **code, that's in the yellow highlighting. It**
24 **doesn't use those as other examples. It says -- so**
25 **there are two different embodiments here. Right?**

1 **There's the matrix barcode embodiment, which is in**
2 **yellow highlighting, and then there are these other**
3 **embodiments of generating a virtual key, and those**
4 **are the list that we've talked about.**

5 Q. That's not my question, Dr. Malek.

6 If you took a photo of a credit card and
7 converted it to a QR code, that would be an example
8 of generating a virtual key. Right?

9 ATTORNEY ENTZMINGER: Objection.

10 Foundation and form.

11 A. I mean, I agree that you can generate a QR
12 code from textural or binary data like a photo of a
13 credit card. But that is not something that is
14 disclosed in -- in Kleve.

15 Q. Not explicitly, in your view. Right?

16 ATTORNEY ENTZMINGER: Objection. Form.

17 A. I don't think it's disclosed in any way.
18 I don't see any statement here saying that in Kleve
19 you generate a QR code from the photo of credit
20 card.

21 Q. But it does say generate a virtual key
22 potentially based on the photo of a credit card.
23 Right?

24 ATTORNEY ENTZMINGER: Objection. Form.

25 A. Well, again, it -- the sentence says,

1 **"Another exemplary embodiment of generating a**
2 **virtual key may be using temporary user's**
3 **credentials, including" -- and one of those**
4 **examples is photos of credit cards. But there is**
5 **no sentence here talking about generating a matrix**
6 **barcode or a QR code using --**

7 Q. Dr. Malek, that's not my question.

8 ATTORNEY ENTZMINGER: You need to let the
9 deponent finish his answer. If you want to ask
10 another question following that up, you can.
11 But he's entitled to finish his answer.

12 ATTORNEY SKOYLES: Thank you, counsel.

13 Q. Kleve does state explicitly that the
14 virtual key can be generated based on the photo of
15 a credit card: yes or no?

16 ATTORNEY ENTZMINGER: Objection. Form.

17 A. **Kleve discloses as another embodiment**
18 **generating a virtual key may be done by using**
19 **temporary user's credentials, including photos of**
20 **credit cards.**

21 Q. Is there a reason you can't give me a
22 yes-or-no answer to that question, Dr. Malek?

23 ATTORNEY ENTZMINGER: Objection. Form and
24 foundation.

25 A. **I mean, I think I'm answering your**

1 **question as accurately as I can.**

2 Q. Is there a reason it's not a "yes," then?

3 I don't understand why it's not a "yes."

4 ATTORNEY ENTZMINGER: You can't just
5 demand an answer that you want.

6 ATTORNEY SKOYLES: I'm trying to
7 understand why he can't --

8 ATTORNEY ENTZMINGER: Objection. Form and
9 foundation.

10 ATTORNEY SKOYLES: I'm trying to
11 understand why he can't give me a simple answer
12 to a simple question.

13 Q. Is there something you don't understand
14 about that question?

15 ATTORNEY ENTZMINGER: A question about
16 what the reference discloses. He tells you what
17 the reference discloses, and you say why can't
18 it be a yes or no. You're not describing what
19 the reference discloses.

20 ATTORNEY SKOYLES: Okay, counsel. Let's
21 let Dr. Malek answer the questions.

22 A. **I mean, at this point I forgot what the**
23 **question was. But I thought I'm answering and**
24 **being responsive to what you were asking me.**

25 Q. Okay. Let's take a 10-minute break.

1 **A. Thanks.**

2 THE STENOGRAPHER: Off the record,

3 9:56 a.m.

4 (Recess taken from 9:56 a.m.

5 to 10:07 a.m.)

6 THE STENOGRAPHER: Back on the record at

7 10:07 a.m.

8 BY ATTORNEY SKOYLES:

9 Q. Dr. Malek, what is a graphical user
10 interface?

11 **A. I mean, I would generally say it's a --**
12 **it's a form of a user interface which is a form of**
13 **allowing a user to use softwares, and it's a**
14 **graphical -- and it's graphical, so it displays**
15 **graphics on a screen and allows a user to interact**
16 **with it.**

17 Q. Would it include typically buttons, things
18 like that?

19 ATTORNEY ENTZMINGER: Objection. Form.

20 **A. A graphical user interface could include**
21 **buttons.**

22 Q. Kleve discloses the use of a smartphone.
23 Right?

24 **A. I don't remember if he uses the word**
25 **"smartphone," but I believe he does talk about -- I**

1 **believe it refers to them as nomadic devices.**

2 Q. It does.

3 A. **Okay.**

4 Q. If you look at paragraph 24, it refers to
5 a nomadic device as being a smartphone,
6 potentially.

7 A. **Paragraph 20 what?**

8 Q. 24.

9 A. **Okay.**

10 Q. I'm sorry. 25. Third line of paragraph
11 25.

12 A. **Okay. I see that, yes.**

13 Q. And the date on Kleve is May 8, 2014.
14 Right?

15 A. **Yes.**

16 Q. That was six or seven years after the
17 iPhone was released. Right? Thereabouts?

18 A. **Yeah, I believe so.**

19 Q. So by that time, you would agree that
20 graphical user interfaces on smartphones were
21 well-known?

22 A. **I mean, the general concept of a graphical**
23 **user interface is, if you're talking about that**
24 **general concept in the abstract, I would agree that**
25 **that was known in 2014.**

1 Q. Other than a graphical user interface,
2 what other kinds of other user interfaces are you
3 aware of?

4 ATTORNEY ENTZMINGER: Objection. Form.

5 A. Well, I mean, another approach is
6 something called command prompt type of user
7 interface. So this is like old school systems
8 where you would -- I mean, there was still a
9 monitor, but you would push a button like 1-2-3 to
10 execute commands on a terminal.

11 Q. We're talking about like DOS/UNIX command
12 line interfaces of the good old days?

13 A. That's right.

14 Q. Those kinds of interfaces were not
15 typically used in smartphones circa 2014, though.
16 Right?

17 A. I mean, they could be used, but I would
18 agree that they were typically not used.

19 Q. So although Kleve doesn't explicitly
20 disclose a graphical user interface, you would
21 expect that an app running on a smartphone in 2014
22 would, in fact, use a graphical user interface
23 rather than the command line inputs that we've been
24 talking about?

25 ATTORNEY ENTZMINGER: Objection. Form.

1 A. I mean, I would say it depends heavily on
2 the app, you know. So you can have an app that
3 doesn't even have a user interface. But, yeah, if
4 you have an app that is interactive, that is
5 intended to be used in interactive fashion by a
6 user to -- for example, you know, to -- you know,
7 like any commerce app, where you have to go select
8 something, put it in your shopping cart, and put in
9 credit card information and say "Purchase," then
10 you would expect in 2014 to involve a graphical
11 user interface.

12 Q. Let's turn to Mottla for a moment. That's
13 Exhibit 1006.

14 Do you have that one?

15 A. I -- I have that, yes.

16 Q. And you would agree with me that Figures 3
17 through, I think the end -- 3 through 12 of
18 Mottla -- all illustrates a graphical user
19 interface. Right?

20 ATTORNEY ENTZMINGER: Objection. Form.

21 A. Yeah, I think I would agree that these are
22 all what appear to be sketches of what is intended
23 to be examples of graphical user interfaces.

24 Q. It's, in fact, the graphical user
25 interface for the Zipcar app on an iPhone. Right?

1 ATTORNEY ENTZMINGER: Objection. Form.

2 A. I don't remember the operating system, but
3 I take your representation that it's coming from
4 the spec. So I would agree with that.

5 Q. Take a look at Figure 2. Do you recognize
6 that as an iPhone home screen circa 2011?

7 A. It says "iPad" on the bottom right, so it
8 looks like it's some sort of Apple technology.
9 Safari, yeah.

10 Q. And what Mottla is disclosing with that
11 Zipcar app is a graphical user interface for a
12 car-sharing application. Right?

13 ATTORNEY ENTZMINGER: Objection. Form and
14 foundation.

15 A. I mean, my understanding is this is
16 describing an app for making reservations for cars
17 like rental cars. So I think, yeah, I would just
18 generally agree with that.

19 Q. But specifically for a Zipcar. Right?

20 If you look specifically at Figure 2, the
21 app 200 is the Zipcar app. Right?

22 A. That's correct.

23 Q. And the application itself is assigned to
24 Zipcar. Right? If you look on the cover page.

25 A. Oh, Zipcar. Yeah, I see that.

1 Q. Were you familiar with the Zipcar system
2 personally prior to 2013?

3 A. I mean, I've heard of them. I don't know
4 if I knew about them prior to 2013 per se, but I've
5 heard of them.

6 Q. Ever used Zipcar?

7 A. I didn't personally use Zipcar, but I
8 think I've seen cars that have the Zip -- the Z
9 logo or whatever on it, yes.

10 Q. Did you see them parked around town?

11 A. I used to see them more often. I haven't
12 seen them lately. I don't know what's the status
13 of the company at this point.

14 Q. I don't either.

15 But Zipcar was a system where you could
16 rent a car for a limited time through your phone.
17 Right?

18 ATTORNEY ENTZMINGER: Objection. Form and
19 foundation.

20 A. Yeah. My understanding is it was kind of
21 like a car rental service, except that car -- you
22 didn't have to go to like a rental service center
23 to rent a car. Like, the cars would be in various
24 parking lots throughout the city and you could go
25 and use them.

1 Q. And, also, you didn't have to rent them by
2 the day. You could rent them just for, like, two
3 hours or five hours. Right?

4 A. **That -- that seems to be what -- yeah. I**
5 **think that's what I understand it to be.**

6 Q. And that's what's shown in the graphical
7 user interface of Mottla. Right?

8 Like if you look at Figure 9 on page 6, it
9 shows a particular car, particular start time, and
10 a duration, and then a rate. Right?

11 A. **Yeah, I see that. Mm-hmm. Yes.**

12 Q. And then there's a button there on Figure
13 9 titled "Confirm Reservation." Right?

14 A. **Yes.**

15 Q. And when the user clicks "Confirm
16 Reservation," do you know what happens next?

17 A. **I mean, I have to look at the spec, but I**
18 **presume you go to screen 10.**

19 Q. Fair enough. You go to screen 10, and you
20 would probably say "Okay" -- right? -- if you
21 actually wanted to make the reservation. Right?

22 A. **Right.**

23 Q. After that, if you maybe turn to
24 paragraph 35 of Mottla, towards the bottom of
25 paragraph 35, about the sixth line up, Mottla

1 states, "For communications initiated using
2 short-field communications, the member enters a
3 request and the reservation server 101 validates
4 the identity of the member."

5 Do you see that?

6 **A. Yes.**

7 Q. So after the user makes that request,
8 there's some external reservation server that, at
9 least based on what it says here, validates the
10 member. Right?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 **A. I mean, I agree with what is disclosed**
13 **here. It says, "For communications initiated using**
14 **short-field communications, the member enters a**
15 **request and the reservation server 101 validates**
16 **the identity of the member."**

17 Q. So there is a validation step between the
18 user making the request and the user getting access
19 to the vehicle. Right?

20 ATTORNEY ENTZMINGER: Objection. Form.

21 **A. Sorry. Can you repeat what the question**
22 **was?**

23 Q. Yes.

24 There is a validation step performed by a
25 server between the user making a request and the

1 user getting access to the vehicle. Right?

2 ATTORNEY ENTZMINGER: Same objection.

3 A. I mean, at least the portion I'm looking
4 at here doesn't disclose that. It just discloses
5 that the member enters a request and the reserving
6 server validates the identity of the member, but it
7 doesn't disclose the additional detail that you're
8 asking me.

9 Q. Later on in that paragraph, it talks about
10 the mobile device communicating with the vehicle
11 via near-field communication (NFC) or Bluetooth.

12 Do you see that?

13 A. Yes.

14 Q. So that's your understanding of how the
15 Mottla device would communicate with the vehicle.
16 Right?

17 ATTORNEY ENTZMINGER: Objection. Form.

18 A. It discloses that the mobile device
19 communicates using NFC or Bluetooth.

20 Q. Mottla also discloses a way of using an
21 access card to communicate with the vehicle.
22 Right? Are you familiar with that?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. I don't recall now. Can you point me to
25 where it talks about that?

1 Q. Sure.

2 Most of Mottla is described as being an
3 improvement to the access card embodiment, which is
4 described in the background section in paragraph 4,
5 and if you look towards the end of paragraph 4, it
6 talks about the user becoming a member and getting
7 a card. But then in the final second-to-last
8 sentence, it says, "Without the access card, the
9 member cannot gain access to the vehicle that he or
10 she has reserved. Therefore, there exists a need
11 for members of a car-sharing service to be able to
12 locate, reserve, and access vehicles with a single
13 streamlined application using something few leave
14 home without: a mobile device."

15 Do you see that?

16 A. Yes.

17 ATTORNEY ENTZMINGER: Objection. Form.

18 Q. So Mottla is then mostly describing that
19 mobile application, the Zipcar app, as an add-on or
20 improvement over the old way of accessing the
21 vehicle by an access card. Right?

22 ATTORNEY ENTZMINGER: Objection. Form.

23 A. I mean, I would agree that it's describing
24 a need for members of a car-sharing service to be
25 able to locate, reserve, and access vehicles with a

1 **single streamlined application using a mobile**
2 **device.**

3 Q. Now, petitioners rely on the combination
4 of Kleve and Mottla. Right?

5 A. **Yes.**

6 Q. And it's your position that it would not
7 have been obvious to combine Kleve's user interface
8 with Mottla's user interface. Right?

9 ATTORNEY ENTZMINGER: Objection. Form.

10 A. **It is my opinion that a POSITA would not**
11 **have been motivated to combine or modify Kleve in**
12 **view of Mottla as proposed, or have a reasonable**
13 **expectation of success in doing so.**

14 Q. And the user interface that you identify
15 for Kleve in your paragraph 53 of Exhibit 2013 is
16 Figure 9 of Mottla. Right?

17 I'm sorry. Figure 9 of Kleve. Let me ask
18 a better sentence.

19 In paragraph 53 of your report, Exhibit
20 2013, you refer to Kleve's user interface as being
21 Figure 9 in Kleve. Correct?

22 A. **Well, I'm referring to what Dr. Almeroth**
23 **is proposing. I'm understanding that he's**
24 **proposing -- he's looking at Figure 9 of Kleve,**
25 **yeah.**

1 Q. Figure 9 in Kleve is a flowchart. Right?

2 A. I see that, yeah.

3 Q. Whereas Kleve's Figure 5, for example, is
4 an actual user interface with buttons. Right?

5 ATTORNEY ENTZMINGER: Objection. Form.

6 A. Yeah. I mean, I would agree that there
7 are -- yeah, I agree that Figure 9 is describing
8 the user interface. I guess in the flowchart
9 Figure 5 is showing a sketch of what this interface
10 looks like.

11 Q. And if we look at Kleve's Figure 9 steps
12 such as step 908, temporary user reviews available
13 vehicle for rent, you would expect to be done using
14 a graphical user interface. Right?

15 ATTORNEY ENTZMINGER: Objection. Form.

16 A. I mean, Kleve doesn't disclose it. He
17 tells how this is done. I mean, I think
18 potentially it's a graphical user interface that
19 lists -- that shows the vehicles for rent.

20 Q. Let's look at Mottla Figure 4. That's
21 exactly what's shown in Mottla Figure 4 --
22 right? -- a list of available vehicles for rent?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. I see Mottla showing a list of vehicles
25 for rent in Figure 4.

1 Q. And if we go back to Kleve, the moment of
2 the request is a little ambiguous, but somewhere
3 between step 910 and step 912, the user makes a
4 request to rent a vehicle. Right?

5 ATTORNEY ENTZMINGER: Objection. Form.

6 **A. Sorry. What's that?**

7 Q. I'm trying to pinpoint the step at which
8 the user makes the request in Kleve's flowchart,
9 and it isn't explicit in one of the blocks, but I
10 think it's somewhere between 910 and 912.

11 Would you agree with that?

12 ATTORNEY ENTZMINGER: Objection. Form.

13 **A. I mean, it doesn't really disclose it**
14 **right in this flowchart. But presumably it would**
15 **be somewhere between step 908 and 912, somewhere in**
16 **between.**

17 Q. Okay. And that could be done with a
18 graphical user interface. Right?

19 ATTORNEY ENTZMINGER: Objection. Form and
20 foundation.

21 **A. Well, I mean, I don't think Kleve**
22 **discloses how that is done, other than this**
23 **flowchart. But could it be done using a graphical**
24 **user interface? Yes.**

25 Q. And when the owner reviews the request,

1 that could be done with a graphical user interface
2 as well. Right?

3 ATTORNEY ENTZMINGER: Objection. Form and
4 foundation.

5 A. Yeah, I don't think Kleve discloses --
6 discloses how it's done. But could it be done
7 using a graphical user interface, yes, I think so.

8 Q. If we turn back to Mottla, there is a
9 figure at the end, Figure 12, that includes an
10 unlock button.

11 Do you see that?

12 A. Yes.

13 Q. There's nothing in Mottla suggesting that
14 when you click the unlock button, the iPhone app
15 couldn't simply display a QR code. Right?

16 ATTORNEY ENTZMINGER: Objection. Form and
17 foundation.

18 A. I don't think Mottla discloses that a QR
19 code is displayed when you push these buttons.

20 Q. That's right. Because we talked about how
21 Mottla assumes the iPhone is going to be using NFC
22 or Bluetooth. Right?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. In that paragraph that we looked at, it
25 did talk about Mottla's app using NFC or Bluetooth.

1 Q. Okay. But another way of using a phone to
2 communicate with something would be to have the
3 phone display a QR code. Right? That could be
4 scanned by a scanner?

5 ATTORNEY ENTZMINGER: Objection. Form.

6 A. Well, I know that's what Kleve discloses
7 is some kind of matrix barcode that gets scanned.
8 I don't think Mottla discloses or talks about that.

9 Q. Correct. So there's nothing in Mottla
10 saying that the system could not be changed such
11 that when the user clicks the unlock button, it
12 displays a QR code?

13 ATTORNEY ENTZMINGER: Objection. Form and
14 foundation.

15 A. Well, I mean, Mottla doesn't talk about a
16 QR code or what would be part of the QR code. So I
17 don't think it clearly discusses how -- how the
18 system would be changed to include this QR code
19 that you're proposing. I think it's describing --
20 it's disclosing what it's disclosing, which is that
21 there are these buttons and you can push those
22 buttons to unlock the vehicle and enter the
23 vehicle.

24 Q. Okay. Let's set Mottla aside for now and
25 turn to the Zaid reference.

1 You're familiar with the Zaid reference,
2 108?

3 **A. Yes.**

4 Q. Zaid is also a car-sharing system. Right?

5 ATTORNEY ENTZMINGER: Objection. Form.

6 **A. Yeah. I would say it's talking about**
7 **vehicle reservations or rental, so I would agree**
8 **with that.**

9 Q. Zaid is assigned to a company called
10 Getaround. Are you aware of that?

11 **A. Yes, I see that.**

12 Q. And I don't know if Getaround still
13 exists, but were you aware of Getaround as a
14 competitor to Zipcar in the 2010s era?

15 ATTORNEY ENTZMINGER: Objection. Form.

16 **A. I don't recall right now. Sorry.**

17 Q. Zaid also discloses a system where a user
18 can rent a car in a way similar to Zipcar -- right?
19 -- for a limited amount of time through a phone app
20 like Zipcar?

21 ATTORNEY ENTZMINGER: Objection. Form.

22 **A. I mean, I would agree that it deals with**
23 **vehicle reservations and car sharing. As far as**
24 **how it describes doing it, I think it is**
25 **actually -- I think in certain ways it is different**

1 **from Zipcar.**

2 Q. Zaid also discloses a user interface on
3 the mobile device. Right? It's shown there on the
4 cover as 116?

5 ATTORNEY ENTZMINGER: Objection. Form.

6 A. **It shows a user interface. I don't know**
7 **if that is a user interface of a mobile device. I**
8 **would have to look and see what it says about 116.**

9 Q. If you turn to paragraph 80, it refers to
10 computing device 118 having a user interface 116.

11 Do you see that?

12 A. **Yeah, I agree with what is there. It says**
13 **a computing device can have user interface 116.**

14 Q. So that computing device is a smartphone.
15 It has a user interface 116. Right?

16 ATTORNEY ENTZMINGER: Objection. Form.

17 A. **I mean, I see at the end of paragraph 80,**
18 **it says, "In various embodiments, the computing**
19 **device 118 is the same wireless computing device**
20 **108 used by a user to access the vehicle."**

21 **So it does seem like it's listing some**
22 **embodiments that computing device with user**
23 **interface can be a wireless computing device.**

24 Q. Okay. So in Zaid, at a basic level, the
25 operation is described in Figure 4, PDF page 5.

1 Right?

2 A. Well, I mean, this is describing some --
3 one aspect of Zaid, yes.

4 Q. It talks about providing access to a
5 vehicle based on the received reservation in step
6 404. Right?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 A. I see that in Figure 4, yes.

9 Q. And that step is provided in a little more
10 detail in Figure 5. Right?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 A. Well, I mean, I don't know if Figure 5 is
13 just describing that step. But aspects of that
14 step are described in Figure 5.

15 Q. Okay. In Figure 5, the user books the
16 reservation in step 502. Right?

17 A. Yes.

18 Q. And the reservation is encrypted in step
19 504. Right?

20 A. Yes.

21 Q. And then sent to the user at step 506?

22 ATTORNEY ENTZMINGER: Objection. Form.

23 A. It says, "Communicate reservation to
24 wireless communication device of user," yes.

25 Q. And then in step 512, if we skip down a

1 little bit, the user of the wireless communication
2 device forwards the reservation to the vehicle.

3 Right?

4 ATTORNEY ENTZMINGER: Objection. Form.

5 A. Step 512 of Figure 5 says, "Forward
6 reservation from the wireless communication device
7 to vehicle access kit."

8 Q. And then the vehicle decrypts the
9 reservation in step 514. Right?

10 ATTORNEY ENTZMINGER: Objection. Form.

11 A. Yeah. So paragraph 128 says, "The 514
12 vehicle access kit receives the vehicle reservation
13 and decrypts the vehicle reservation."

14 Q. Okay. So then the flowchart says "end,"
15 but really the functionality continues on the
16 vehicle at step 602 in Figure 6. Right?

17 ATTORNEY ENTZMINGER: Objection. Form.

18 A. Yeah. I see the step 602, the vehicle is
19 receiving the reservation.

20 Q. Okay. And then at step 604, the vehicle
21 decides based on that reservation to grant access
22 to the vehicle, to unlock the doors. Right?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. Step 604 of Figure 6 says, "Grant access
25 to the vehicle."

1 Q. Then eventually, after a certain period of
2 time, when the reservation becomes invalid, the
3 vehicle withdraws access in step 608. Right?

4 ATTORNEY ENTZMINGER: Objection. Form.

5 A. Step 608 of Figure 6 says, "Withdraw
6 access when reservation becomes invalid."

7 Q. So you would agree that the vehicle
8 reservation is the thing, the data, that provides
9 access to the vehicle. Right?

10 ATTORNEY ENTZMINGER: Objection. Form.

11 Q. Would it be helpful if I directed you to
12 part of the spec, Dr. Malek?

13 A. Sure. And I kind of lost the question.
14 Sorry. If you can do that and also reask the
15 question.

16 Q. I'm just trying to make sure we're on the
17 same page, that it's the vehicle reservation that
18 provides the access to the vehicle.

19 And if you look at paragraph 67 of Zaid,
20 it states that, the second sentence, "In various
21 embodiments, a method for vehicle access control
22 includes receiving a vehicle reservation from a
23 wireless communication device and providing vehicle
24 access based on the received reservation." Right?

25 ATTORNEY ENTZMINGER: Objection. Form.

1 A. So are you reading from paragraph -- oh, I
2 see it.

3 Q. The very bottom of the column.

4 A. Yes, I see that statement.

5 Q. So the vehicle reservation is what
6 indicates that a particular user gets access to a
7 particular vehicle for a particular time. Right?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 A. It doesn't -- it doesn't disclose what you
10 just had in the question. But it discloses
11 "vehicle access control includes receiving a
12 vehicle reservation from a wireless communication
13 device, and providing vehicle access based on the
14 received reservation."

15 Q. And your understanding of Zaid is that
16 that's what this vehicle reservation is, though.
17 Right? It's giving access to a particular user to
18 a particular vehicle for a particular time. Right?

19 ATTORNEY ENTZMINGER: Objection. Form.

20 A. I don't think it discloses what you had in
21 the question. It discloses a method for vehicle
22 access control that includes receiving a vehicle
23 reservation from a wireless communication device
24 and providing vehicle access based on the received
25 reservation. It doesn't talk about particular

1 **users or particular date and time.**

2 Q. You're right. The sentence that I read
3 does not.

4 I'm asking about your general
5 understanding of Zaid. Zaid discloses a
6 car-sharing system such that a vehicle reservation
7 provides access for a particular user to a
8 particular car for a particular time for that
9 vehicle reservation. Right?

10 ATTORNEY ENTZMINGER: Objection.

11 Foundation and form.

12 A. **I don't believe there is disclosure of**
13 **what you just had in the question in Zaid. It does**
14 **talk about vehicle reservation and vehicle access**
15 **being based on the reservation, but I don't recall**
16 **disclosures with respect to the other constraints**
17 **that you had put into the question.**

18 Q. Okay.

19 This vehicle reservation could be
20 transmitted from the server to the wireless
21 communication device in the clear. Right? But
22 it's not. It's encrypted in step 504. Right?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. **The -- yes. Zaid does disclose that the**
25 **reservations are encrypted.**

1 Q. And "encryption" is another word for -- or
2 "encrypted" is another word -- another way of
3 saying "coded." Right?

4 ATTORNEY ENTZMINGER: Objection. Form.

5 A. **I mean, it's a way of transforming data**
6 **from one point to another, and you could consider**
7 **that to be a form of encoding.**

8 Q. "Coded data" and "encrypted data" are
9 synonyms. Right? Same thing?

10 A. **I'm not sure about --**

11 ATTORNEY ENTZMINGER: Objection. Form.

12 A. **I wouldn't go as far as saying they are**
13 **synonyms, but I think encrypted data could be coded**
14 **data.**

15 Q. Encrypted data is coded data. Right?

16 ATTORNEY ENTZMINGER: Objection. Form.

17 A. **Encrypted data can be coded data.**

18 Q. I think this is a "square is a rectangle"
19 kind of an issue.

20 How could encrypted data not be coded?

21 ATTORNEY ENTZMINGER: Objection. Form.

22 A. **I mean, I think in my declaration for this**
23 **IPR, I offered the opinion that encoded data cannot**
24 **be coded data. So that's not one of the things**
25 **that I provided. And, you know, I'm -- I'm**

1 **agreeing that encoded data -- an example of encoded**
2 **data could be encrypted data.**

3 Q. My question is the other way around,
4 though. How could encrypted data not be coded
5 data?

6 ATTORNEY ENTZMINGER: Objection. Form.

7 A. I mean, sitting here today, I cannot think
8 of how, because that was not something that I
9 offered an opinion in the IPR at least. So I'm not
10 offering an opinion that it cannot be, but I need a
11 little more time to think through it.

12 But I agree that encoded data or encrypted
13 data is a form of -- I would say it's a form of
14 coded data.

15 Q. And encryption or coding is a way of
16 converting data essentially from one form into
17 another. Right?

18 ATTORNEY ENTZMINGER: Objection. Form.

19 A. Encryption involves transforming data
20 from, yeah, clear form/clear text sample to the
21 encrypted form.

22 Q. Conversion between encrypted and
23 unencrypted or coded to decoded doesn't change the
24 underlying content of the message. Correct?

25 ATTORNEY ENTZMINGER: Objection. Form.

1 A. I'm not sure how -- what you mean by
2 "content." But I would agree that if you encrypt
3 something -- let's say you have text. Let's say
4 the text is "Sam," my first name, and you encrypt
5 that so it's not in clear form. When you decrypt
6 that, you're going to get "Sam" back, basically.

7 Q. Otherwise, it wouldn't be very good
8 encryption. Right? That's the whole point?

9 A. That's right.

10 Q. So if instead of the word "Sam" you were
11 encrypting a unique number, then when you decrypted
12 it, you would reveal that same unique number.
13 Right?

14 ATTORNEY ENTZMINGER: Objection.

15 Foundation and form.

16 A. Yeah. Again, generally speaking, I would
17 agree that when you encrypt a unique number and
18 then you decrypt the encrypted unique number, then
19 you're going to get back the same unique number.

20 Q. Let talk about the unique increment that
21 is disclosed in Zaid. Okay?

22 Are you familiar with that?

23 A. Yes.

24 Q. In paragraph 72 of your opinion, you take
25 the position that Zaid does not teach that this

1 unique increment is included in Zaid's vehicle
2 reservation. Right?

3 A. I take the position that it is not
4 included in the reservation, but rather it's
5 included in the messages that -- in turn, that
6 include the reservation as well as the increment.

7 Q. That's right. And you have a figure there
8 that you put in paragraph 77. You created that box
9 where the message has two pieces: it has the
10 reservation and it has the unique increment.
11 Right?

12 A. Yes.

13 Q. So, in your view, the unique increment is
14 not part of the reservation in Zaid?

15 A. No, I don't think so. In fact, I think
16 Zaid talks about putting that unique increment in
17 various steps or messages, not just the reservation
18 messages. Not just the messages that contain the
19 reservation but also, for example, in update
20 messages that are being received from the server.

21 Q. Correct.

22 If you could turn to Zaid Claim 21 for me.
23 It's on PDF page 20.

24 Let me know when you're there.

25 A. I'm there.

1 Q. It says in Claim 21: "The vehicle access
2 control system recited in Claim 1, the vehicle
3 reservation includes a unique increment."

4 Do you see that?

5 A. Yes.

6 Q. Do you understand that disclosure to be
7 part of the Zaid specification?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 A. The specification talks about the same
10 thing, and when you read the specification, it's
11 very clear that it's talking about the message that
12 contains the reservation and not the reservation as
13 the message itself.

14 So it's a message that has a reservation,
15 so Zaid is referring to it as "vehicle
16 reservation," and it's talking about that message
17 which contains the reservation including a unique
18 increment. And it's clear if you look at the
19 specification of Zaid.

20 Q. Okay. Well, in Claim 21, you agree it
21 explicitly states that the vehicle reservation
22 includes a unique increment. Right?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. I mean, I see that sentence there and I'm
25 providing the clarification that when you read the

1 spec, it's clear that by vehicle reservation, Zaid
2 means the message containing the vehicle
3 reservation.

4 Q. You seem to be taking a very distinct view
5 separating the vehicle reservation from the
6 message. Right?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 A. Well, I mean, you have to understand that
9 the reason I do that is because you have to
10 understand what is the purpose of a unique
11 increment in the context of Zaid. So a POSA would
12 read Zaid and understand the purpose of a unique
13 increment is for preventing replay or repeat
14 attacks. And it talks about not just
15 reservation -- not just messages containing
16 reservation having that, but also, like, update
17 messages and other kinds of messages having that.
18 Because it is trying to make sure that this kind of
19 a repeat or replay attack doesn't happen in the
20 system.

21 And as far as the languages in Claim 21, I
22 saw that also in the spec, and the spec clarifies
23 what's going on here. It talks -- when it says
24 "vehicle reservation," it's talking about the
25 message that contains the vehicle reservation

1 including also a unique increment.

2 Q. So you think Claim 21 is wrong? You think
3 it should have said "the message includes a unique
4 increment"?

5 ATTORNEY ENTZMINGER: Objection.

6 Foundation and form.

7 A. I don't think it's wrong. I think it's
8 just a shorthand way of referring to something.
9 Even like as I'm testifying today, a couple of
10 times I have to correct myself because I'm saying
11 reservation message.

12 So reservation message is a message that
13 has reservation content in it, but it has other
14 information within it. And in Zaid, it talks about
15 how it also includes a unique increment to prevent
16 a replay attack.

17 Q. So -- but Claim 21 doesn't refer to the
18 reservation message. Right? Claim 21 explicitly
19 states that the vehicle reservation includes the
20 unique increment?

21 ATTORNEY ENTZMINGER: Objection. Form and
22 foundation.

23 A. Well, I'm agreeing with you as to what
24 Claim 21 text says, and I'm providing the
25 clarification that when you read the spec, it makes

1 **it clear that vehicle reservation is a message --**
2 **is a network message that contains reservation.**
3 **And then Zaid also discloses that it includes a**
4 **unique increment. The --**

5 Q. So in your -- I'm sorry.

6 A. **I was just going to say, the message**
7 **includes the unique increment.**

8 Q. So, in your view, when Zaid refers to the
9 vehicle reservation in the specification, this
10 should be understood to refer to the message that
11 includes the vehicle reservation and the unique
12 increment?

13 ATTORNEY ENTZMINGER: Objection. Form and
14 foundation.

15 A. **This is referring to the vehicle**
16 **reservation message, which is a message that**
17 **contains vehicle reservation, but it can include**
18 **other things such as the unique increment.**

19 Q. When the specification refers to vehicle
20 reservation, is it referring to the reservation,
21 the message, the unique increment, or all of the
22 above?

23 ATTORNEY ENTZMINGER: Objection. Form and
24 foundation.

25 A. **I mean, we have to look at the spec. It's**

1 a long spec. But as I explained, when it's talking
2 about this unique increment and it talks about
3 it -- the spec talks about the purpose of the
4 unique increment, and the purpose of it is for
5 preventing replay or repeat attacks, and those are
6 the kinds of attacks that happen on the network.
7 And I've described the details of what the nature
8 of the attack is.

9 So a POSA would understand all that when
10 they read the spec. And so when it says "includes
11 a unique increment in a vehicle reservation," a
12 POSA would understand that it is including that
13 unique increment in a network message that contains
14 the vehicle reservation to prevent the replay and
15 repeat attacks that the spec talks about.

16 Q. At least based on the text of Claim 21,
17 you would agree that if the vehicle reservation
18 includes a unique increment, then the vehicle
19 reservation would itself also be unique. Right?

20 ATTORNEY ENTZMINGER: Objection. Form.

21 A. Well, no. Based on my understanding of
22 what these terms mean in light of the spec, in
23 light of the totality of what Zaid is disclosing, I
24 know that what it means by "unique increment,"
25 the -- I know -- I know the meaning of that. The

1 unique increment is used for preventing replay and
2 repeat attacks.

3 So in light of the entire disclosure of
4 Zaid, I know what this claim is claiming. It's
5 claiming that you are putting a unique increment in
6 a message that has the reservation, and the reason
7 you do that is explained in the spec. It is to
8 prevent a replay attack.

9 Q. So, in your view, a vehicle reservation
10 that includes a unique increment is not unique?

11 ATTORNEY ENTZMINGER: Objection. Form and
12 foundation.

13 A. I mean, as I explain in my report, the
14 message, the overall message that includes the
15 unique increment as well as the reservation
16 content, that overall message would be unique if
17 the unique increment is unique.

18 But as far as the reservation data, the
19 reservation itself, I don't think that that is
20 unique, because I don't think this claim that we're
21 looking at is talking about putting that unique
22 increment inside of a vehicle reservation, but
23 rather is talking about putting that in a message
24 that carries the vehicle reservation.

25 Q. Even though it literally says "the vehicle

1 reservation includes a unique increment"? That's
2 your view?

3 ATTORNEY ENTZMINGER: Objection. Form and
4 foundation.

5 A. Well, again, I think as an expert you
6 should consider the totality of the teachings of
7 prior art references, not just one statement out of
8 the entire spec of 21 pages.

9 So I read the spec. It talks about what
10 is the purpose and the point of the unique
11 increment. And the purpose and point of it is to
12 prevent replay and repeat message attacks on the
13 network.

14 And so in light of that understanding and
15 what the spec teaches me, I understand that this
16 sentence should be interpreted to disclose that it
17 is the message that contains the vehicle
18 reservation that includes the unique increment, not
19 that the reservation itself includes the unique
20 increment.

21 Q. Okay. Let's take another 10-minute break
22 if we can.

23 A. Okay. Thanks.

24 THE STENOGRAPHER: Off the record at
25 11:03 a.m.

1 (Recess taken from 11:03 a.m.
2 to 11:14 a.m.)

3 THE STENOGRAPHER: Back on the record at
4 11:14 a.m.

5 BY ATTORNEY SKOYLES:

6 Q. Dr. Malek, I'd like to talk a little bit
7 about the privileges in the context of the Zaid
8 reference. Is that okay?

9 A. Okay.

10 Q. We talked before about how Zaid is a
11 car-sharing system. Right?

12 A. Yes.

13 Q. And it has this vehicle reservation which
14 is limited to a certain vehicle and a certain time.
15 Right?

16 ATTORNEY ENTZMINGER: Objection. Form and
17 foundation.

18 A. Well, I mean, I know it talks about a
19 vehicle owner being able to indicate whether the
20 car is available for rent or not.

21 Q. That's right.

22 And then there was a vehicle reservation
23 which, within that available time, specifies that a
24 certain user could access it for the time that
25 they've paid for. Right?

1 ATTORNEY ENTZMINGER: Objection.

2 Foundation and form.

3 A. It has vehicle reservation times that are
4 specified by the renter when they want to rent the
5 vehicle that is available.

6 Q. Specified in the reservation, though.
7 Right?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 A. Well, the reservation time would be
10 specified when the renter is renting the car.
11 Right? So it would be specified by the renter when
12 they are making a reservation for the vehicle.

13 Q. In your opinion in paragraph 85, you take
14 the position that vehicle access is not a privilege
15 under the District Court's construction. Right?

16 A. That's right.

17 Q. You don't appear to offer an opinion on
18 whether vehicle access limited to a certain time
19 would be a privilege under the District Court's
20 construction.

21 Am I right about that?

22 ATTORNEY ENTZMINGER: Objection. Form.

23 A. Are you referring to, like, the part where
24 I talk about use for a period of time?

25 Q. Well, I think what you've tried to do is

1 separate two things that shouldn't be separated. I
2 think as you point out, the petition alleges that
3 Zaid's privileges limit access for a period of
4 time.

5 Is it your position that limited access
6 for a period of time is a privilege?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 A. Well, I mean, the opinion that I've
9 offered here is just unfettered access will not
10 qualify as privilege because of what the court has
11 construed the term "privileged" to mean.

12 I haven't offered the opinion that, you
13 know, used for a period of time wouldn't satisfy
14 the court's construction.

15 Q. Do you agree that time-limited access is
16 not unfettered access?

17 ATTORNEY ENTZMINGER: Objection. Form.

18 A. I agree if you have a time-limited use or
19 access, then that would not be unfettered access,
20 because it's limited by the amount of time that you
21 have access.

22 Q. You mentioned before how the vehicle owner
23 specifies the times at which the vehicle could be
24 rented by one of the users. Right?

25 ATTORNEY ENTZMINGER: Objection. Form and

1 foundation.

2 A. In the context of Zaid, my understanding
3 is that the vehicle owner decides when the vehicle
4 is available for rent.

5 Q. So this would be like the vehicle owner
6 decides, "I need my car for the weekend and so I'm
7 not going allow it to be rented out." Right?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 A. Yes. If the owner doesn't want to rent
10 their car out, then they can not declare that to be
11 a time that it's available for renting.

12 Q. And if the owner was going on a business
13 trip for a week, they might specify that week as
14 being a time when their vehicle could be rented
15 out. Right?

16 ATTORNEY ENTZMINGER: Objection. Form.

17 A. Well, in Zaid, the owner decides when the
18 car is available for rent. And if they know that
19 they're going on vacation for a week and they won't
20 be able to make the car available for renting, then
21 they can specify that.

22 Q. Let's talk about cloud processing systems.
23 What is a cloud processing system?

24 A. For the purposes of this IPR, I haven't
25 construed the meaning of that term beyond, you

1 know, what is the plain and ordinary meaning of it.
2 But the opinion that I'm offering here is that Dr.
3 Almeroth and the petitioner haven't articulated why
4 Zaid's data network, for example, is a cloud
5 processing system or how the data network that
6 they're pointing to functions as a cloud processing
7 system.

8 Q. Now, as an expert in the field, what's
9 your understanding of what is a cloud processing
10 system?

11 ATTORNEY ENTZMINGER: Objection. Form.

12 A. I've applied the plain and ordinary
13 meaning of it, and I haven't offered opinions,
14 construction opinions about it.

15 In the context of IPRs, the opinion that
16 I'm offering here is very specific. I'm saying
17 that the petitioner and Dr. Almeroth haven't
18 articulated how the data network is a cloud
19 processing system and how it functions as a cloud
20 processing system.

21 Q. Do you have any opinion of what the plain
22 and ordinary meaning of a cloud processing system
23 is?

24 ATTORNEY ENTZMINGER: Objection. Form.

25 A. I mean, again, in the context of this IPR

1 for the purposes of what I was asked to do for the
2 IPR, I am rebutting Dr. Almeroth's opinions. So my
3 assignment was to review his report and the prior
4 art references, and offer opinions as to whether I
5 agree with them that the patents are invalid in
6 light of the prior art. And here I'm pointing
7 to -- you know, I understand that the petitioner
8 and Dr. Almeroth has the burden to show the
9 elements exist in the prior art, and here I'm
10 saying that he hasn't articulated at all why the
11 data network of Zaid is a cloud processing system
12 or why it functions as a cloud processing system.
13 I haven't been asked to offer construction opinions
14 as to the meaning of the cloud processing system.

15 Q. Do you consider yourself an expert in
16 cloud processing systems?

17 ATTORNEY ENTZMINGER: Objection. Scope.

18 A. I consider myself to be an expert in cloud
19 computing, yes.

20 Q. What is a cloud processing system, as an
21 expert in cloud computing?

22 ATTORNEY ENTZMINGER: Objection. Form.

23 A. Well, you know, to be able to offer a
24 construction opinion, it's not just enough for me
25 to say I'm an expert in cloud computing. I have to

1 consider the references, you know, of the patent,
2 the spec. I have to read it in its entirety and
3 analyze it with respect to that specific question
4 in mind. And I wasn't asked to -- to perform that
5 task. And it's not a task that I would take
6 lightly. If they had asked me to do it, I would
7 have spent a substantial amount of time to really
8 think about what is meant by cloud processing
9 system in the context of this patent and the
10 specification and the prosecution history, and I
11 would have offered a claim construction opinion.
12 But I wasn't asked to do so.

13 My assignment was to review Dr. Almeroth's
14 report and see -- you know, offer an opinion
15 whether he has shown the elements of these claims.
16 And I'm saying here there is just an absence of any
17 articulation of why he thinks the data network is a
18 cloud processing system or why he thinks that it
19 functions as a cloud processing system.

20 Q. Sitting here today, do you have any
21 opinion on what is a cloud processing system?

22 ATTORNEY ENTZMINGER: Objection. Form and
23 foundation.

24 A. Again, I wasn't asked to offer claim
25 construction opinions about cloud processing

1 system. That would require me to analyze the
2 patent in detail and, you know, I would need time
3 to think about it to be able to give you a
4 definition of it in the context of the patent.

5 But, you know, again, as far as what the
6 petitioner was required to do, they haven't
7 articulated any reasoning, any disclosures that
8 would help -- that would allow me to say, "Oh, yes,
9 Dr. Almeroth has been able to identify a cloud
10 processing system." His declaration is just void
11 of any details on that.

12 Q. I'm confused because I'm not asking you to
13 do claim construction. I'm asking you to give me
14 the plain and ordinary meaning of cloud processing
15 system. That's -- that's not asking for claim
16 construction. That's asking for you as an expert
17 to tell me what is a cloud processing system.
18 Plain and ordinary meaning. What is it?

19 ATTORNEY ENTZMINGER: Objection.

20 Foundation and form.

21 A. Well, I mean, again, in the context of
22 IPR, I've applied the plain and ordinary meaning of
23 a cloud processing system. But I'm not ready to
24 give you, you know, a definition for it, because
25 for me to feel comfortable to give you a

1 definition, I would really have to review the
2 entirety of the patent, the prosecution history,
3 and the spec with that assignment in mind to be
4 able to articulate a definition that I would feel
5 is accurate. And, you know, I'm not ready to do
6 that because I wasn't asked to perform that.

7 But I did review Dr. Almeroth's report,
8 and he really points to nothing -- or I should say
9 he does not articulate why he thinks the data
10 network in Zaid is a cloud processing system or why
11 it functions as one.

12 Q. When you say "in the context of this IPR,
13 I applied the plain and ordinary meaning of a cloud
14 processing system," how can you say you did that if
15 you don't know what is the plain and ordinary
16 meaning of a cloud processing system?

17 ATTORNEY ENTZMINGER: Objection. Form and
18 foundation.

19 A. I mean, I applied what is the plain and
20 ordinary meaning of cloud processing system. As I
21 said, I'm not ready to offer you a construction or
22 a definition for it without having sufficient time
23 to -- to think about it in light of the -- all the
24 disclosures in the patent. I wasn't asked to offer
25 a definition or construction for the term.

1 Q. Do you understand what the plain and
2 ordinary meaning means? That means the plain and
3 ordinary meaning to a person of skill in the art
4 outside the context of the patent. So what the
5 patent says really doesn't matter when you're
6 trying to determine the plain and ordinary meaning.

7 ATTORNEY ENTZMINGER: Objection. Form and
8 foundation.

9 A. Well, my understanding is that when an
10 expert reviews the claims of a patent, the expert
11 should apply -- I mean, typically apply a POSA's
12 understanding of the terms, the plain and ordinary
13 meaning of those terms, in light of the
14 specification and in light of the prosecution
15 history. And, you know, that's what I've done
16 here. But I'm not ready to offer a claim
17 construction opinion about it or give you a
18 separate definition beyond the phrases, beyond the
19 words that are in the patent, because that was not
20 something that I was asked to do.

21 Q. How is the board supposed to credit your
22 opinion wherein you opine, based on the plain and
23 ordinary meaning, that Dr. Almeroth has not shown a
24 cloud processing system as claimed in the prior
25 art, if you can't tell the board what your

1 definition of a cloud processing system is?

2 ATTORNEY ENTZMINGER: Objection. Form and
3 foundation.

4 A. Well, again, you have to look at what I'm
5 opining about here. I'm saying Dr. Almeroth -- you
6 know, he simply just points to data network and he
7 says this is a cloud processing system. But he
8 doesn't articulate why it's a cloud processing
9 system and it doesn't -- he doesn't try to show
10 that it functions as a cloud processing system.

11 So it's really his failure to -- to meet
12 his burden, to show that this limitation is met in
13 the prior art. That's the opinion that I'm
14 providing here.

15 Q. How does a cloud processing system
16 function in general?

17 ATTORNEY ENTZMINGER: Objection. Form.

18 A. Again, my opinion here is that he hasn't
19 identified -- he hasn't explained how it functions
20 as a cloud processing system or why it is a cloud
21 processing system. He doesn't articulate that.
22 And so that's the opinion that I'm providing here.
23 I'm not -- I'm not -- I wasn't asked to do his work
24 and I wasn't asked to offer a construction opinion
25 about cloud processing system.

1 Q. Does a cloud processing system include a
2 server?

3 ATTORNEY ENTZMINGER: Objection. Form.

4 A. **Yeah, I think it could involve a server.**

5 Q. Does it include a networked group of
6 servers?

7 ATTORNEY ENTZMINGER: Objection. Form.

8 A. **Again, we're talking a hypothetical in the**
9 **abstract, I suppose. Because Dr. Almeroth hasn't**
10 **really explained what his -- what is his reasoning**
11 **here.**

12 But in the abstract, you're asking me does
13 a cloud processing system involve a server or a
14 network of servers. I think that is possible, yes.

15 Q. Does a cloud processing system include the
16 internet?

17 ATTORNEY ENTZMINGER: Objection. Form.

18 A. **Yeah. Again, in the abstract, you're**
19 **asking me does cloud processing system in turn --**
20 **it could. That could be part of it.**

21 Q. Dr. Malek, how would you define the
22 boundaries of a cloud processing system?

23 ATTORNEY ENTZMINGER: Objection. Form.

24 A. **I don't really know what you're asking.**
25 **What do you mean by "boundaries"? Boundaries of**

1 **what it means, or just generally in a system**
2 **architecture what are the boundaries of what is a**
3 **cloud processing system?**

4 Q. Well, if we take the internet and these
5 groups of network servers that we've talked about,
6 which are part of a cloud processing system,
7 presumably there is some computing resource in the
8 world that is not part of that cloud processing
9 system.

10 And so my question is, in your expert
11 opinion, where do you draw the line? How do you
12 determine whether a particular, let's call it
13 computing resource, is or is not part of a cloud
14 processing system?

15 ATTORNEY ENTZMINGER: Objection. Form.

16 A. Well, I mean, I would look at the details
17 of a system to be able to opine about it. I can't
18 opine about it at the level of abstraction that
19 you're describing a system.

20 Q. What details would you look for?

21 ATTORNEY ENTZMINGER: Objection. Form.

22 A. I mean, depends on the nature of the work
23 that I'm doing. If I'm doing an infringement
24 analysis, for example, I would look at the source
25 code. I would look at the technical documents. If

1 you were asking me in the context of IPR, I would
2 look at the disclosures in a prior art reference to
3 see what it's describing part of the system to be.
4 And then I would articulate the reasoning as to why
5 I believe certain portion of the system, for
6 example, either a real existing system or some
7 disclosure of that system in prior art meets the
8 limitations of what it means to be a cloud
9 processing system.

10 Q. What technical indicia would you look for,
11 though, in determining whether a computing resource
12 is or is not part of a cloud processing system?

13 ATTORNEY ENTZMINGER: Objection. Form.

14 A. I mean, I -- again, I wasn't -- I wasn't
15 asked to perform opinions about this. But maybe a
16 starting point is to look at the prior art and see
17 does it refer to something as a cloud, does it give
18 an item as a cloud.

19 I don't recall, for example, Zaid
20 mentioning anything about cloud in -- in his
21 specification. So maybe that would be a starting
22 point. And I would then go further to understand
23 the details of it to be able to opine about it.

24 Q. If we look at the cover of Zaid, Exhibit
25 1008 -- let me know when you've got it.

1 **A. I have it.**

2 Q. Zaid shows a network there in the center
3 of 114.

4 Do you see that?

5 **A. Yes.**

6 Q. You understand that shape around the word
7 "network" to be a cloud. Right?

8 ATTORNEY ENTZMINGER: Objection. Form.

9 **A. Yeah. I mean, usually computer networks**
10 **are depicted as a cloud in architectural diagrams**
11 **and documents informally, but I wouldn't take the**
12 **use of that notation to mean that the network is a**
13 **cloud processing system. Again, I don't think Dr.**
14 **Almeroth has even offered that opinion. I don't**
15 **think, for example, in his report he says that**
16 **because a network is shown in an icon that looks**
17 **like a cloud, therefore it is the cloud processing**
18 **system. I didn't even -- I didn't see that kind of**
19 **reasoning in his declaration.**

20 Q. Sitting here today, looking at Figure 1 of
21 Zaid, you would agree that network 114 is part of
22 the cloud. Right? It's shown literally in a
23 cloud?

24 ATTORNEY ENTZMINGER: Objection. Form.

25 **A. I agree that a cloud icon is shown, and I**

1 testified that a cloud icon has historically been
2 used to show a network. So this even goes before
3 "cloud computing" was a term of art. So even if
4 you go back to like 1970s and '60s where, you know,
5 you didn't have anything like cloud computing or
6 another term that even existed, networks were
7 typically depicted as a cloud. And the intention
8 is to show that, well, we don't know the details of
9 the network. There is some kind of a network
10 topology here that connects these things together.
11 That's the intention.

12 I -- you know, I don't think that is by
13 itself sufficient to show that, oh, there is a
14 cloud processing system because there is a cloud
15 icon in this figure. And even if it is, Dr.
16 Almeroth doesn't offer that as his opinion. So he
17 doesn't really provide any basis for his opinion
18 that there is a cloud processing system in this
19 figure.

20 Q. You would agree that by 2011, which is the
21 date on Zaid, cloud processing systems were well
22 developed in the art. Right?

23 A. I think the notion of cloud computing
24 existed in 2011 time frame, yeah.

25 Q. They didn't just exist, though; it was

1 well developed by 2011. Right?

2 ATTORNEY ENTZMINGER: Objection. Form.

3 A. Well, I don't know -- I don't know what
4 you mean by "well developed." Because technology
5 continues being developed, so definitely cloud
6 computing has come a long way since 2011. But I
7 think that the notion of cloud computing existed as
8 of 2011.

9 ATTORNEY SKOYLES: Okay. Let's take
10 another quick break, and let's see if we can
11 wrap things up.

12 THE STENOGRAPHER: Off the record at
13 11:39 a.m.

14 (Recess taken from 11:39 a.m. to
15 11:42 a.m.)

16 THE STENOGRAPHER: Back on the record at
17 11:42 a.m.

18 BY ATTORNEY SKOYLES:

19 Q. Dr. Malek, just a few wrap-up questions.
20 How did you prepare for today's
21 deposition?

22 A. I had a meeting with Ms. Entzminger.
23 Hopefully I'm not mispronouncing her last name.
24 I'm probably mispronouncing it.

25 Q. Anybody else?

1 **A. No, that's it.**

2 Q. Did you review any documents other than
3 the ones that we looked at today that are part of
4 the record in this IPR?

5 **A. No, we didn't.**

6 Q. How long did you meet with Ms. Entzminger?

7 **A. Oh, sorry. We had two meetings, actually.**
8 **So we met for two hours on Tuesday and for one hour**
9 **on Wednesday.**

10 Q. Were those virtual meetings?

11 **A. Yes.**

12 Q. Have you discussed the substance of your
13 deposition during any of the breaks today?

14 **A. No.**

15 ATTORNEY SKOYLES: Okay. I thank you for
16 your time today, and I have no further
17 questions.

18 THE WITNESS: Thank you.

19 ATTORNEY ENTZMINGER: Thank you.

20 THE STENOGRAPHER: We are off the record
21 at 11:43 a.m.

22 (Witness excused and deposition concluded
23 at 11:43 a.m.)

24

25

1 J U R A T

2

3 I, Sam Malek, PhD, do hereby certify that
4 I have read the foregoing transcript of my
5 testimony, and is an accurate record of said
6 testimony (except for the following corrections
7 listed below):

8 Page Line Correction

9

10

11

12

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16

17

18 SAM MALEK, PhD

19

20 Sworn to and subscribed before me this ____
21 day of ____, 2026.

22

23

24 Notary Public/Justice of the Peace

25 My commission expires:

1 CERTIFICATE OF REPORTER

2

3 I, Deanna J. Dean, Registered Diplomate
4 Reporter, Certified Realtime Reporter, and New
5 Hampshire licensed court reporter, the officer
6 before whom the proceedings were taken, do hereby
7 certify that the foregoing transcript is a true and
8 accurate record of these proceedings; that said
9 proceedings were taken in Stenotype note by me on
10 Thursday, August 13, 2026, commencing at 9 a.m.
11 (PDT) and ending at 11:43 a.m. (PDT).

12 I further certify that present on behalf of
13 Party Toyota Motor Corp was Aidan C. Skoyles of
14 Finnegan, Henderson, Farabow, Garrett & Dunner LLP,
15 and on behalf of Party Emerging Automotive LLC was
16 Brenda Entzminger of Bunsow De Mory LLP.

17 I further certify that I am not related to, nor
18 associated with any of the parties or their
19 attorneys, nor do I have any disqualifying
20 interest, personal or financial, in the actions
21 within.

22 Dated this 26th day of August, 2026, at
23 Hillsborough County in the State of New Hampshire.

24 
25 _____

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