

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VISA, INC.,
Petitioner,

v.

CORTEX MCP, INC.,
Patent Owner.

IPR2024-00486 (Patent 9,251,531 B2)
IPR2024-00488 (Patent 9,954,854 B22)
IPR2024-00489 (Patent 10,749,859 B2)
IPR2024-00490 (Patent 11,329,973 B2)

Record Of Oral Hearing
Held: May 6, 2025

Before SHEILA F. McSHANE, KARA L. SZPONDOWSKI, and
RUSSELL E. CASS, *Administrative Patent Judges*.

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IPR 2024-00488 (Patent 9,954,854 B22)
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IPR 2024-00490 (Patent 11,329,973 B2)

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

(1:01 p.m.)

JUDGE CASS: Good morning, everyone. This is the oral hearing in a series of related cases between Visa, Inc. and Cortex MCP, Inc., IPR 2024-00486, 487, 488, 489, and 490. I am Judge Russell Cass and with me on the panel today are Judges McShane and Szpondowski.

Can we start by having an identification from each side of who is present?

MR. ARGENTI: Good morning, Your Honor. Matt Argenti from Wilson Sonsini on behalf of Petitioner, Visa, Inc. With me today is backup counsel Patrick Medley, and we also have a number of representatives from Visa attending via the public link.

JUDGE CASS: Thank you. And for Patent Owner.

MR. WILSON: Douglas Wilson of Armond Wilson, LLP, for Patent Owner Cortex MCP, Inc. And also watching via the link is at least one representative from Cortex.

JUDGE CASS: Thank you. And now we will now begin. Both sides will have some time to present arguments as to all of the related cases being heard today. As far as your presentation goes, Petitioner will proceed first, followed by Patent Owner's response. Petitioner may then use any remaining time for rebuttal to respond to Patent Owner's arguments and then, finally, Patent Owner may use any of its time for surrebuttal responding to Petitioner's rebuttal.

A few reminders before we begin. As I think one or both of you noted, there is a public line for this case. We're not aware of any

1 confidential information that may be discussed. If that's not the case, please
2 let us know.

3 When you're arguing, please speak slowly. And if you hear
4 another voice, such as myself or one of the other judges appearing remotely,
5 please stop so that people don't talk over each other. That makes it easier for
6 the court reporter and just makes things run more smoothly.

7 If either party believes the other party is presenting an improper
8 argument, such as a new argument that was not made in the parties' briefs,
9 please raise that issue during your presentation and do not object at the time
10 and interrupt the other party's presentation. Also, we've received the parties'
11 demonstratives, and I know you've given at least me a set here. It's your
12 choice, you can refer to them by slide number, or we have them all and can
13 project them if you'd like; whatever you prefer.

14 I'll be keeping time and can give you a warning when you've
15 gone into your rebuttal time if you'd like. Are there any questions from the
16 parties before we begin?

17 MR. ARGENTI: No, Your Honor.

18 JUDGE CASS: All right. Let's start with Petitioner then.
19 Would you like to reserve time for rebuttal?

20 MR. ARGENTI: Yes, Your Honor. You read my mind. I'd
21 like to reserve 15 minutes, please.

22 JUDGE CASS: All right. I will put 45 minutes on the clock.
23 And are you ready to begin?

24 MR. ARGENTI: I am.

25 JUDGE CASS: All right. We will start then.

1 MR. ARGENTI: Again, my name is Matt Argenti on behalf of
2 Visa. Today, I'm going to be referring to our demonstrative exhibits which
3 have been submitted in each of these IPRs as Exhibit 1058.

4 Your Honors, the patents challenged in these four IPRs claim
5 systems for managing and verifying credentials. Patent Owner contends that
6 this extends to tokenized payments, but Patent Owner did not invent
7 tokenization, at least as its own prior art shows. Patent Owner also argues
8 that their key contribution to the field was having the credential issuer verify
9 an electronic representation of the credential. But when they point to
10 examples in their specification, it's things like confirming credential
11 information that's included in a user's request or providing additional
12 credential information or providing an image of the credential. We see the
13 same thing in the prior art of record.

14 Turning to slide 2 now, here we see the grounds of challenge
15 for the 531 patent. We have grounds based on the Osborne reference and
16 grounds based on the combination of Stafford and Purves, and the disputes
17 center on those references. Patent Owner doesn't dispute aspects of the
18 grounds that include the Neafsey reference, or at least not based on the
19 Neafsey reference. There's no dispute, so I won't spend time addressing that
20 one today.

21 Turning to slide 3 and the 854 patent, we, again, see that the
22 grounds involve the same Osborne, Stafford, Purves, and Neafsey references
23 as in the 531. The four challenged patents here all had similar claims, and
24 they're all related. And the disputed issues in these four IPRs largely
25 overlap, so I plan to focus my discussion on the 531 patent and then briefly

1 touch on the other patents at the end.

2 Moving through slides 4 and 5, the grounds for the 859 and 973
3 patents also rely on those same references.

4 So turning to slide 6, the four challenged patents share a
5 common specification. It describes generating and verifying officially
6 verifiable electronic representations of credentials, which the patents call
7 OVER Files. These OVER Files can comprise any officially-verifiable
8 electronic credential; that's what the specification says. And it gives
9 examples, like a driver's license, an ID card, or a professional license.

10 There are three main components or actors in the system that
11 these patents describe. As we see in the figure at the lower left, there's an
12 OVER File Storage Client. We can think of that as a user device for the
13 person with the credential. Then there's an OVER File Generation and
14 Verification Engine. That is the server that generates an OVER File in
15 response to a request from the user. It sends the OVER File to the user, and
16 it responds to requests to verify the OVER File as corresponding to a
17 credential. And, finally, there's the OVER File Third-Party Client. That's
18 the third party that wants the user credential. So a user can use an OVER
19 File to convey some electronic information to the third party, so the third
20 party can then be allowed to reach out to the OVER Engine to get
21 verification of the credential.

22 If we turn to the next slide, slide 7, we see Claim 1 of the 531
23 patent, which is generally represented with the claims at issue here. This
24 claim recites the same three components that we just saw in the figure: the
25 OVER Engine, the OVER File Storage Client device, and the OVER File

1 Third-Party Client verifying device. And it recites the same flow of
2 information that I just discussed: a user requests an OVER File, the OVER
3 Engine provides it to the user, the third party scans information associated
4 with the OVER File from the user's device and sends a verification request
5 to the OVER Engine, and the OVER Engine responds with an authentication
6 message indicating whether the scan corresponds to credential information
7 stored in the OVER Engine.

8 Now, a key disputed limitation here is Element 1.3 that's
9 underlined in red. It requires generating an OVER File comprising a virtual
10 representation of the credential that has been verified by an issuing agency
11 to be an official representation of the credential based on the information
12 associated with the credential of the user. And that gets us to claim
13 construction.

14 Turning to slide 8, here, we see constructions advanced in our
15 petitions. First, we applied construction of the claimed OVER File that
16 encompasses both a file comprising an image of the credential and a file
17 comprising a token. A token is basically a stand-in for a credit card number
18 or other credential. It's a surrogate for the actual credit card number. For
19 example, it could be a randomized number that a customer can use during a
20 purchase to give to a merchant instead of the actual credit card number.

21 JUDGE CASS: Now, counsel, as I'm sure you know, in our
22 decision on institution, we stated that an OVER File encompasses a virtual
23 representation of one or more credentials to be used for verification of those
24 credentials. Do you have any issue with that construction?

25 MR. ARGENTI: Well, so the virtual representation doesn't

1 need to be used for verification, so I would qualify that a little bit. It's the
2 OVER File and it's actually the scan of the OVER File that's transmitted to
3 the third party, so the OVER File needs to comprise a virtual representation,
4 but there's nothing in the claim that requires that the virtual representation be
5 the thing that's used to verify.

6 JUDGE CASS: What would be an example of a situation
7 where verification was done without the virtual credential?

8 MR. ARGENTI: Well, I think exactly as we proposed in our
9 grounds where, in view of the teachings of Purves, there's an image
10 associated with the credential that's provided to the user so that they can
11 keep track of multiple credentials that they have access to at the same time.
12 But that image doesn't need to be what's provided to the third party.

13 JUDGE CASS: I see. So going to the spec of the patent, so
14 Figure 7 and 8, would those be examples of OVER Files?

15 MR. ARGENTI: Let me go back to 7 and 8 here, Your Honor.
16 Your Honor, I don't think that this was something that was teed up in the
17 briefing. I understand you have a question. If the written description says
18 these are examples of OVER Files, I'm not going to dispute that; but I don't
19 know offhand whether the written description actually says that.

20 But what I do know is that the claims aren't limited to the
21 examples in the specification, and they certainly are clear, when they talk
22 about an OVER File that comprises the virtual representation, the OVER
23 File can include other things beyond the virtual representation. And then
24 when you get to the third-party verification, it is based on a scan that's
25 associated with the OVER File. The claims are explicitly written to not

1 require the virtual representation must be the thing that's used for the third-
2 party verification.

3 JUDGE MCSHANE: So, Mr. Argenti, this is Sheila McShane,
4 Judge McShane. So, basically, and let me get this right, so your position is
5 that, essentially, verification of the credentials meets the claim language; is
6 that right?

7 MR. ARGENTI: Verification of the credential -- I think the
8 claim language is verification of an association between the credential and
9 the scan associated with the OVER File. But correct— that one way that
10 that's satisfied is by verifying that the credential, although I want to make
11 sure that we're not getting into a different disputed issue because these
12 claims have a lot of verifications that are written in them. So I believe that
13 the question that Judge Cass had went to what's provided to the third party to
14 be used for the second verification in the claims, which is different than the
15 first verification that's recited when it's talking about generating the OVER
16 File.

17 JUDGE MCSHANE: What I'm talking about is what's recited
18 on -- this is the 531 patent -- recited in Limitation 1.3. That's the verification
19 I'm talking about.

20 MR. ARGENTI: Right. Which is a different verification than
21 what Judge Cass had been asking about, and so, to your question, Your
22 Honor, it's a little bit more nuanced than that, and that's what I was going to
23 get into here and then when we discuss the grounds of challenge. Our
24 construction for the “verified by an issuing agency,” as we see here on slide
25 8, was that the issuing agency has verified a virtual representation in an

1 OVER File as being an official representation of a credential and that is as
2 opposed to just verifying the underlying credential.

3 However, then Patent Owner didn't dispute this construction,
4 but they came back and pointed to the DMV example in their specification,
5 which we said, well, that is verifying the underlying credential information,
6 you're checking the underlying credential information. So based on Patent
7 Owner's arguments, you can verify the credential as a way of verifying the
8 virtual representation. That's not at odds with the construction here, right, as
9 long as the virtual representation is verified. If the means of doing it is by
10 verifying the credential, which appears to be Patent Owner's argument, then,
11 okay, we see plenty of examples of that in the prior art.

12 So I think where our petition presented examples in the prior art
13 of verifying the virtual representation that we're directly verifying the virtual
14 representation. Based on Patent Owner's examples, they view the claim as
15 encompassing that forms of verification of the credential can also extend to
16 verifying the virtual representation.

17 JUDGE MCSHANE: Yes. Well, Patent Owner can speak for
18 themselves in their time, but I thought that in surreply Patent Owner came
19 back and they cite to the spec itself at the time, but they also came back, I
20 think, fairly strongly and said that the verification has to be the verification
21 of the virtual representation, full stop. I mean, I feel like that your
22 contention. If you want to comment on that point. Otherwise, we'll let the
23 Patent Owner speak for themselves.

24 MR. ARGENTI: I do think that's probably a question that's
25 well directed to Patent Owner. In our view, they say that and, yet, they are

1 still pointing to examples of verifying the underlying credential information.
2 They have not backed away from their DMV example. They say that is an
3 example of verifying the virtual representation. And, if that's true, we point
4 to the same things in the prior art.

5 JUDGE MCSHANE: Okay. Thank you.

6 JUDGE CASS: All right. Counsel, I want to follow-up on this
7 a little bit. So we have the DMV example in the spec, and that's verifying
8 the credential itself. You could also verify the virtual representation. So, a
9 virtual representation could be something like, let's say, a QR code, right.

10 MR. ARGENTI: A virtual representation could be a QR code.
11 I would agree that the virtual representation could be the QR code. The
12 claims do require that the virtual representation be verified by the issuing
13 agency, so I don't want to disassociate those limitations or act like I'm, you
14 know, picking the claims apart piecemeal; but I would agree that a QR code
15 could be a virtual representation.

16 JUDGE CASS: Okay. And I think you say, like, an image. Is
17 that another example --

18 MR. ARGENTI: An image, a QR code. I mean, really, as I'll
19 explain in a few slides, I think the parties agree, the experts agree, that all
20 that is required to be a virtual representation in this context is that it be
21 electronic and it, in some way, be associated with, be tied to and be a stand-
22 in for the underlying credential.

23 JUDGE CASS: So, if you have, let's say, a bank account
24 number, if you're transmitting that electronically, it's going to be in 1s and
25 0s, electronic form, does that make it a virtual representation?

1 MR. ARGENTI: I'm not sure that that's an issue that we've
2 reached in the briefing. I think probably it would be based on the broad
3 view that seems to be agreed on here, but we don't need to go that broad
4 when we're looking at the prior art combination.

5 JUDGE CASS: Okay. So when we talk about verifying a
6 virtual representation that would include, let's say, a QR code, checking the
7 QR code to see that the QR code actually represents the bank account
8 number.

9 MR. ARGENTI: Absolutely.

10 JUDGE CASS: Okay. So, I was trying to go back to the spec,
11 and, obviously, we have the driver's license example, which, I think, as you
12 pointed out, appears to be a verification of the underlying credential. Are
13 there examples in the spec, and I know this is not controlling, but are there
14 examples in the spec of verifying the virtual representation rather than the
15 underlying credential?

16 MR. ARGENTI: There is bald language in the specification
17 that says you can verify the virtual representation. Beyond that, I am not
18 aware of examples in the spec of how that would be accomplished. Patent
19 Owner has put forth what they say are examples of that, but, to your point, I
20 don't think there's great disclosure of what they meant by that in the
21 specification.

22 JUDGE CASS: Okay. And just so I'm clear, there appears to
23 be a construction floating around that maybe I should say puts a gloss on
24 your construction here that the verification of the virtual representation can
25 include virtual representation of the underlying credential itself. Is that a

1 construction that you agree with?

2 MR. ARGENTI: I think what's important here is that this
3 construction is undisputed. And then what we're doing is looking at Patent
4 Owner's arguments in response to that where they don't dispute the
5 construction. They say here's an example of it. We're saying the examples
6 in the prior art are the same as that construction. I think Patent Owner has
7 tried to frame this as a claim construction issue. I don't agree that it's a
8 claim construction issue, given that they are, at least on their face, saying
9 that this is not a disputed issue.

10 So, I think asking whether we agree with that construction is
11 really kind of beside the point when Patent Owner themselves are the ones
12 who argue that their example fits within the agreed-upon construction.

13 JUDGE CASS: Well, if you disagreed with the construction,
14 that might be important. So, I guess maybe I should ask it that way: do you
15 have any disagreement with Patent Owner's construction?

16 MR. ARGENTI: We have not taken a position on whether we
17 agree or disagree with that construction, nor do we need to. All we have
18 pointed out is that the prior art discloses what they are saying the claims
19 encompass.

20 JUDGE CASS: All right. Thank you.

21 MR. ARGENTI: So turning to slide 9 and the prior art, first,
22 the Osborne reference. Osborne is a Visa prior art reference describing a
23 tokenized payment system. It provides tokens corresponding to a user's
24 accounts, like bank accounts or credit cards. A user requests a token. The
25 server generates a token and links it to the user's payment account and sends

1 the token to the user to be given to a merchant when making a purchase.

2 The merchant sends the token back to the token server for verification that it
3 corresponds to the account valid for the purchase.

4 And Osborne says the token server can be operated by the issuer
5 of the financial account that's linked to the token, so a bank or a credit card
6 company is the one giving the user a token that corresponds to the account
7 held with that institution. Osborne also says the tokens can be pre-funded,
8 meaning funds are exclusively allocated to that particular token. So what
9 Osborne says is that not only can the bank or credit card company create the
10 token that corresponds to one of their accounts, but there can be verification,
11 Osborne uses the word assurance, of a particular amount of funds available
12 for that token.

13 Turning to the next reference on slide 10, Stafford. As we see
14 in the abstract, Stafford describes a system for storing, and validating, and
15 disseminating credential information. Instead of calling them OVER Files
16 or tokens, Stafford calls its credential stand-ins “key signatures” because
17 they are provided to a third party and used to unlock access to the
18 confidential information.

19 In Figure 2, Stafford describes the process of generating the key
20 signatures and providing them to a user. The credential information is
21 encrypted with a particular one-time pad key, which is then combined with
22 another key and used to generate a hash value, which is the key signature.
23 The key signature is sent to the user.

24 Then, in Figure 3, the user can give the key signature to a third
25 party in lieu of credential information or in addition to credential

1 information. The third party sends the key signature to the system server
2 and is given the credential information in return, thereby authenticating that
3 the key signature corresponds to the credential information stored at the
4 server.

5 Turning to slide 11, like Osborne, Stafford, and the challenged
6 patents, Purves describes a system for managing credentials. Purves calls
7 this a virtual wallet, which you can store a user's payment accounts, so bank
8 accounts, credit cards, gift cards, and other forms of payment can be stored
9 in the payment and used for transactions. Purves explains that the wallet
10 entry can display helpful information related to the credential, like a
11 nickname, the brand of the card, or an image of the card. And Purves also
12 explains that, in some circumstances, the wallet system can generate the
13 credential itself.

14 Now, excuse me, Your Honors. I'm going to skip slide 12 and
15 Neafsey because there are really no disputes that center on the Neafsey
16 reference. So turning to slide 13 and the Osborne combinations. As we
17 explained in the 531 Petition, many of the challenged claims are obvious in
18 view of Osborne alone. For certain dependent claims, we also explained that
19 a person of ordinary skill would have been motivated to combine Purves's
20 teachings regarding credential generation and providing credential images to
21 give a simple visual indication of the credentials available to the user.

22 So turning to the disputed issues, starting on slide 14. Patent
23 Owner argues that Osborne does not satisfy the requirement for a virtual
24 representation that's been verified by an issuing agency. But as we've
25 explained, Osborne teaches or suggests this in multiple ways. First, Osborne

1 discloses that the issuer of the underlying financial account can also be the
2 one generating the token, so that is a verified virtual representation. The
3 token is verified because it is coming from the bank that also manages the
4 account. Consistent with that, as we see here in the top right of slide 14,
5 Osborne says that the token can be linked to the account by servers at the
6 issuer. So the issuer knows that that linkage exists. By providing the token,
7 the bank is verifying it as official and connected to the underlying account.
8 Otherwise, they wouldn't issue it.

9 Now, in slide 15 --

10 JUDGE SZPONDOWSKI: I'm sorry. Is that an inherency
11 argument? Because it kind of sounds like an inherency argument.

12 MR. ARGENTI: No, it's not an inherency argument. It's the
13 described generation of the token by the bank that is the verification. It's not
14 an inherency argument where we're saying, well, that must necessarily
15 happen behind the scenes. It's the generation itself that is the verification
16 and that's specific --

17 JUDGE SZPONDOWSKI: And where does Osborne explicitly
18 say that the token is verified by the issuer?

19 MR. ARGENTI: It doesn't use those words, but the plain
20 disclosure that the issuer of the financial account can be the one generating
21 the token is the explicit disclosure that we're relying on. Patent Owner is
22 placing --

23 JUDGE SZPONDOWSKI: And what disclosure in Osborne and
24 what paragraphs do you think give you the strongest support with that?

25 MR. ARGENTI: Certainly, the paragraphs cited here on slide

1 14, which is disclosing that the issuer of the financial account can also be the
2 one generating the token, as well as the disclosure of the linkage between the
3 two. We may have additional disclosures cited in our briefing. I certainly
4 wouldn't want to remove that from the analysis. But I think this disclosure
5 here is sufficient for the interpretation that the plain disclosure of Osborne
6 disclosed a verification.

7 JUDGE CASS: This is Judge Cass. Let me ask a couple of
8 questions to follow-up on that. So the bank generates the token but has a lot
9 of confidence in its software, so it doesn't have an explicit step where it goes
10 back and checks, you know, does a second check to make sure it did the
11 right thing. Would that be a verification according to Limitation 1.3?

12 MR. ARGENTI: Yes, it would, Your Honor. It would.

13 JUDGE CASS: And why is that?

14 MR. ARGENTI: So we addressed that other circumstance, like
15 in our other reasons that Osborne teaches or suggests this. But just the
16 generation itself is, to the user, a verification that the token is linked to the
17 account. The claims don't require to whom the verification is -- they don't
18 require a verification message at all. Patent Owner's expert conceded that
19 during his deposition. So they also don't require a particular party or entity
20 be the one for whom this is verified. The generation by the bank is a
21 verification for the user.

22 JUDGE CASS: So if that's the case, I mean, what's the purpose
23 of including this "has been verified" language? Couldn't the claim just say a
24 virtual representation of the credential that was, you know, issued by an
25 issuing agency? What additional meaning does the word verification have?

1 MR. ARGENTI: I think that's probably a better question for
2 Patent Owner in terms of what's the purpose of it. But I will say that if the
3 claim recited generated by an issuing agency, that would be much narrower
4 from the certain perspective of the current claims don't require any -- it's the
5 OVER Engine that's generating. It doesn't require that the issuing agency be
6 the one doing the generating, so that would be a narrowing limitation from
7 that perspective.

8 I think, here, it's really a special circumstance in Osborne where
9 Osborne is talking about the bank being the one generating the token. We're
10 not contending that any and all generations of tokens or virtual credentials
11 satisfy this limitation. We're not reading the limitation out of the claim.
12 We're pointing to a particular disclosure in this prior art reference that
13 satisfies it.

14 JUDGE CASS: So, in other words, I mean, by having the
15 issuing agency, having the issuing agency involved is kind of what
16 Limitation 1.3 is really directed to, that you couldn't have just some other
17 party generate a representation without involvement of the issuing agency
18 because then you might not know, you might not have as much confidence
19 that it's accurate.

20 MR. ARGENTI: That's exactly right, Your Honor. The claim
21 requires the involvement of an issuing agency. It does not require that the
22 issuing agency be the one generating the token. But what we're pointing to
23 in Osborne, where it is the issuing agency that generates the tokens, that's one
24 way that this limitation is satisfied.

25 JUDGE CASS: All right. I apologize, but I'm going to ask you

1 a question about the patent again, so you might need to get your notebook.

2 MR. ARGENTI: Okay.

3 JUDGE CASS: I'm looking at, just happen to be looking at the
4 489 case. But, in that case, paragraph 47, there's what appears to be a code,
5 XML, listing of what I think is the token, and there's various different, I take
6 it, pieces of data in there, including client details, client fingerprint, some
7 other stuff, a bunch of other stuff. I guess my first question is: is that the
8 token in Osborne? My second question is what would be the virtual
9 representation in there?

10 MR. ARGENTI: So just to be clear, we're looking at paragraph
11 47 of Osborne and, in particular, the example token data structure.

12 JUDGE CASS: Yes.

13 MR. ARGENTI: So to your question, yes, this is one example
14 of a token in Osborne, and it's something that we cited and that both parties
15 have had arguments about. In terms of what is the virtual representation, I
16 think it's the entire token data structure or whatever -- the entire token data
17 structure. It's not just the account number or anything like that. The token
18 itself is the virtual representation of the underlying encounter.

19 JUDGE CASS: Okay. So then your position is, by the process
20 of having the issuer generate this XML token data structure, that would be
21 the verification in the step 1.3?

22 MR. ARGENTI: Right.

23 JUDGE CASS: All right. Thank you.

24 MR. ARGENTI: So, now, turning to slide 15, and, as if the
25 plain disclosure we just discussed wasn't enough, Patent Owner's arguments

1 confirm that Osborne satisfies the verification requirement. As we've already
2 discussed, they point to a DMV example in their Patent Owner response.
3 Osborne discloses, essentially, the same thing. It says that the token issuer
4 can first obtain assurance that funds from the funding source have been
5 uniquely allocated for the token. And Osborne also talks about contacting the
6 pay card issuer for confirmation of the pay card information. That is no
7 different than their DMV example of reaching out to the DMV to obtain
8 information for the OVER File. This is funding and account information for
9 the token in Osborne.

10 Turning to slide 16, apart from Osborne's express disclosure of
11 this limitation, the petition also explained that it would have been obvious.
12 As our expert, Dr. Shamos, testified, the bank or other account issuers would
13 logically verify that the token accurately represented the credential before
14 providing it to a customer. So this goes to the question about inherency. If
15 there's an underlying separate step that's required, that's what we're saying is
16 obvious. I don't think the claims do require that, but that would have been
17 obvious in view of Osborne.

18 As Dr. Shamos explained, it would be a problem if tokens were
19 out there in the marketplace that had not been linked to a payment account,
20 particularly where the bank was the one that issued the token from one of its
21 own customer's accounts. Verifying that the token was linked to the
22 credential would, of course, increase confidence among customers,
23 merchants, and even the bank that the token legitimately represented the
24 credential.

25 Think about the alternative. Patent Owner is proposing that

1 Osborne be interpreted to suggest that a bank would get a request from a
2 customer for a token linked to an account at the bank, and the bank would
3 issue the token without ever confirming that the account actually existed.
4 That's an unreasonable interpretation of Osborne, and it certainly doesn't
5 undermine our obviousness showing. In fact, as we see here on slide 16,
6 Patent Owner's expert conceded that he had not considered whether it would
7 be desirable for Osborne to provide tokens that had been properly linked to a
8 payment account. And when asked, he admitted that might possibly be true.
9 Of course it's true. Patent Owner has no legitimate argument that it isn't.

10 JUDGE MCSHANE: Mr. Argenti, on this issue, looking at the
11 testimony, there is the concept that, you know, it's a routine step and it's
12 logical and so on, and Patent Owner made arguments that what his testimony
13 really represents is that the expert is employing common sense. What do
14 you have to say about that?

15 MR. ARGENTI: Well, as we say in our briefing, this is not a
16 common sense analysis. The Federal Circuit has a particular framework for
17 a common sense analysis. We did not make a common sense assertion here.
18 Those are not words that you will find in the expert testimony or in the
19 petition.

20 So there's very little support for Patent Owner's argument that
21 arguing something is routine or logical somehow transforms it into a
22 common sense analysis that requires the Federal Circuit framework. The
23 Federal Circuit certainly has not said that. When you look at the two
24 previous Board cases that they're citing for this sleight of hand, it doesn't
25 hold up. In those cases, there were multiple steps interrelated and dependent

1 on each other and multiple modifications of the prior art to arrive at the
2 claimed invention.

3 That's not at all what we're doing here. Our obviousness theory
4 is rooted in Osborne's disclosure, the things that Osborne says. Osborne says
5 the bank can issue a token. Osborne says there can be linkage at the financial
6 institution associating the token with an account.

7 All Dr. Shamos is saying is, yes, it would make sense to do that
8 before you're issuing the token for the user. The bank has a lot of reasons to
9 make sure that the underlying account actually exists and is linked to the
10 token. So this is very different. This is not a common sense analysis.

11 JUDGE MCSHANE: Okay.

12 JUDGE CASS: So let me ask another question just to make
13 sure I understand in your obviousness argument, you know, what is the
14 verification that's being done here. So if we take, as an example, this XML
15 token in paragraph 47 of the patents of Osborne, in your obviousness
16 analysis, you know, what is it that you're saying is obvious, would be
17 obvious to do here? Is it go through and verify all the information in the
18 token? Is it verify the account number? You know, what specifically --

19 MR. ARGENTI: So we can focus on the account number in
20 particular, right. The user sends a request for a token. Say I want a token
21 for my bank account. Here's the account number. Lacking this obvious
22 limitation, the bank would just issue a token for that account number without
23 ever actually looking up or confirming that that is an account number at the
24 bank. So that's what we're saying is obvious is that not just creating the
25 linkage but also confirming that that's an actual account number and then

1 confirming that this token is now linked with this account number.

2 JUDGE CASS: So wouldn't that be verification of the
3 underlying credential and not verification of the virtual representation?

4 MR. ARGENTI: So they're related to each other, but they are
5 distinct from each other. You could get the request from the user and verify
6 the account. What we're saying is that it would be obvious to confirm the
7 linkage between the token and the account, not just confirming that the
8 account exists but then confirming that this linkage exists, which is right
9 there in the example token.

10 So, again, this is not a huge link for obviousness. It's supported
11 by the disclosure in Osborne.

12 JUDGE CASS: So it wouldn't be going to the account and
13 saying is this a valid account in general and is there money in it. It would be
14 looking at the, for instance, looking at the token file, seeing the data that's in
15 the token file, putting that into a database, seeing if it returns the account, et
16 cetera.

17 MR. ARGENTI: It would be both, but, yes, certainly, we're
18 arguing that it would be obvious to verify the linkage between the token and
19 the account before providing the token to the user.

20 JUDGE CASS: All right. Thank you.

21 MR. ARGENTI: So if we turn to slide 17, the only other
22 argument that Patent Owner has with respect to Osborne and the independent
23 claims of the 531 patent is that we failed to identify with particularity what
24 aspect we rely on for the OVER Engine claim element. They argued in their
25 Patent Owner Response that we relied on Osborne's PPT system generally,

1 but I want to read a quote from their Preliminary Response: “Again and
2 again, the petition points to Osborne's token server to satisfy the OVER
3 Engine claim limitations.” They knew exactly what we were relying on at
4 that point.

5 And when we pointed out that we cited the token server, rather
6 than the claim and merchant portions of the PPT, then they came back and
7 said that we relied on the token database for one aspect of the claims, not the
8 token server. But Osborne describes that the token server and the token
9 database can be integrated together, for example in Figure 15 and related
10 written description, like paragraph 152.

11 JUDGE MCSHANE: So on this one, Mr. Argenti, so just
12 looking at Figure 4, okay, we just looked at Figure 4. When you're doing the
13 mapping, right, what are you mapping in this Figure 4 to the OVER engine
14 specifically?

15 MR. ARGENTI: Sorry, Your Honor. Let me just flip to Figure
16 4. I think it's starting off on the wrong foot to say that this is the only
17 mapping that we have. Certainly, we have been clear that we are mapping to
18 the token server; and, certainly, we cite and rely on Figure 4. But, again, we
19 rely on other disclosure from Osborne saying that these are not all distinct
20 components from each other. They can be. They don't have to be. They
21 can be combined. And, certainly, there is disclosure that we have cited of
22 the token server and the token database being combined.

23 So we are relying on the token server. We also cited the token
24 database functionality with respect to, I believe it's Claim 1.6. We don't
25 dispute that.

1 JUDGE MCSHANE: All right. Thank you.

2 JUDGE CASS: So, in other words, it would be within your
3 position that the OVER generation engine is the token server in combination
4 with the database, whether those are the same thing or separate things.

5 MR. ARGENTI: Agree, except to the extent that Patent Owner
6 argues they can't be separate and fall within the scope of the claims, I don't
7 think they've really teed that up in their briefing. So I don't want to fall too
8 hard into a concession here at oral argument, but, certainly, we're citing both
9 of those. They're explicitly cited in the petition.

10 JUDGE CASS: All right. Thank you.

11 MR. ARGENTI: Thank you. So that is the discussion of
12 Osborne and Claim 1. Now, I'm mindful of the clock and that my time is
13 rapidly ticking. You've had a lot of great questions. Does the Board have
14 any guidance as to whether they would prefer that I move on to the
15 dependent claims for Osborne or the Stafford ground?

16 JUDGE CASS: I'll just tell you you've got seven and a half
17 minutes, and I don't have a preference.

18 MR. ARGENTI: Okay. I'm going to keep moving through
19 then and we'll see what we can fit in here. For Dependent Claim 2 on slide
20 18 of the Osborne grounds, this claim recites a second OVER file for use on a
21 second device of the user that's invalid for use on the first user device.
22 There's no dispute at this point that Osborne discloses that the user can have
23 multiple devices. Osborne also teaches device fingerprinting for security,
24 which Dr. Shamos explains is a technique that ties particular credentials to
25 particular devices. As seen here, that includes an example in Osborne where

1 the token file includes a device MAC address.

2 So if we turn to slide 19, as Dr. Shamos explains, in view of
3 Osborne's disclosure of multiple user devices and client fingerprinting, it
4 would have been obvious to a POSA to use the device fingerprinting for
5 device-specific tokens invalid for use on other user devices. In particular,
6 Osborne discloses an interface for creating new tokens where the user can
7 select the activated devices for that token. If the token was automatically
8 valid for all user devices, as Patent Owner argues, that configuration in
9 Osborne doesn't make sense.

10 If we turn to slide 20 and Dependent Claim 7 and 20 --

11 JUDGE CASS: Before we move on from Claim 2, so Claim 2
12 requires that the official representation or the second OVER File is invalid
13 for the first OVER File. Using the XML example in Osborne that we looked
14 at, how would that work? If somebody tried to use the token for, let's say,
15 an iPhone but they were using an iPad, or I tried to use the one from my
16 iPhone but I was using my iPad and that had a different device fingerprint
17 than -- I take it that wouldn't work.

18 MR. ARGENTI: That's right --

19 JUDGE CASS: How would that actually get implemented?

20 MR. ARGENTI: Dr. Shamos explains that's what client
21 fingerprinting is, that's what device fingerprinting is, is that, when you have
22 a device ID, like a MAC address that's built into the token structure, then the
23 request to use the token has to be coming from that device or else it wouldn't
24 work.

25 JUDGE CASS: And when you say it wouldn't work, does that

1 happen -- how does that happen? The device sends, is the device rejected, or
2 would the third-party verification apparatus reject it? At what point would
3 that happen?

4 MR. ARGENTI: I don't think Osborne is specific on the details
5 of the operation, so I don't think it's limited to one of those options. I think,
6 practically, it would more likely be coming on the server side, potentially on
7 the user side. It's hard to envision it happening with a third-party device, but
8 I'm not a software engineer, so maybe it could be.

9 JUDGE CASS: Okay. Thanks.

10 JUDGE SZPONDOWSKI: I have a question about that, as
11 well. Can you just clarify, because I'm just not following, how the
12 fingerprinting shows that it's invalid for use in the first OVER File Client or
13 Storage Client device?

14 MR. ARGENTI: So the fingerprinting identifies the devices on
15 which it is valid for use; and, therefore, it is implicit that it is invalid for use
16 on other devices.

17 JUDGE SZPONDOWSKI: I would be using the same
18 fingerprint on my iPhone versus my iPad, wouldn't I?

19 MR. ARGENTI: Not when the fingerprint is specific to a
20 device ID, such as a MAC address.

21 JUDGE SZPONDOWSKI: Okay. Thank you.

22 MR. ARGENTI: So slide 20, Claim 7 and 20, here, the claims
23 require a status indicator indicating an invalid credential and credential
24 information that indicates a reason for an invalid credential. As we pointed
25 out, there are numerous examples of this limitation in Osborne, including

1 sending one type of rejection message for insufficient funds and a different
2 message for exceeding the maximum number of allowed transaction
3 attempts. Moreover, as Dr. Shamos explained, these elements in this claim
4 limitation were commonplace and would have been readily apparent in view
5 of Osborne's teachings, as well as the state of the art.

6 Patent Owner has no meaningful response, other than to say Dr.
7 Shamos's testimony is conclusory and uncorroborated, but that's not true.
8 Unlike Dr. Malek, Dr. Shamos cites numerous examples corroborating his
9 testimony about the state of the art and impose his understanding of Osborne.

10 Turning to the next slide, 21, in Claims 8 and 29, this goes to
11 the remote storage requirement. As we explained in our petition, Osborne
12 expressly discloses use of remote storage facilities for its PPT system. We
13 see that in paragraph 133. Patent Owner argues that only applies to program
14 components and not databases or data components. That's a false
15 distinction. Osborne talks repeatedly about use of distributed databases
16 consistent with this remote storage disclosure.

17 JUDGE MCSHANE: Mr. Argenti, I think Patent Owner also
18 asserts that you're citing to paragraph 150 is new in reply. What's your
19 response to that?

20 MR. ARGENTI: This is not a paragraph that we cited for this
21 claim in the petition. This is in response to their argument. They said that
22 we, the Petitioner, was misinterpreting paragraph 133. In response to that, to
23 rebut that argument, we cited plenty of other aspects of Osborne that are
24 entirely consistent with our interpretation of paragraph 133.

25 JUDGE MCSHANE: All right. Thank you.

1 MR. ARGENTI: So turning to the next slide, slide 22, and
2 Dependent Claims 12 and 13 where Patent Owner argues that our mapping
3 is inconsistent with Claim 11, all of these claims recite a credential
4 identifier. And for that, they say that we rely on Osborne's account number
5 for Claim 11 but Osborne's token identifier for Claim 12. The issue here is
6 pretty simple. We cited both the account number and the token identifier
7 with respect to Claim 11, so our mapping in Claims 12 and 13 is not
8 inconsistent.

9 Turning to slide 23, Independent Claim 19, this requires that the
10 OVER File comprises a credential image. Here, we refer to Purves. We
11 brought Purves in for that aspect of the claim. Their arguments here are
12 repeats of the security arguments and other arguments that they make with
13 respect to the Stafford ground. They can be rejected for the same reasons.
14 Hopefully, I have time to get to that.

15 JUDGE CASS: Yes. You have about 30 seconds before you
16 start going into your rebuttal time.

17 MR. ARGENTI: Understood, Your Honor. Thanks. I think I
18 probably will go into my rebuttal time just a little bit. For slide 24 and
19 Dependent Claim 23 and some others that depend from it, Claim 23 recites
20 that the OVER Engine requests the credential from the issuing agency.
21 Their argument here is that we did not provide a motivation to do this, but,
22 as we pointed out in our reply, this aspect of Purves that we are relying on is
23 part of what Purves describes in terms of generating and adding a credential
24 to the wallet, in particular adding it to the wallet. That's what we addressed
25 in the motivation. We explicitly referenced Claim 23 in our motivation, so

1 there's no credible argument that we did not include this in our rationale to
2 combine.

3 Now, turning to slide 25 and the combination of Stafford and
4 Purves, as we've explained in the briefing, this combination brings in Purves'
5 teachings regarding representative credential images that Purves describes as
6 a way to help users identify the key signatures to be given to a third party,
7 and it brings in its teachings regarding use of QR codes as a way to convey
8 the key signatures in Stafford and to the third party, which would increase
9 convenience and reliability.

10 We can turn to slide 26. Specifically, when addressing Element
11 1.3 of Claim 1, we explain that in the combination of Stafford and Purves,
12 the OVER File would include the key signatures encoded in QR format, as
13 well as an issuer-verified image that represents the credential. Again, this
14 will help the user manage the key signatures and identify which one they
15 want to use, which one corresponds to particular credential information, and
16 also provides a convenient means to pass the key signatures along to a third
17 party using that QR code.

18 So turning to slide 27, looking at the key signatures, the key
19 signatures on their own satisfy Element 1.3, which is disputed here. These
20 are a virtual representation of the credential. The parties agree that virtual in
21 this context just means electronic or digital, and the experts also agree, as we
22 see on this slide, that the key signatures represent the user's credential
23 documents. We see that in Dr. Malek's testimony, as well as Dr. Shamos's
24 analogy to a coat check ticket. So there's no dispute about the virtual
25 representation requirement.

1 The key signatures are also based on information associated
2 with the credential. They are generated as a result of a request to prepare the
3 credential information for release, and they are specifically tied to that
4 credential information. Plus, the key signatures are computed from the one-
5 time pad key that is used to encrypt the credential information. That one-
6 time pad is information associated with the credential because it's what's
7 used to encrypt and decrypt it, and the key signature is based on the one-time
8 pad.

9 Finally, based on Patent Owner's DMV example that we talked
10 about for Osborne, the key signatures are verified by the credentials-issuing
11 agency because Stafford teaches verifying the underlying credential
12 information. So Stafford on its own is known to satisfy Element 1.3, but
13 then we get to Purves in the combination.

14 So we can turn to slide 28. There's no dispute that the images
15 Purves teaches are virtual representations verified by the issuer as official
16 representations, and they are, of course, based on information associated
17 with the credential because they are based on the credential itself, regardless
18 of whether the image is a generic representation of the image or an actual
19 image of the credential. So Patent Owner's arguments attacking Stafford is
20 lacking that and failed to address the grounds combination. And looking at
21 Patent Owner's arguments that Purves comes up short—they're easily
22 dismissed.

23 Turning to slide 29, first Patent Owner argues that Purves does
24 not disclose storing the credential representation on a user device. Well,
25 again, there's no dispute that Stafford and the ground or the combination

1 satisfies this. And, regardless, Patent Owner mischaracterizes Purves, which
2 does teach storage. Dr. Malek conceded that it has transient storage. It's
3 admitted. It has web page form to the user's device. It's stored in a RAM for
4 display to the user. Patent Owner has never raised any argument why that
5 wouldn't be enough to satisfy the claims.

6 Turning to slide 30, Patent Owner argues that Purves somehow
7 fails to satisfy Element 1.3 because the reference doesn't disclose using card
8 images or verification. But, again, this goes to the two verifications in the
9 claims that we talked about earlier. That argument is based on the second
10 verification, not the first verification. So we don't need to use the card
11 images to verify the OVER File with the third party. All we need to do is
12 have verified card images included in the OVER File, and that's in our
13 combination and they've never disputed that.

14 So turning to slide 31 and the disputed issues of the rationale to
15 combine. They argue that Purves' electronic wallet teachings don't make
16 sense to combine with Stafford. Patent Owner's argument presumes that the
17 credentials are released at the same time that the key signatures are
18 generated. They say, well, if you're releasing the key signatures at the time
19 you acquire them, why do you need to keep track of them. But that's not
20 what Stafford teaches. Remember, Stafford discloses key signature
21 generation and credential release as two separate processes, Figure 2 and
22 Figure 3. So the user receives the key signatures, but they aren't used until
23 the user gives them to a third party to be exchanged for the credential. And
24 Stafford says that the user can have multiple sets of key signatures at the
25 same time, so it makes perfect sense to give the user a tool to keep them

1 straight.

2 Turning to slide 32, Patent Owner argues that the one-time use
3 key signatures in Stafford don't make sense to combine with the teachings of
4 --

5 JUDGE SZPONDOWSKI: Mr. Argenti.

6 MR. ARGENTI: Yes.

7 JUDGE SZPONDOWSKI: I'm sorry. Could you just explain a
8 little more what this combination looks like? You want to incorporate
9 Purves' credential images into Stafford's system when Stafford gave a hash
10 value that's then mapped to the virtual credential representation of the stored
11 credential, and I guess I'm just struggling with why a person of ordinary skill
12 in the art would be motivated to add those images to Stafford's system and
13 what that looks like.

14 MR. ARGENTI: In terms of what it looks like, I mean, the best
15 -- we didn't design a particular embodiment of how this would be combined,
16 but I can give you kind of an abstract representation if we flip back to slide
17 26 where we have the keypad signature that's encoded in QR code format, as
18 well as the card. This is the information that we are saying would be
19 included in the OVER File that's sent to the user. As opposed to just a key
20 signature that's a string of characters, we're encoding the key signature as a
21 QR code and we're adding an image to the OVER File that's going to help
22 the user keep that straight.

23 In terms of the motivation to do it, we have identified, as I just
24 mentioned, that the image would help the user keep this straight when the
25 user has multiple key signature OVER Files for multiple different packages

1 of information, which is consistent with what Stafford says. And it is going
2 to give the user a convenient way to communicate the key signatures to the
3 third party with the QR code scan. As Dr. Shamos explains, if you're doing
4 this manually by writing down numbers or having the third party copy
5 something off a screen that's prone to error, it's more labor intensive. The
6 QR code is an easy scan that was widely used at this time. Neither one of
7 those beneficial motivations is disputed. They have no response that that
8 wouldn't happen in this combination. Their arguments about why the POSA
9 wouldn't do it go to the security issues, to the disparate relationship
10 purportedly between these references. So they're not arguing that those
11 would not be helpful modifications.

12 I'm going to try and save myself five minutes, Your Honor, so I
13 will get through -- given that I've touched on the rationale and the arguments
14 against the rationale right there, they're incorrect. As we see on slide 31, 32,
15 which is where we address that these references, Stafford and Purves, are not
16 so different. There's no big distinction between an electronic wallet and
17 one-time use key signatures. Purves discloses storing things in the wallet
18 that are used one time, whereas Stafford discloses applications that are
19 entirely consistent with what Purves is talking about, whether it's e-
20 commerce purchases of goods or services. So there's quite a bit of overlap
21 between these references.

22 As to the security arguments that Patent Owner has raised, none
23 of them hold up. Both references teach encrypted communications, which,
24 basically, gets rid of all of their security concerns. If you're encrypting the
25 package of OVER File information that's sent, the image, as well as the key

1 signature, whether in QR code format or not, that's going to be a secure form
2 of transmission that's consistent with what's going on in both Stafford and
3 Purves. There's certainly nothing in Stafford that indicates only the key
4 signatures and just the key signatures can be transmitted to the user. In fact,
5 when the key signature is used to unlock the credential information, the
6 credential information is provided to the third party, including by
7 transmission to the third party. So there is nothing in Stafford that's
8 consistent with Patent Owner's argument that, whoa, you can't send anything
9 other than the key signature, that's a big safety breach.

10 So I think that can conclude the Stafford and Purves discussion.
11 Unless there are any other questions, we can jump to slide 37, 38, 39.
12 Essentially, we have tables here listing how these issues for the 531 patent
13 match up to the disputed issues in the other patents. They entirely overlap.
14 They don't have arguments for the other patents that are unique beyond what
15 we just discussed, except for, if we turn to slide 40, Claims 19 and 21 of the
16 859 patent --

17 JUDGE CASS: I'll just let you know you have about five
18 minutes left of your rebuttal.

19 MR. ARGENTI: Thank you, Your Honor. I will briefly point
20 out their argument that we didn't present argument on those claims in the
21 petition is not true. We identified them with particularity in the grounds.
22 We also, as we have here on this slide, explicitly said in the petition that
23 Claims 19 and 21 have the same content as Claim 2 of that patent. We
24 provided the same, the detailed argument for slide 2 -- Claim 2. I'm rushing.
25 And then our expert, Dr. Shamos, confirms that the same analysis applies,

1 but you don't even need to turn to Dr. Shamos's analysis when we have
2 assertions in the petition that all three of these claims are the same, they
3 provided their substantive rebuttal to this issue on the merits of the prior art
4 in their surreply, so there's really no valid argument that we didn't address it
5 in the petition. Thank you.

6 JUDGE CASS: All right. Thank you, counsel. You have four
7 minutes remaining in your rebuttal time. All right. Counsel for Patent
8 Owner, would you like to reserve time for rebuttal?

9 MR. WILSON: I'd like to reserve five minutes.

10 JUDGE CASS: Five minutes. Okay. Get that set up here. All
11 right. So are you ready to begin?

12 MR. WILSON: I'm ready, Your Honor.

13 JUDGE CASS: All right. You may begin.

14 MR. WILSON: All right. Thank you, Your Honors. I'm going
15 to jump right in, and I'm going to start on slide 3 on my demonstratives.
16 And what I plan to cover this now-afternoon, at least for those of us in
17 Denver, are the issues that I think are simplest and cleanest for the Board to
18 simply reject all of the Osborne and Stafford grounds. So I won't be going
19 through all the dependent claims, for example, but, if Your Honors have
20 questions, I'm happy to answer them. And if not, we'll just rest on our
21 briefing for those claims.

22 So I'm going to jump right in with the first issue on slide 3,
23 which is that Visa failed to show any art meets Visa's construction of
24 issuing-agency verification. Now, if we look at slide 4, what we have on
25 slide 4 is the 531 Petition argument, Visa's argument, on claim construction.

1 I think I heard Mr. Argenti say earlier that this is not a claim construction
2 issue; and, yet, that is exactly how the Petition tees it up. It is this is in the
3 claim construction section and, looking at the middle of the paragraph there
4 on slide 4, they say, during prosecution, applicant argued that this phrase
5 requires that the issuing agency verified that the virtual representation is an
6 official representation of the credential. Accordingly, the petition construes
7 this phrase to require that an issuing agency have verified a virtual
8 representation in an OVER File as being an official representation
9 credential. That's their Petition construction.

10 Now, as we've heard, they are abandoning that in reply, but this
11 is the Petition. If we turn to slide 5, we're going to see there's a reason they
12 took that position, and that's because, on slide 5, you'll see claim 1 of the 531
13 patent, but every challenged claim has this same language. It's a virtual
14 representation of the credential that has been verified by an issuing agency
15 to be an official representation of the credential. That's the actual claim
16 language. Their construction just mimics the words of the claim. That's not
17 something you can run away from. That's not something you even need to
18 construe. It is literally the words of the claim.

19 So turning to slide 6, when Visa comes back in reply and says
20 Patent Owner concedes that something less than this can satisfy the claim,
21 we can't. The claim language is what the claim language is. We can't
22 change the words of the claim any more than Petitioner can, and so we can't
23 say, hey, the claims don't actually require this. They do. And aside from
24 that, we didn't say that. If we look at slide 6 and the language from Visa's
25 reply brief, it says Patent Owner argues that an example of the specification

1 corresponds to this limitation. In this example, the OVER Engine checks the
2 driver's license number against the DMV's database. The database's
3 response includes additional information, e.g. a name and address and
4 credential image, and indicates the validity of the requested credential.
5 Patent Owner, thus, admits that a virtual representation of the credential may
6 be verified by an issuing agency by checking credential data against an
7 issuing-agency database.

8 We admitted no such thing, first of all. That example involves
9 actual verification of the virtual representation, as I'll point out momentarily.
10 And when it says the validity of the requested credential in that quote, the
11 requested credential there, as we'll see, is, in fact, an OVER File. So what
12 it's indicating is the validity of the OVER File. But the column 6 in the 531
13 patent makes that abundantly clear, as I'll show you in a moment.

14 But aside from the fact that this is factually incorrect, it is
15 legally irrelevant. We can't change the words of the claim. They say what
16 they say, and Visa has to show what the claims say, not what it says we
17 contend.

18 Now, turning to slide 7 --

19 JUDGE MCSHANE: So, counsel, on this point, okay, just to
20 be clear, you know, the Petitioner would say you admitted this, you're
21 saying, no, you didn't admit this, and you're saying that just doing this
22 verification cannot in its step, step 1.3, it cannot be just checking the
23 credential data; is that your position?

24 MR. WILSON: That is our position, yes, that the words of the
25 claim say that the virtual representation must be verified by an issuing

1 agency and that must happen for the claim to be satisfied. Checking
2 underlying credential data is insufficient.

3 So looking at slide 7, this is column 6 from the 531 patent, but,
4 as counsel for Visa articulated, all the specifications are the same. This
5 language is in every patent. You can see on the first paragraph we're
6 discussing this example, and the highlighted language there in the top
7 paragraph says the application gateway may request 126 generation of the
8 OVER File. So let me stop right there. What's being requested is generation
9 of an OVER File. That's the requested credential.

10 It goes on to say verification of the generated OVER File
11 credential. So what's it asking for? Two things: generate an OVER File and
12 verify the generated OVER File credential. It's asking for the same two
13 things that the claim says. And when we look down at the bottom, we can
14 confirm that that, in fact, happens. It says the issuing agency may also
15 provide a status indicator for the generated OVER File credential.

16 So, again, not only did it say it was verifying the requested
17 credential, which is the OVER File, it also provides this additional example
18 where the issuing agency provides a status indicator for the generated OVER
19 File credential. These are examples of verifying the OVER File, which
20 contains the virtual representation.

21 And if I may add, because I think this will come up later, if you
22 look in that bottom quoted portion on slide 7, just above the highlighted
23 portion it says, in some embodiments, the OVER File may be generated by
24 the issuing agency database 130 and sent to the OVER File database 128 for
25 storage and distribution to the user device. Here, the OVER File in this

1 example is being generated by the issuing agency, and guess what? It still
2 provides a status indicator for the generated OVER File credential. So
3 there's no question generation and verification are two distinct steps.

4 JUDGE CASS: So, counsel, what was the example of the
5 status indicator here?

6 MR. WILSON: The status indicator would be -- it could just be
7 a true or false bit, right, or it could be a valid or invalid, anything like that
8 that says this OVER File is a valid representation of the underlying
9 credential because, as the patent discusses elsewhere, for example, the
10 OVER File can expire, right. And if that expires, it just changed to invalid.
11 Now, all of a sudden, it's no longer verified. And so any indication by the
12 issuing agency that the OVER File is a valid representation of the underlying
13 credential would suffice.

14 JUDGE CASS: And, counsel, I'm not sure if you're going to
15 get to this, so, in your Patent Owner response, you did cite this driver's
16 license example in the patent, which does seem to suggest that what's being
17 verified in that example is the driver's license. Is that an example of the
18 verification step of Limitation 1.3?

19 MR. WILSON: So the passage, which, by the way, is at page
20 12 of the Patent Owner response in the 531 patent, the 486 IPR, that passage
21 says the issuing agency database may respond by indicating the validity of
22 the requested credential. The requested credential here is the OVER File, as
23 we just saw from the top of column 6. On slide 7, it says the application
24 gateway may request generation of an OVER File and verification of the
25 generated OVER File credential. So that language referring to the validity

1 of the requested credential is the OVER File, the validity of the OVER File.

2 Now, whether you agree with that interpretation or not, column
3 6 is specifically describing verification of the OVER File, as we just saw.
4 So whether you like this passage or whether you would refer to the bottom
5 of column 6 and the status indicator or the top of column 6 where it says it's
6 explicitly requesting verification of the generated OVER File credential,
7 whichever of those you choose, the point is this is an example of two things:
8 generation of an OVER File and verification of the OVER File. So whether
9 you agree or disagree that the requested credential there in the passage
10 quoted on page 12 is the OVER File, the point was, in this example, an
11 OVER File is verified and column 6 is abundantly clear about that.

12 JUDGE CASS: So let me try to understand this driver's license
13 example better. So, here, in this example, the entity that's generated the
14 OVER File, is that the DMV or is that some other entity?

15 MR. WILSON: So it can be either one and, in fact, at the
16 bottom of column 6, it's actually the DMV, right. The portion that shows up
17 on slide 7 that I quoted to you earlier, it's actually the DMV that's providing
18 it.

19 JUDGE CASS: Okay. So then it says in column 6 that the
20 OVER File database may contact the state DMV or provide the driver's
21 license identification number to the issuing agency database. And then it
22 says the issuing agency database may respond to indicate the validity of the
23 requested credential containment with the driver's license identification
24 number. So it's a little unclear to me whether -- when I first read this, this
25 suggested to me that it was providing the driver's license number and it was

1 then indicating the validity of that number and then providing information
2 linked to that number, such as the person's name, address, et cetera. You say
3 that's not what's happening here?

4 MR. WILSON: What I'm saying is, when it says our
5 interpretation of this passage is, when it says indicating the validity of the
6 requested credential, we understand that to be referring to the requested
7 OVER File credential because, earlier in column 6, it says we're requesting
8 an OVER File and verification of that OVER File credential.

9 JUDGE CASS: Why is it saying to provide the driver's license
10 identification number?

11 MR. WILSON: Because the OVER File contains the driver's
12 license number.

13 JUDGE CASS: But what it's verifying is the number, right, not
14 the virtual representation of the number; isn't that true? I mean, I guess I'm
15 not seeing -- what it seems here to be saying is that it's verifying the number.

16 MR. WILSON: I disagree, Your Honor. I think it's referring to
17 the requested credential, which is the OVER File. But whether you agree or
18 disagree, in column 6, it is verifying an OVER File, and you can see that
19 down here at lines 59 through 61 where it says the issuing agency may also
20 provide a status indicator for the generated OVER File credential. It is
21 plainly providing a verification of the OVER File credential.

22 So whether you agree or disagree with the portion that we
23 quoted, column 6 is an example of a clear disclosure of verification of an
24 OVER File credential.

25 JUDGE CASS: Could OVER File credential, could that mean a

1 credential that is stored in the OVER File, such as a driver's license number?

2 MR. WILSON: So if we take a look at column 6 and my
3 references are to the 531 patent, but, again, this is in every other patent just
4 in a slightly different citation. But column 6, lines 18 through 20, it says the
5 application gateway may request 126 generation of an OVER File and
6 verification of the generated OVER File credential. It is requesting
7 generation and verification of the OVER File credential. So when it
8 provides a status indicator, that's an indicator of the validity of that
9 generated OVER File credential, not some underlying credential.

10 JUDGE CASS: Okay. Are there other specific examples in the
11 patent at issue here, other than this driver's license example, that would help
12 us better understand what's being verified is the OVER File and not a
13 credential in the OVER File?

14 MR. WILSON: I'm not aware of any, Your Honors.

15 JUDGE CASS: All right. Okay. Thank you.

16 MR. WILSON: But for the point that Your Honor asked about
17 earlier about the inclusion of the driver's license, if you look at column 12,
18 again, referring to the 531 patent, starting at line 48, it says, as shown in
19 Figure 9, the credential display 600 may comprise text sections and, again, it
20 uses the DMV example. And if you look at line 57, it says text section C,
21 610, may be configured to display a driver's license identification number.
22 And this is a display of an OVER File. So the OVER File contains a driver's
23 license number, at least in the example in the specification, if that makes
24 sense.

25 JUDGE CASS: Okay. Thank you.

1 MR. WILSON: Okay. So turning to slide 8, I now want to
2 jump to Osborne and the fact that these details show that Osborne taught
3 issuing-agency verification of an alleged OVER file.

4 So turning to slide 9, as I think I belabored already, there are a
5 few steps in every challenged claim some form of generating an OVER File
6 and a separate step of a virtual representation of the credential that has been
7 verified by an issuing agency to be an official representation of the
8 credential. Again, these are two distinct claim requirements.

9 If we turn to slide 10, we can see that the Petition, as Mr.
10 Argenti, actually, articulated, just generation itself is a verification. That's
11 exactly what they're arguing here on slide 10 of the Petition and the Reply
12 Brief. That is incorrect. The claim has two distinct requirements:
13 generation of an OVER File and verification by the issuing agency. But
14 they rely on generation alone.

15 JUDGE MCSHANE: Counsel, let me ask you this: you know,
16 are you suggesting that Osborne would generate a token and it wouldn't do
17 anything in its process to make sure that it's generating a valid token?

18 MR. WILSON: I guess you're asking me to infer between the
19 lines of Osborne outside of what it actually discloses, and the answer is I
20 don't know. Osborne discloses what it discloses, and I think what you're
21 suggesting is an obviousness argument or wouldn't it be obvious over
22 Osborne to do this, but there's no articulation of any rationale for that, other
23 than what's already in the petition. And so I can only respond to the
24 arguments that Visa has made, and saying that Osborne wouldn't issue a
25 token without verification when Osborne describes issuing a token without

1 verification, it's hard for me to answer that question any other way than
2 Osborne discloses issuing a token without verification. I mean, that's,
3 literally, what the disclosure says. We pointed out how, when you look at
4 the step-by-step process for issuance of a token, there is no verification step.
5 It simply generates a token, and the claim requires two distinct things:
6 generation of a token and verification by the issuing agency that it's an
7 official representation. It's just not there. I mean, I can't infer it, you know.
8 It's just not there.

9 And turning to slide 11, now, this is interesting, slide 11 is
10 interesting because this gets to the reply argument that pivot to the new
11 construction of issuing-agency verification that we and Cortex have
12 unequivocally disavowed. Visa says they're not advocating that
13 construction, but they're happy to rely on it. So I can't tell whether they're
14 for it or against it, but let me just point out Dr. Shamos plainly stated that
15 verifying credential data alone is insufficient to meet the petition's
16 construction of these claims. If you look at the quote on the right, he says or
17 he's asked, so you agree then that verifying that the credential data supplied
18 by the user is correct does not meet your construction of verified by the
19 issuing agency supplied in your opening declaration of these IPRs, correct?
20 He says I think that's right. So he admits that merely verifying underlying
21 credential data does not satisfy the opening construction by Visa of these
22 claims.

23 JUDGE SZPONDOWSKI: So what's your response to the
24 disclosure in paragraph 47 of Osborne where the issuer is generating a token
25 and is obtaining assurance that the funds have been uniquely and exclusively

1 allocated for the token. I mean, isn't that verifying the token in Osborne?

2 MR. WILSON: I think that's verifying the underlying
3 credential. That's like checking a bank account or a credit card and saying
4 are there sufficient funds here. If there are, yes, we'll authorize this
5 transaction. But verifying that there are sufficient funds is not a verification
6 that a token, for example, is an official representation of the underlying
7 credential. They have nothing to do with each other.

8 JUDGE CASS: So, counsel, how is this different from the
9 driver's license example in the spec of the patent at issue?

10 MR. WILSON: So the difference is that, in one case, I think, if
11 you're referring to Osborne's example, Osborne's example is saying, hey, this
12 account has money in it, you can use it. That's like saying, hey, you have a
13 valid driver's license. The status indicator, for example, that Osborne
14 describes providing for the generated OVER File for a driver's license is
15 different in that it indicates the validity of the virtual representation as
16 distinct from the underlying credential. That's how those are different.

17 JUDGE CASS: So I want to ask you another question. So for
18 step 1.3 you're saying that credential, virtual representation of the credential
19 has been verified by an issuing agency, could that occur, for instance, the
20 issuing agency generates the file and then immediately just does a check on
21 it? Would that be sufficient? You know, kind of at the end of the generation
22 process.

23 MR. WILSON: Sure. I think that would be sufficient, as long
24 as there's an explicit check to say does this file that we generated represent
25 officially the underlying credential.

1 JUDGE CASS: Okay. And so what if it took, generated the
2 token, OVER File, whatever you want to call it, and then said we're going to
3 check some of the information in there, but we're not going to check every
4 piece of data, would that be good enough or does it have to check
5 everything? How do we know, you know, what's required for it to be
6 verified?

7 MR. WILSON: What's required is for the issuing agency to
8 sign off on it as an official representation of the underlying credential. So
9 whatever it needs to check to make itself happy that this token or this virtual
10 representation is going to be an official representation of the underlying
11 credential, whatever makes it happy, then that's sufficient, as long as that's
12 an explicit check that's being done.

13 JUDGE CASS: So if you have a system that says, okay, I can
14 generate a token and then said, okay, we're going to go verify the account
15 number, put that into our bank database, make sure it's valid, it's got funds,
16 et cetera, and then we're going to set a bit in the token saying it's valid;
17 would that be good enough?

18 MR. WILSON: Yes, I think it would be.

19 JUDGE CASS: Okay. Thank you.

20 MR. WILSON: Okay. Turning to slide 12, this is Visa's
21 argument of why Osborne discloses this. I think we've already hit this pretty
22 hard, but I just want to point out a few things. Visa argued earlier that
23 there's nothing in here invokes common sense, right. Well, the language that
24 invokes common sense is saying, since verifying the token would be a
25 routine step, based on the credential data received, that's invoking common

1 sense. And I think they said the Federal Circuit has not endorsed that view,
2 but let me point out, in *DSS Technology*, which is a case we've cited and, in
3 fact, I'll cover in more detail here momentarily, in *DSS Technology*, at pages
4 1374 to 1375, the Federal Circuit says here the Board relied on a gap fill,
5 ordinary creativity instead of common sense to supply a missing claim
6 limitation. In cases in which common sense is used to supply a missing
7 limitation as distinct from a motivation to combine, our search for a
8 reasoned basis for resort to common sense must be searching. The Board's
9 reliance on ordinary creativity calls for the same searching inquiry.

10 It doesn't matter what words you use. If you're using a proxy
11 for common sense, then it invokes common sense. Ordinary creativity,
12 routine step, it would be logical, all those, as the Board has said, are proxies
13 for common sense.

14 JUDGE CASS: So, counsel, by your logic, this is a single
15 reference obviousness case, wouldn't that reasoning apply to every single
16 reference obviousness case?

17 MR. WILSON: No, I disagree.

18 JUDGE CASS: Why not? What's an example of a single
19 reference obviousness case that wouldn't raise this problem?

20 MR. WILSON: So I can use a single reference in my ground
21 and say, you know, this particular claim would have been obvious based on
22 this single reference. However, I can invoke as part of that obviousness
23 inquiry the knowledge of a person of ordinary skill in the art. That
24 knowledge makes, like, ten, references to disclose a feature, and so those ten
25 references disclosing that feature then would show that that feature was

1 within the knowledge of a person of ordinary skill in the art and so it would
2 be obvious to combine with a single reference. And that's still a single
3 reference obviousness case, but it's based on the knowledge of a person of
4 ordinary skill in the art based on disclosure of the feature in prior art. Here,
5 we do not have disclosure of this feature, issuing-agency verification, in any
6 prior art. Nothing. There's not a single reference that discloses it, and we
7 are solidly in the *DSS Technology* paradigm of a claim limitation that is
8 missing from the prior art.

9 So I want to point out also that the only rationale that's shown
10 here are the last 12 words of this passage on slide 12: doing so would
11 increase confidence that the token would represent the credential. That's it.
12 That's the obviousness argument at its core. Twelve words. That is not a
13 reasoned analysis with evidentiary support. You can see the cite here.
14 That's a cite to the expert declaration, who says, verbatim, the same thing.
15 We all know that that's entitled to little or no weight, so there is no reasoned
16 analysis, no evidentiary support.

17 Turning to slide 13, we have the three points from *DSS*,
18 *Technology*, about what you do in common sense analysis, and I'm going to
19 skip the first point. Point number two, common sense is invoked to fill in a
20 missing limitation only when the limitation in question was unusually simple
21 and the technology particularly straightforward. And point three, references
22 to common sense, whether it's supplying motivation to combine or a missing
23 limitation, cannot be used as a wholesale substitute for reasoned analysis or
24 evidentiary support, especially when dealing with a limitation missing from
25 the prior art reference as specified.

1 Now, turning to slide 14, let's talk about unusually simple or
2 particularly straightforward. Here, what we have is an evidence comparison.
3 We've got Dr. Malek on the left who in, as you can see, 25 paragraphs of his
4 declaration talk about why the limitation here is not unusually simple and
5 the technology is not particularly straightforward.

6 What does Dr. Shamos, Visa's expert, say? Absolutely nothing.
7 Nothing with the petition. And did he come back and reply in response to
8 Dr. Malek's point? No. He submitted a reply declaration, but he refused to
9 respond to Dr. Malek's points. The evidence on this point, these two points,
10 unusually simple and particularly straightforward, is undisputed. On this
11 record, the Board cannot find that this limitation is obvious.

12 JUDGE MCSHANE: Counsel, on this point, I'm just curious,
13 so, you know, the language says the limitation in question was unusually
14 simple and technology particularly straightforward. With the technology
15 particularly straightforward, on that issue, I know that your expert talks a lot
16 about the claim as a whole, but when you're looking at the technology and
17 let's say, for the sake of argument, we limit it, should we limit it to the
18 limitation of the verification step rather than looking at the claim in total?

19 MR. WILSON: So I think you need to look at both. The first
20 inquiry is whether the limitation in question was unusually simple. Dr.
21 Malek addresses that, and he points out, for example, that Osborne has a
22 whole list of additional verification techniques. He doesn't list this one at
23 all. If it were unusually simple or well-known in the art, surely he would
24 have listed it. That's his explanation, and he has additional analysis of the
25 limitation in question to show that it is not unusually simple. And he also

1 discusses extensively why the technology is not particularly straightforward
2 with references to the prior art that Visa has cited and provided.

3 So this record is undisputed, and we have evidence to back up
4 both of these points. Visa, who bears the burden of proof, has nothing.

5 Turning to slide 15, Visa also had to provide a reasoned
6 analysis and evidentiary support. Again, there is nothing here in this
7 Petition. All we have are the 12 words. And as we turn to slide 16, we can
8 see the insight here, this paragraph 241, about Dr. Shamos's declaration.
9 And I'm going to start in the middle of the paragraph of 241 there on slide
10 16. He says the issue of a token representing a payment credential would
11 logically ensure that the token accurately represented the credential. Again,
12 that's an invocation of common sense and doesn't move the obviousness
13 analysis. It's essentially a non-statement.

14 Next sentence: The existence of unofficial, forged or altered
15 tokens in the marketplace would create problems for both issuers and users.
16 What kind of problems? Are those problems for Osborne's system? How
17 would issuing-agency verification, which Visa is pulling out of the air,
18 making up out of whole cloth, how would that solve those problems? We
19 don't know. There's no reasoned analysis and, certainly, no evidentiary
20 support.

21 And, finally, the next sentence: It would be a routine step to
22 verify that the token was an official representation of the credential based on
23 the credential data received and doing so would increase confidence that the
24 token legitimately represented the credential. Again, that's verbatim from
25 the Petition. It's entitled to little or no weight, aside from the fact that there

1 is no reasoned analysis or evidentiary support there.

2 So Visa cannot carry its burden on this record to show
3 obviousness of issuing-agency verification. It simply cannot. But, wait, it
4 gets worse. Turning to slide 17, we see that Dr. Shamos has opined creating
5 identity documents in the digital world was challenging for several reasons.
6 Number two, a digital credential can easily be copied, forged, or altered, and
7 it is difficult to issue a challenge to a remote network user to prove that they
8 are the person named in the credential. And in paragraph 120 on the right,
9 he says a solution to problem two is to require the presenter of the credential
10 to furnish additional information to prove that they are the person named in
11 the credential. He says this protects against credentials being copied or
12 stolen. In the banking industry, this was done starting in 1967 by requiring a
13 user to enter a PIN at an ATM machine. He says we know about this
14 problem of unofficial, forged, or altered tokens; it's already been solved.
15 You require user authentication at the time of the transaction; that's how you
16 solve it. It's been done since 1967. So why wouldn't a person of ordinary
17 skill in the art use that? Why would a person of ordinary skill in the art
18 resort to grabbing issuing-agency verifications out of the air, out of the ether,
19 when Dr. Shamos says this problem has already been solved?

20 Well, guess what? Turning to slide 18, Osborne uses exactly
21 what Dr. Shamos said. "In some implementations, the token server may
22 determine whether the user token is authenticated. If the token server
23 determines that the user is not authenticated, option no, the token server may
24 generate an authentication failed message and initiate an error-handling
25 routine and/or a user enrollment routine, such as the PTT 500 component

1 discussed above in the description with reference to Figure 5. If the token
2 server determines that the user is authenticated, option 'Yes,' the token
3 server may continue processing at 713a." Osborne already uses user
4 authentication at the time of the transaction, which is exactly what Dr.
5 Shamos says solves this problem. So why are we grabbing issuing-agency
6 verification out of the air?

7 JUDGE CASS: So, counsel, I'm looking back at Osborne and,
8 specifically, say, page 8, paragraphs 47, around paragraph 47. It says one of
9 the ways you can generate the token is to have, for instance, the user fills out
10 a form that has the information that you want in the token. And I think the
11 patent has a similar example where you can fill out a form and it can scan it
12 and, basically, send all that information to the token or OVER file generator.
13 And as we all know, I mean, we can make mistakes when we write down
14 long strings of numbers or scanners can make mistakes when they try to read
15 our handwriting or things like that, so, you know, given that that's pretty
16 well known, why wouldn't it be obvious to verify the information that's in
17 there?

18 Oh, I'm sorry. I think somebody has lost sound. Okay. We're
19 good.

20 MR. WILSON: Okay. So just to be clear, you're articulating a
21 new obviousness rationale --

22 JUDGE CASS: Well, I mean, I don't want to say whether it's
23 new or not new, but I'm just curious why that would not be obvious. I think
24 we may be having some -- oh, I'm sorry. I think I just muted myself and
25 didn't realize it. Let me ask my question again so everyone hears it.

1 So looking at Osborne around paragraph 47, there's a discussion
2 about how a client can generate a form that has all, you know, information in
3 it and then that information on the form can get put into a token or OVER
4 File, and I think the patent has some similar discussion when it talks about
5 the driver's license example. And we all know that, when we fill out forms
6 with long numbers on them or we scan them, that sometimes we can make
7 mistakes or the scanner can make a mistake, something like that can happen.
8 So why wouldn't it be obvious to just run a check on that information on
9 the form just to make sure it's accurate?

10 MR. WILSON: So I guess I don't understand the specific
11 context. You're saying when the application comes in and they're trying to
12 find the credential, do they check the information to make sure that the
13 entered information is correct so that you actually get a real credential, a real
14 underlying credential; is that what you're saying is a check?

15 JUDGE CASS: Yes. Just to make this more concrete, so
16 you've got a form on information to create a token. Maybe one is bank
17 account number, so you write in your bank account number. Maybe another
18 is driver's license number, so you write that in. And there might be other
19 information, as well. And then that goes to a system, say the token OVER
20 File generation system that takes the information in the form, creates a
21 record, kind of like we saw in paragraph 47 of Osborne that's got a token with
22 a bunch of information in it, and puts together that record as the token. But
23 it all came from information on a form, so why wouldn't, before the token
24 actually gets issued, they want to go back and actually verify that the
25 account number was correctly entered in the file and that the driver's license

1 number was correctly entered in the file and other such information was
2 actually correct by verifying it against some official record of it?

3 MR. WILSON: So I think Osborne actually does disclose that,
4 and that's in the form of checking the underlying credential there. So, in
5 other words, if you're saying I want a token to represent this bank account,
6 Osborne will go and verify that there is actually a bank account there, maybe
7 even that there are funds in it, to verify that what you're referencing is
8 actually a real credential and there is actually a real credential here before it
9 generates a token.

10 So, yes, Osborne discloses that. What it doesn't disclose is, once
11 I've done that, now I'm generating a token that's going to be a virtual
12 representation of that file and verifying the token is actually an official
13 representation of that bank account. That's the piece that's missing.

14 JUDGE CASS: You could do this in a couple of ways. You
15 could verify the information as part of the generation of a token, or you
16 could generate the token and then you could verify the information after that,
17 right? And wouldn't the latter be a verification of the token?

18 MR. WILSON: No, I don't think so. I think you're trying to
19 confirm that there is a valid underlying credential, that the underlying
20 credential is valid. So I think whatever or wherever you do it in, if you're
21 just checking to see is there a real credential here, is there a real driver's
22 license with this number, that's verifying that the driver's license actually
23 exists, not verifying that the token or the virtual representation is an official
24 representation of the valid underlying credential. Those are two distinct
25 steps: again, generating the OVER File and then verifying the OVER File.

1 What you're describing, I think, is part of generation. Do we actually have a
2 credential here --

3 JUDGE CASS: I guess I'm struggling a little bit because when
4 you look at paragraph 47 of Osborne, this looks to me like an XML file with
5 a bunch of information in it. I'm struggling a bit between how do you know
6 what's verification of the token that has information in it versus verification
7 of the underlying credential, which also matches information in the token?
8 It strikes me as kind of maybe a fine line, and I'm trying to make sure I
9 understand what's on what side.

10 MR. WILSON: So I think what you're looking at, and I'd have
11 to go back and re-read this passage in Osborne to be sure, but I think what
12 you're looking at in paragraph 47 is or what Visa at least contends, I know
13 this much, that they contend that that is a token. That is the -- OVER File is
14 the virtual representation; it's everything. So that's the end result of the
15 process.

16 The beginning would start with an application, and I'm sure, if
17 you flip back in Osborne, you'll find the application and it probably contains
18 similar data structures, you know, bank account and all those sorts of things.
19 So when Osborne receives that, it's going to, in the Osborne system, the PPT is
20 going to go back and check and say is there really a bank account here. But
21 it doesn't check that token data structure in paragraph 47.

22 JUDGE CASS: What would checking the data structure look
23 like?

24 MR. WILSON: I'm sorry?

25 JUDGE CASS: What would checking the data structure look

1 like?

2 MR. WILSON: It would look like an additional verification
3 step by the issuing agency actually. So let's be clear. Although, yes, Osborne
4 says that the issuing agency can operate the token server, it doesn't have to,
5 but the verification must be performed by the issuing agency to say, yes, we
6 will accept this virtual representation as a proxy for this underlying
7 credential. We don't see that anywhere in Osborne.

8 JUDGE CASS: All right. Thank you.

9 MR. WILSON: Okay. I just want to quickly address the,
10 turning to slide 22, the fact that Visa's petition identifies the PPT apparatus
11 as the OVER Engine, and we heard some argument about that earlier. It's
12 beyond question that the Petition identifies the PPT apparatus as the OVER
13 Engine, and what we've heard now are three versions of this argument
14 because the Petition identified the PPT apparatus as the OVER Engine, the
15 reply brief identifies the token server, and then, today, we heard Mr. Argenti
16 identify the token server in combination with the token database. So three
17 versions of this argument. Shifting arguments don't work in IPRs. It's
18 improper.

19 So looking at the Petition passage on slide 22, and this same
20 passage exists in every one of the petitions. And, in fact, you don't have to
21 take my word for it. All of the institution decisions conclude that the OVER
22 Engine in Visa's theory is the PPT apparatus. They say it explicitly. So the
23 Board interpreted the petitions the same way we did. Visa can't change its
24 position in reply, and it certainly can't change its position today at the oral
25 argument.

1 And let me just jump ahead to slide 26 and say Dr. Shamos
2 disagrees with Visa. Their own expert, beginning on the left, says, just to
3 clarify here, you are not saying that Osborne's token server is, by itself, an
4 OVER Engine, are you? And he says, so I guess there's a difference
5 between what I said or didn't say and what I actually believe. Always the
6 words you want to hear your expert say. So I don't think I have a statement
7 that says that the token server is the OVER Engine. He refused to say it. He
8 would not say the OVER Engine is the token server.

9 So Visa is required to put forth in its petition a ground of
10 invalidity with specificity. The statute requires that, Section 312(a)(3). It
11 didn't do it. Now we're in the third iteration of this. Looking on the right,
12 Dr. Shamos says, so my question, though, is a little different. This is after
13 pages of transcript trying to get him to identify an OVER Engine. So my
14 question, though, is a little different, and that is what in Figure 6 constitutes
15 the OVER Engine if the OVER Engine has to both generate and verify
16 tokens? Well, I can't tell because it depends on the implementation. He was
17 unable to identify an OVER Engine. That should end the matter, and the
18 Board can confirm the patentability of all challenged claims over all Osborne
19 grounds on that basis alone.

20 Now, I want to skip ahead to slide 29. Now we've shifted
21 gears. Now we're in Stafford, in the Stafford - Purves combination, and this
22 is whether or not key signatures can constitute the OVER File or the virtual
23 representation of the credential, which is Visa's position, as you can see here
24 in slide 29 taken from the Petition. The key signatures taught by Stafford
25 correspond to the recited OVER Files and, in fact, they say a hash value,

1 thus, acts as a virtual credential representation of the stored credential
2 derived based on the information associated with the credential, and that's
3 the key problem for their OVER File argument.

4 They argue two things: the user's private key and the one-time
5 pad are derived based on information associated with the credential or the
6 information associated with a credential because that's how you get the hash
7 values, but neither one of those things is true. As we see on slide 30, in
8 Stafford, each one-time pad is used to encrypt a bundle of credentials. The
9 unencrypted ID files, plural, are symmetrically encrypted using one-time
10 pad. So when Dr. Shamos was asked about this on the right, he agrees. So a
11 single release of information can contain any number of credentials, correct?
12 It could. So the ID files, no matter how many there are, are encrypted
13 together with a secure one-time pad, correct? That's what that seems to say.
14 A one-time pad, a bundle of credentials --

15 JUDGE CASS: So, counsel, what are these credentials, the ID
16 files?

17 MR. WILSON: They could be anything. They could be bank
18 accounts. They could be birth certificates. They could be passports. They
19 could be anything.

20 JUDGE CASS: Are you saying that those credentials might not
21 have anything to do with the credentials that go into the OVER File, or
22 would they be credentials that are going into the OVER File?

23 MR. WILSON: So I don't think there is an OVER File in
24 Stafford. They certainly don't have anything to do with the one-time pad or
25 the user's private key. Those two things are completely independent of

1 whatever credentials end up being encrypted.

2 Now, their argument is that, because a one-time pad is used for
3 a single instance of encrypting this bundle of credentials that, somehow, all
4 of those credentials in that bundle are now associated with this one-time pad
5 and, therefore, you know, by circular logic, you end up with, a-ha, the one-
6 time pad is information associated with the credential. It's just not true. In
7 Stafford's system, if I encrypt these same credentials for a second release of
8 information, they use a different one-time pad. So there is no
9 correspondence between a one-time pad and any credential in Stafford. The
10 same is true of the user's private key.

11 If we turn to slide 31, you'll see now in Stafford -- this is Dr.
12 Shamos again. Now, in Stafford, the user is assigned a private key as part of
13 its use of Stafford's system, correct? Yes. And the user's private key is
14 persistent, regardless of how many credentials the user uploads or how many
15 releases of credential information the user purchases, correct? I think that's
16 generally true. The private key is given to the user before they upload any
17 credentials. It is not associated with any credential.

18 So turning to slide 32, you can see the key or pad, pad key one,
19 used for the one-time pad, is encrypted with a user's private key, and that's
20 how you get IdSec1, the first hash value, and, ultimately, how you get
21 IdSec2, the second hash value. That's their argument. These things are not
22 associated with any credential.

23 Okay. Now I want to turn to slide 34 and now we're back to
24 issuing-agency verification but on the Stafford ground. And we can see in
25 the Petition that the Petition's position is Stafford teaches that it's encrypted

1 credentials, the underlying credential that is, may be verified by the issuer
2 and may include storing an image of the credential, a scanned copy. So all
3 we're talking about here in Stafford are verifying the underlying credentials.

4 However, to the extent that Stafford does not expressly teach
5 that the key signature file sent to the user include a virtual representation
6 verified by the issuing agency, this aspect of the claim is met by Purves. So
7 they're relying on Purves.

8 Now, turning to slide 35, this is their argument for Purves. And
9 you can see again -- but the difference is this argument is disclosure. Purves
10 discloses this. And if we look at it, the argument is nonsensical on its face.
11 Dr. Shamos repeats it nearly verbatim, which entitles his testimony to little
12 or no weight.

13 And if we turn to slide 36, you will see the actual argument
14 broken down. First, the rationale, let's start with the rationale at the end.
15 Since an actual credential naturally represents itself, I'm not even sure what
16 that means, but how does that have any bearing on the representative image
17 provided from an issuer at the time? I don't know. It's not explained. This
18 is supposed to be disclosure in Purves. There's no citation to Purves.
19 There's no argument that Purves explicitly discloses a representative image
20 being verified by the issuing agency. There's nothing here.

21 Now, let me jump ahead to my last point, and this is in slide 39.
22 And this point is the combination of Stafford with Purves, and I think the
23 Board got this correct in its institution decisions. Stafford is a completely
24 different system than Purves. Stafford is a highly secure system for the
25 disclosing credentials, things like a birth certificate or a bank account or

1 whatever. Purves is a totally different system, and we can see here Figure 2
2 on the left of slide 39 has, Dr. Shamos and I agree, at least 13 numbered
3 steps to release information. And, now, can you imagine a scenario in which
4 any consumer goes to the store and is willing to engage in these 13 steps and
5 pay a fee to use their credit card, that doesn't make any sense. What about
6 going to a movie theater and handing a ticket to a ticket agent using these 13
7 steps and paying a fee or boarding a plane and going through these 13 steps
8 and paying the fee. Nobody is doing that. That's not what Stafford is for. It
9 is an entirely different system.

10 And turning to slide 40, Purves is a virtual wallet for consumer
11 transactions. You can see that in the abstract right there. The enrollment of
12 payment accounts in a consumer's virtual wallet. These are two totally
13 different systems for totally different purposes. So the question is how and
14 Your Honor asked Mr. Argenti earlier how do you incorporate one system
15 into another, and he said it wasn't his job to articulate the specific
16 embodiment. Well, but it is.

17 And turning to slide 41, here's why. If we look at slide 41, and
18 this is the same slide I read earlier that shows that what Stafford does is
19 encrypts a bundle of credentials at a time, not just one. So which of those
20 credentials do you pick to create a representative image of to include with
21 the hash values in Stafford to show you what credentials you've encrypted?
22 It doesn't make any sense. Stafford is doing a bundle of credentials, not one;
23 so this doesn't make any sense. And guess what? Those credentials may use
24 a different hash value in the next disclosure. So if I use the same
25 representative credential on two sequential exposures, how are they

1 distinguishing -- this makes no sense. This combination makes no sense.

2 And if Your Honors don't have any additional questions, I'll
3 reserve the rest of my time.

4 JUDGE CASS: All right. Thank you, counsel. You have two
5 minutes left before your argument time was used up, so that will give you
6 seven minutes for your rebuttal.

7 MR. WILSON: All right. Thank you, Your Honor.

8 JUDGE CASS: All right. Counsel, you have four minutes
9 remaining in your rebuttal, so you may begin when ready.

10 MR. ARGENTI: Thank you, Your Honor. First, going to the
11 Osborne discussion and the DMV example, we already discussed that at
12 length, but I just want to point out their position now is that the DMV
13 example is verifying the OVER File as opposed to the OVER File request. I
14 would refer the panel to page 12 of their Patent Owner response where they
15 cited the disclosure that talks about verifying the information contained in
16 the OVER File generation request. Their argument in the Patent Owner
17 response stands on its own. That's what we responded to in the reply. So for
18 them to shift positions now is untimely and --

19 JUDGE CASS: Counsel, I think, if I understood it correctly,
20 their position was that that was a verification of the OVER File because
21 there's a status indicator, so I was wondering if you could respond to that.

22 MR. ARGENTI: So that's a separate disclosure, and it's really
23 irrelevant. As we discussed earlier when I was up, there are examples where
24 they are pointing to or in that column that at least pay lip service to the idea
25 of verifying the virtual representation. There's very little disclosure of that.

1 That doesn't change the fact that this is the example they relied on in the
2 Patent Owner response. This is the one that we responded to explaining why
3 it's the same in the prior art. We interpreted that as a broader interpretation
4 of the claim scope to which we are entitled to respond as a Petitioner. For
5 example, refer to the Federal Circuit *Axonics* decision for that proposition.

6 But, regardless, even if they weren't applying a broader
7 interpretation, that doesn't change the fact that, well, then we're just back to
8 the Petition grounds. The Petition stands on its own with respect to showing
9 how, if you have to verify the virtual representation, if that has to be the
10 thing that's verified and, if verifying the underlying credential information
11 can't be a form of verifying the virtual representation, that was the basis of
12 the Petition. So that analysis still stands on its own. There's nothing that has
13 changed about that.

14 As to their citation to the *DSS* case in support of their common
15 sense argument, I didn't see anything in that *DSS* case that says, well, it's a
16 common sense argument; even if you're not saying it, you're relying on
17 common sense. To the extent that they talked about gap-filling there, that's,
18 again, distinguishable from our circumstances here where we're pointing to
19 disclosure in Osborne itself, the disclosure that says it can be the bank that
20 issues the token, the disclosure that says that there can be a linkage, a
21 confirmation of funds available to that particular token and that that linkage
22 can be stored at the bank.

23 So we're not gap-filling. We're explaining why the disclosure
24 of Osborne that's there renders this limitation obvious.

25 They argue that Dr. Shamos concedes somehow that this

1 problem had been solved through user authentication. Osborne also talks
2 about user authentication. User authentication is a separate issue than
3 confirmation or verifying that the token, the virtual representation, is valid.
4 You can have a valid token in the wrong user's hand. That's what you're
5 trying to avoid with user authentication. If the user authentication at the
6 time of the transaction was seen as the solution for token verification, then
7 it's already a failure because the user is going in and trying to use that token.
8 What we're getting at in our combination is verifying that the token is valid
9 at the time of issuance, which, again, is consistent with what Osborne
10 discusses and describes and is entirely consistent with routine practice and
11 logical in terms of getting everybody involved in this flow of information
12 confidence that the token that's been issued actually stands for an account.

13 And, remember, Osborne talks about obtaining assurance that
14 funds are available for a token, not just funds are available. Funds are
15 available and linked to that token.

16 JUDGE CASS: Counsel, I think you're out of time.

17 MR. ARGENTI: I had a couple of points on Stafford, if I could
18 make them quickly. But if not, I can sit down.

19 JUDGE CASS: I'll give you one minute.

20 MR. ARGENTI: Thank you, Your Honor. As to their slide 26
21 argument with Dr. Shamos and his apparent alleged concessions, they're
22 selectively quoting him there. He pointed out immediately before that
23 testimony that their questions had been inconsistent. That's what he was
24 pointing out. And then, when he says he can't answer the question with
25 respect to Figure 6, that's because you have to look at Osborne in its larger

1 context than the disclosure as a whole. As I already explained, Figure 15
2 and the related written description explains that all of those previous figures,
3 including Figure 6, can be combined together.

4 As to their slide 36 argument arguing that we have not shown
5 that Purves shows verification of card images, that's untimely. If you look at
6 the Patent Owner response, they did not make that argument in their Patent
7 Owner response. They only argued that Purves lacks the storage
8 requirement and is not used for verification, as opposed to the image itself
9 being verified. So that --

10 (Simultaneous speaking.)

11 MR. ARGENTI: -- where we made the argument.

12 JUDGE CASS: Thank you, counsel. All right. Counsel for
13 Patent Owner, you had seven minutes. I gave counsel for Petitioner another
14 minute, so I'll give you eight minutes. You may begin when ready.

15 MR. WILSON: Thank you, Your Honor. Unless you have
16 questions, I won't take all of this time. Let me just -- I think there's only one
17 point that's worth responding to here, and that is the last point that Mr.
18 Argenti made that our argument about Purves not disclosing issuing-agency
19 verification is untimely, we didn't make it in our Patent Owner response, I
20 would refer the Board to page 55 of our Patent Owner response where, and I
21 quote, it says: Purves does not teach using card images for verification and,
22 thus, fails to provide the asserted verification by the issuing agency. It
23 literally says that. The argument is fleshed out in pages 57 to 60, and you'll
24 also find it in our surreply at page two. So the argument was made.

25 And that's all I have, unless Your Honors have any additional

1 questions.

2 JUDGE CASS: All right. I don't. And I don't see anything
3 from any of my co-judges, so thank you very much.

4 MR. WILSON: Thank you, Your Honor.

5 JUDGE CASS: Does either party have anything to raise before
6 we adjourn the hearing?

7 MR. ARGENTI: No, Your Honor.

8 MR. WILSON: No, Your Honor.

9 JUDGE CASS: Thank you very much. Well, counsel, I
10 appreciate the time and effort you put in today. Clearly, you were both very
11 well prepared and spent a lot of time organizing your presentations, and we
12 appreciate it a lot. You'll be getting an opinion from us in due course. And
13 with that, this hearing is adjourned. But if you could stay for a few minutes
14 and see if the court reporter has any terms or other questions that could be
15 cleared up, that would be terrific. Otherwise, have a great rest of your day.

16 (Whereupon, the above-entitled matter went off the record at
17 3:03 p.m.)

IPR 2024-00486 (Patent 9,251,531 B2)
IPR 2024-00488 (Patent 9,954,854 B22)
IPR 2024-00489 (Patent 10,749,859 B2)
IPR 2024-00490 (Patent 11,329,973 B2)

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