

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.,

Petitioner,

v.

1LSS, INC.,

Patent Owner.

IPR2025-01180

DEPOSITION OF:

JOSHUA PHINNEY, Ph.D., P.E.,

Pursuant to Notice by Patent Owners

DATE: Thursday, April 23, 2026

TIME: 9:53 a.m. - 1:20 p.m. PST

LOCATION: Via Zoom Videoconference

REPORTED BY: Holly Darino, RPR
CSR No. 14940

Job No.: 10189146

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P R O C E E D I N G S

* * * * *

THE COURT REPORTER: My name is Holly Darino.
My CSR number is 14940. And I will swear in the
witness.

Dr. Phinney, if you can raise your right hand,
please.

JOSHUA PHINNEY, Ph.D., P.E.,
having been duly sworn, was examined and testified as
follows:

THE WITNESS: I do.

THE COURT REPORTER: Thank you.

Counsel, you can proceed.

MR. CORDREY: Thank you.

DIRECT EXAMINATION

BY MR. CORDREY:

**Q. Good morning, Dr. Phinney. My name is
Greg Cordrey. I am counsel for the patent owner, 1LSS,
Inc. We're here today in connection with IPR Case
No. IPR2025-01180.**

Have you had your deposition taken before?

A. Yes.

1 Q. How many times would you say?

2 A. I think probably less than 60, but around
3 there.

4 Q. Okay. So pretty -- pretty high number. Sounds
5 like you probably have some familiarity, then, with this
6 process, but I'll lay down some basic ground rules so
7 that you and I are on the same page with how this will
8 proceed.

9 First off, let me ask you. Are you taking any
10 medication that would affect your ability to testify
11 fully and truthfully today?

12 A. No.

13 Q. Throughout the morning, your afternoon, I
14 guess, I'll be asking you some questions. If you need a
15 break at any time, that's fine. Just let me know you
16 need a break, and we'll go off the record. The only
17 thing I would ask is if I have a pending question, that
18 you answer the question before we take a break. Is that
19 all right?

20 A. Yes.

21 Q. As you may know, the court reporter is taking
22 down everything we say. As a result, we'll need verbal
23 responses to the questions, so avoiding any head
24 shaking. When you respond, we'll need actual yeses and
25 noes. Do you understand that?

1 A. Understood.

2 Q. At the end of this process, we'll have a
3 written transcript. You'll have the ability to review
4 it and make corrections to that transcript. However, to
5 the extent you make any corrections to the transcript,
6 we'll have the ability to comment on those corrections.
7 Do you understand that?

8 A. Yes.

9 Q. Before we proceed, do you have any questions
10 for me about how the process is going to take place
11 today?

12 A. No.

13 Q. Are you ready to proceed, then?

14 A. Yes.

15 Q. Who is your present employer?

16 A. Exponent, Inc.

17 Q. How long have you been at Exponent, Inc.?

18 A. 21 years, approximately.

19 Q. Is this -- is my understanding correct that
20 you've been there since you obtained your Ph.D. in 2005?

21 A. Yes.

22 Q. Have you worked at any other employers?

23 A. Yes.

24 Q. Who were they?

25 A. A company called Community Care Network, and

1 then apart from different assistantships where I think I
2 would have technically been employed by university.
3 Other than that, just a contractor.

4 **Q. What years did you work with Community Care**
5 **Network?**

6 A. Oh, I think that -- maybe 1995 to 1997.

7 **Q. And what does Community Care Network do?**

8 A. That was a preferred provider organization or a
9 PPO, so they administered that network of healthcare
10 providers.

11 **Q. What did you do for Community Care Network?**

12 A. I worked in the -- the filing and IT department
13 because that's when there was both paper and electronic.

14 **Q. These other positions that you listed, the**
15 **assistantships and working as a contractor, were these**
16 **before 2005?**

17 A. Yes.

18 **Q. Okay. What does Exponent do?**

19 A. Exponent is an engineering and scientific
20 consulting company, and we assist clients to solve
21 technical problems.

22 **Q. At Exponent, what would you say the -- your**
23 **responsibilities are?**

24 A. So I lead technical investigations regarding
25 most frequently electronics or electrical equipment and

1 that can involve failure analysis and, you know,
2 determining the root cause of failure or sometimes it
3 can be for the purposes of a patent matter or a trade
4 secret matter.

5 Q. In the patent and trade secret matters, is it
6 accurate that you serve as an expert report in those --
7 I'm sorry -- as an expert witness in those matters?

8 A. That's -- that's almost always the case, yes.

9 Q. And between the two as a lead technical
10 investigator and an expert in the patent and trademark
11 matters, what percentage would you say your time is
12 devoted to each of those?

13 A. Now it's -- it's about 80 percent in a patent
14 or a trade secret matter. It used to be more about
15 50/50 before COVID.

16 Q. Is it accurate, then, that if since post-COVID
17 you were doing about 80 percent of your work in patent
18 and trade secret matters, that the other 20 percent is
19 in this failure analysis area?

20 A. Yeah. That's -- that's -- that -- that can
21 include some other things sometimes like regulatory work
22 where there isn't necessarily a failure, but I'm
23 calculating something. And that can go, for instance,
24 into an environmental impact-type of filing.

25 Q. Does Exponent manufacture any products?

1 A. We have.

2 **Q. What products have they manufactured?**

3 A. We've provided, designed and furnished,
4 different -- different equipment, including radar --
5 underground penetrating radar sets and other -- other
6 types of equipment for the conflict in Afghanistan when
7 that was going on, and we've sold that to other
8 governments. And that's a type of work that we did for
9 what's called the Rapid Equipping Force. So sometimes
10 we would solve a problem and generate a product.

11 I got that -- that doorbell thing that I said
12 might happen. And if I could go -- I'm sorry.

13 **Q. Oh, yeah. Sure. Yeah, yeah, yeah.**

14 MR. CORDREY: Let's go off the record for a few
15 minutes.

16 THE COURT REPORTER: Okay. Off the record.
17 (Off the record.)

18 THE COURT REPORTER: Back on the record.

19 BY MR. CORDREY:

20 **Q. I think when we left off before our quick break**
21 **there, we were talking about products that Exponent**
22 **manufactures. You had identified this**
23 **ground-penetrating radar. Were there any other products**
24 **that Exponent has manufactured?**

25 A. There -- I've seen a few that I know we built,

1 so I think there are a couple, yes.

2 **Q. Can you give me a sense as to what the nature**
3 **of the products are?**

4 A. Yeah. One was to create a barrier and a
5 culvert -- the idea being to block off a culvert, which
6 is like a pipe that goes underneath road to prevent
7 people from getting in and putting an explosive device
8 in there. So it's, you know, a mechanical thing.

9 **Q. Anything else?**

10 A. That's -- that's what I remember seeing. So
11 there could be others, but I -- I -- I'm not really -- I
12 don't think I could tell you more detail.

13 **Q. Is it accurate that Exponent doesn't**
14 **manufacture or hasn't manufactured any consumer**
15 **products?**

16 A. I don't really know, so I'm not sure.

17 **Q. How about yourself? Have you any experience**
18 **manufacturing consumer products?**

19 A. Only in as much as I've consulted for industry
20 regarding the design of consumer products.

21 **Q. Do you have any experience manufacturing**
22 **consumer products that use magnets?**

23 A. Only that same kind of answer. Only in as much
24 as I've done consulting related to those types of
25 products on -- for industry.

1 **Q. What was the nature of the consulting?**

2 A. So at Exponent what we're often considering is
3 an unusual case or corner case, and that can involve
4 things like the performance of a connector under certain
5 circumstances. You know, maybe it's looking at a
6 force-displacement profile for a -- for a connector and
7 the resulting contact force but perhaps under a, you
8 know, stressful condition for that connector. That's an
9 example.

10 **Q. In connection with these consultations, is**
11 **Exponent involved in the manufacturing of any product?**

12 A. I think the -- only in as much as our
13 recommendations or analysis could, you know, fold back
14 into a -- to the design of a product.

15 **Q. Do you have any experience developing consumer**
16 **products using rare earth magnets?**

17 A. I'd say yes, but that same kind of answer.
18 Like, in as much as our analysis could feed back into
19 the design as we consult for industry.

20 **Q. What kind of products were you involved with**
21 **that involved -- I'm sorry. Strike that.**

22 What kind of consumer products were you
23 involved with that involved rare earth magnets?

24 A. I'm recalling miniaturized linear motors.

25 **Q. I didn't catch that last part. I'm sorry.**

1 **Miniaturized?**

2 A. Linear motor.

3 **Q. What applications are these miniaturized linear**
4 **motors typically used in?**

5 A. That was a -- that was a consumer product
6 report for haptic feedback.

7 **Q. Can you tell me what kind of product that was?**

8 A. I think it was a handheld product and the
9 haptic feedback would be to someone holding the device.

10 **Q. Can you be more specific? Was it like a mouse**
11 **or was it a, like, massage gun or what was the product?**

12 A. I think it's like a phone.

13 **Q. Oh. Any other products that involved rare**
14 **earth magnets? And again, I'm just focused on consumer**
15 **products, to be clear.**

16 A. Other than that, I don't believe so. Outside
17 of connectors and -- and the haptic feedback devices,
18 I'm not recalling one that I would call a consumer
19 device.

20 **Q. Were you -- strike that.**

21 **Do you have any experience with the production**
22 **side of those consumer products?**

23 A. Yes.

24 **Q. What experience did you have?**

25 A. So we're sometimes are not just looking at

1 devices themselves or failure modes but considering that
2 in the context of manufacture. So all of the -- the
3 documentation and records regarding manufacture and
4 sources of supply and so forth can all go into trying to
5 figure out what happened, you know, if you're trying to
6 determine the root cause of failure.

7 **Q. Do you have any experience in the high-volume**
8 **production of a consumer product other than in the**
9 **failure mode analysis?**

10 A. Yes.

11 **Q. And what was that?**

12 A. I would say in disk drives -- hard disk drives,
13 so flying head storage. You know, that's -- I'm calling
14 those consumer products because that was -- that's --
15 the industry would call -- there's enterprise and
16 consumer, and the consumer would be the -- the ones that
17 could go ultimately into a desktop or a laptop.

18 **Q. What did you do in connection with the -- your**
19 **support, I guess, of the production of hard disk drives?**

20 A. I did a lot of assembly plant and head disk
21 testing operations. So got involved a lot with the --
22 with some parts of that assembly.

23 **Q. I use the term "rare earth magnets." And to**
24 **make the -- I guess to be clear on the record, what is**
25 **your understanding of a rare earth magnet?**

1 A. Well, a rare earth would be some of these more
2 rare metals that aren't just common transition metals
3 that are often one component of a magnetic material.

4 **Q. And what would be -- what would be an example**
5 **of something that -- that would not be a rare earth**
6 **magnet?**

7 MR. TANG: Objection. Scope.

8 THE WITNESS: Among permanent magnets, I would
9 say if there was a ferrite magnet or a ceramic, that,
10 you know, these are often shaped into sort of kitchen
11 magnets for -- for more -- for cabinet closure. I
12 wouldn't call those rare earth typically.

13 BY MR. CORDREY:

14 **Q. Is it okay if I refer to that latter group as**
15 **refrigerator magnets? Or give me a name if you prefer a**
16 **different name.**

17 A. I was thinking of the -- I think of those as
18 ceramic magnets. And when I think of refrigerator
19 magnets, I'm often thinking of types that don't even
20 have a north and a south that are really well defined.
21 They're more amorphous. And that's often what people
22 think of when they're talking about a refrigerator
23 magnet. Like it's this sheet material that is capable
24 of having attraction to both north and south of a normal
25 permanent magnet as well as a ferromagnetic surface,

1 like a refrigerator.

2 Q. I guess if I refer to those, then, as, I guess,
3 nonrare earth magnets, is that okay?

4 A. Yeah. That's fine. Excuse me. Yeah. That's
5 fine. I'm sorry.

6 Q. Going back to your experience with consumer
7 products, have you any experience in sourcing and
8 purchasing the rare earth magnets that are used in
9 consumer products?

10 A. I -- I have bought neodymium, so that. And
11 other than that, mostly the magnetic materials I've
12 sourced or have worked with the sourcing on are -- are
13 more silicon steel. So they're, like, ribbon kind of
14 materials, but they're not really permanent magnet --
15 permanently magnetized materials or they're not usually
16 thought of that -- as that. They're normally classified
17 as soft.

18 Q. They're classified as what? I'm sorry.

19 A. Soft.

20 Q. Soft. Okay.

21 What was the context in which you were involved
22 with the purchasing of the neodymium magnets?

23 A. Over the -- over the years I've done that both
24 for research and for testing .

25 Q. Is it accurate to say that it wasn't your use

1 of -- or your purchasing of the neodymium magnets wasn't
2 in connection with a specific product?

3 A. I think that's accurate. It was more of either
4 a test bed or a research type of project.

5 Q. Have you ever been involved in the design of
6 machinery or production equipment that's meant to handle
7 rare earth magnets?

8 A. I'd say tangentially, yes.

9 Q. Can I ask you to elaborate on that?

10 A. Yeah. This had to do with voice coil motors,
11 and generally those have to be biased. And some of the
12 bias can be permanent magnet bias.

13 So I've worked a lot with head disk testers
14 where the -- the -- the head assembly needs to be put on
15 an arm of a voice coil motor. So part of the assemblies
16 that were in there were -- were magnetized and had a
17 yoke around them and then the actual voice coil part
18 would fit in that yoke. But, you know, the yoke would
19 want to collapse.

20 Q. Any other examples?

21 A. That's the -- that's the one -- the only one
22 that comes to mind right now.

23 Q. How do the rare earth magnets differ from the
24 nonrare earth magnets in terms of their field strength?

25 A. Generally speaking, you often think of them as

1 being stronger. Rare earth magnets can be stronger but
2 often more expensive. So that's -- that's -- that's
3 sort of the first general kind of answer.

4 THE COURT REPORTER: Mr. Tang, I'm sorry. I
5 couldn't hear your objection. Can you repeat?

6 MR. TANG: Yeah. Scope.

7 THE COURT REPORTER: Thank you.

8 BY MR. CORDREY:

9 **Q. What about in terms of brittleness?**

10 A. It can depend what we're comparing it to. I
11 think it would just depend because there are many types
12 of rare earth magnets and there are many types of
13 alternatives that you can compare them to.

14 **Q. Would it be inaccurate to generalize and say**
15 **rare earth magnets are generally more brittle than**
16 **nonrare earth magnets?**

17 MR. TANG: Objection. Scope.

18 THE WITNESS: I think you'd really -- it would
19 really depend on what you're talking about. Like
20 neodymium I've worked with is far less brittle, for
21 instance, than some of those ceramic magnets that I was
22 talking about before. But that's just one example
23 because there really are many.

24 BY MR. CORDREY:

25 **Q. The neodymium magnet that you worked with, do**

1 you recall which particular grade of neodymium you
2 worked with?

3 A. I don't recall. It needed to be shorted for
4 shipping. I recall that. But I don't think I could
5 tell you the -- like a grade designation on it.

6 Q. What does that mean, it needed to be shorted?

7 A. So if you have a magnet like that that can be
8 quite powerful, you don't want to just put it in the
9 mail because -- as is. And what you can do is put --
10 for shipping purposes, you can put a yoke -- an iron oak
11 -- yoke around the magnet to sort of guide the flux
12 circuitously so that it won't really escape the
13 packaging.

14 Q. Why are you -- why is there a concern about
15 preventing the magnet or -- is it the magnet flux --
16 from escaping the packaging?

17 A. Well, some of those magnets can -- you know, I
18 wouldn't -- I wouldn't want a child to be around them,
19 for instance. You know, they can crush things. They
20 can move, and the forces around them can be quite high.
21 And it can certainly make them fly off of things and on
22 -- stick to other things and crush little fingers and
23 things like that.

24 Q. In your opinion -- and we'll get into your
25 report here in a bit -- you talk about the risk or the

1 potential corruption of magnetic cards with respect to
2 magnets. Do you recall that?

3 A. Yes.

4 Q. So how do rare earth magnets rate compared to
5 nonrare earth magnets in terms of the risk to corrupting
6 the magnet strip on credit cards or magnetic cards, I'll
7 say?

8 MR. TANG: Objection. Scope.

9 THE WITNESS: Generally speaking, I'd say that
10 if we were to answer a question like that or consider
11 that, I think we'd need to look at what particular
12 materials we're talking about just because there are so
13 many.

14 BY MR. CORDREY:

15 Q. Is it accurate to say the stronger the magnet,
16 the higher the risk of corruption to the magnetic strip
17 on a magnetic card?

18 A. It could depend on things like proximity or
19 other -- other types of issues like I had mentioned with
20 what mitigations could be in place for the use of a
21 permanent magnet in an assembly. So it can depend on
22 things. But stronger magnetic fields can have more of
23 an effect, at least talking about DC.

24 Q. I didn't catch that last part. In terms of
25 talking about what?

1 A. DC.

2 **Q. What's DC?**

3 A. So when we think about permanent magnetization,
4 it doesn't oscillate back and forth. But a lot of --
5 and so that -- we call that direct current. It would be
6 like the magnetic field that's static that you get from
7 an electromagnetic magnet with a constant current. But
8 demagnetization -- in fact, commercial demagnetizers
9 work often with AC fields, and that means they go one
10 direction and then oscillate back the opposite direction
11 and, you know, many times a second typically.

12 **Q. And going back to my question a second ago**
13 **about the risk presented to the magnetic strip on**
14 **magnetic cards. All things being equal, you know, the**
15 **-- any shielding you may have and the distances, is it**
16 **accurate to say that rare earth magnets present a**
17 **greater risk to the demagnetization of those magnetic**
18 **strips than nonrare earth magnets?**

19 MR. TANG: Objection. Incomplete hypothetical.

20 THE WITNESS: I think I answered a question
21 like this a couple questions ago, and I think there's
22 just such a variety of materials that, I think, to give
23 you an answer, I think we'd have to be more specific
24 about the materials, plus some of these other factors
25 that I mentioned with, you know, separation or

1 mitigation.

2 BY MR. CORDREY:

3 Q. As an example -- trying to give you more
4 specifics -- if -- would a neodymium N48 magnet present
5 a higher risk of corrupting a -- the magnetic strip on a
6 magnetic card than, say, a ferrite magnet, all other
7 things -- all other things being equal?

8 MR. TANG: Objection. Scope.

9 THE WITNESS: So with that particular -- I
10 don't -- I don't think I can answer you sitting here,
11 unless -- you know, I don't think I addressed that. So
12 with that N48, I don't -- I don't know that I can tell
13 you.

14 BY MR. CORDREY:

15 Q. What kinds of information would you need to
16 have to be able to answer that question?

17 A. In general, we would look at the strength of
18 the magnetic field.

19 Q. Anything else?

20 A. So in your question, I think you had asked
21 that, you know, all other things being equal. And that
22 -- that one thing would be a key differentiator. You
23 know, it's basically a question of how strong the magnet
24 is. That's -- other than that, I think -- that seems
25 like the key piece of information.

1 **Q. Is it your experience that rare earth magnets**
2 **are more difficult to work with than nonrare earth**
3 **magnets?**

4 MR. TANG: Objection. Scope.

5 THE WITNESS: Again, there's just so many types
6 that I'm -- I don't think that -- that to answer that
7 type of question, I think we'd have to think about what
8 -- what kind of work we're doing with them, plus, you
9 know, think about the particular magnets at issue.

10 BY MR. CORDREY:

11 **Q. Have you ever been involved in the design of**
12 **any consumer products that used magnetic shielding?**

13 A. Did you say magnetic shielding?

14 **Q. Yes.**

15 A. I'd say -- I'd say yes, you know, with that --
16 that caveat that it's often my analysis that's sort of
17 feeding back to the design.

18 **Q. Is it accurate to say that that -- that**
19 **experience you have is more on the design side, then, of**
20 **the consumer product than, for instance, like the**
21 **manufacturing side?**

22 A. Yeah. That's my understanding is -- is
23 providing some insight that could affect design.

24 **Q. Aside from manufacturing, have you had**
25 **experience in the design of -- or use of magnet**

1 **shielding on the manufacturing process for consumer**
2 **goods?**

3 A. And just to make sure I understood your
4 question, you asked about the -- if I had experience
5 with the manufacturing process for consumer goods as it
6 pertains to magnetic shielding?

7 **Q. Yes.**

8 A. I'd say -- I'd say yes.

9 **Q. What was that experience?**

10 A. It had to do with electroformation of magnetic
11 materials and conductors in patterned films for a
12 consumer product.

13 THE COURT REPORTER: I'm sorry. That was
14 pattern what?

15 THE WITNESS: Patterned films.

16 THE COURT REPORTER: Thank you.

17 BY MR. CORDREY:

18 **Q. Can you elaborate a little bit more with**
19 **respect to the consumer products that you mentioned,**
20 **what types of consumer products?**

21 A. This was a sleeve for -- for proximity cards
22 and other types of -- and other types of credit cards
23 and things of that nature that would fit around them,
24 but it had a pattered panel on two sides.

25 **Q. What is a proximity card?**

1 A. So this -- these were, like, near-field
2 communication cards that had sometimes what you call
3 like an RFID, the kind of technology that we think of
4 now as this tap-to-pay kind of technology. But it had
5 some precursors.

6 **Q. Was there an actual consumer product that was**
7 **manufactured?**

8 A. There was -- I can -- I can answer that in two
9 ways. There was, yes, in one instance. And then in
10 another, it's -- it's -- I don't know quite how to
11 answer you for the other -- for the other instance. It
12 seems like it could be a consumer product.

13 **Q. In the first instance, what was the product?**

14 A. It was a -- it was a sleeve for other cards.

15 **Q. And the other cards, what type of cards were**
16 **those?**

17 A. Those were -- those were contactless payment
18 cards.

19 **Q. So in my mind I'm conjuring up an image of, for**
20 **instance, like when you check into a hotel and you get**
21 **your magnetic key for your room and they'll slide it in**
22 **a sleeve for you. Is that the kind of product that**
23 **you're referring to?**

24 A. Yes. Those -- those types of sleeves that we
25 often see in that hotel context, you know, that's often

1 like a papery kind of material. And this actually was
2 patterned, so it had patterned metallic films on it.

3 Q. And that sleeve had some form of shielding in
4 it or some form of magnetic shielding in it?

5 A. Yes. That's -- that was how it was touted.
6 That was its purpose.

7 Q. Okay. I'm going to introduce to you your
8 expert report or your expert declaration, I should say.
9 Let me -- sorry. Give me a second. Let me just add
10 that to the chat.

11 So if you have a clean copy, you're welcome to
12 also refer to that. This -- for the record, this was
13 designated as Exhibit 1003. I'm going to go ahead and
14 share it as well. Whoops. That's not it.

15 If you can let me know when you have that
16 exhibit and have an opportunity to review it and confirm
17 that this is, in fact, your declaration in this matter.

18 A. Yes, it is.

19 Q. This declaration is quite lengthy. Did you
20 draft the entire declaration?

21 A. Not the whole thing. I provided some materials
22 for the first draft and discussed my opinions with
23 counsel.

24 Q. Is it -- is it accurate to say that you -- the
25 first draft was produced by counsel and then provided to

1 **you?**

2 A. With everything in it, I'd agree with that, you
3 know, with all the -- all the parts I've sort of finely
4 put in.

5 **Q. Were there any sections that you didn't have**
6 **input into that were provided strictly by counsel?**

7 A. I'd say I had input into all of them. The --
8 the -- some parts that are more related to the process
9 outside the IPR could qualify like that. So, for
10 instance, objective indicia, the -- the legal
11 understandings section and -- and that sort of --

12 **Q. Any other sections or is that -- is that it,**
13 **the objective indicia and the legal understanding**
14 **portions?**

15 A. The -- the prosecution history section was one
16 where, you know, I -- I reviewed it, but I don't -- I
17 don't recall providing particular input into what went
18 into it. I -- I looked at the prosecution history, but
19 I don't -- that really didn't relate -- I don't think I,
20 like, provided opinions or something that went into that
21 before it was drafted.

22 **Q. Any other sections?**

23 A. Actually, I take that back. I think
24 prosecution history, there was a part that I -- that I
25 remember thinking about and discussing with counsel. So

1 -- but that's -- that's -- that's, more or less, it.

2 **Q. Sitting here today, are you aware of any**
3 **corrections that you need to make to your declaration?**

4 A. I'm -- I thought there was a missing word.
5 There was just one missing word that I would regard as
6 more of, like, a typo. I remember seeing that. But I'm
7 sorry. I didn't write it down. So I don't think it's
8 substantive. But that's -- that's all I can -- so no --
9 I'm sorry -- is the short answer.

10 **Q. That's fine. You know, I would just -- you**
11 **know, obviously it's -- I'm really mostly concerned**
12 **about any substantive corrections that you might have to**
13 **the report or to your declaration.**

14 A. I don't have any sitting here.

15 **Q. Did you review the petition in connection with**
16 **preparing your declaration?**

17 A. I don't think so, no.

18 **Q. Did you review the petition at any time?**

19 A. I can -- I can look at the materials provided
20 to me. I could have. I know I looked at preinstitution
21 briefing.

22 **Q. Let's see. I'll jump ahead to I think where**
23 **you list materials considered on page 7. I hope you can**
24 **see this on the screen.**

25 **So it looks like -- stop me if you want me to**

1 stop. It looks like this is listing all the exhibits,
2 the petitioner -- petitioner's exhibits.

3 A. So I -- I -- in connection with preparing this
4 declaration, I don't -- I don't recall looking at the
5 petition and I don't see it listed.

6 Q. How many hours would you say you spent drafting
7 the petition?

8 A. So I understand that the petition was something
9 from the attorneys that, like, goes with this
10 declaration. And I don't --

11 Q. I'm sorry. Did I say -- I didn't mean to say
12 petition. How much time did you spend in preparing the
13 -- your declaration?

14 A. I think -- I think it was less than -- less
15 than 30 hours.

16 Q. What was your hourly rate that you charged for
17 your work on the declaration?

18 A. I think it was \$775 an hour.

19 Q. I'm going to jump ahead now in your
20 declaration. And I'm going to -- I'm going to -- excuse
21 me? I'm sorry. Dr. Phinney, did you have a question?

22 A. I didn't say anything. I heard something, too,
23 but that wasn't me talking.

24 Q. Okay. So I have a few questions about your
25 declaration I want to go to, and I'm going to jump

1 around a little bit since it's almost 300 pages. But if
2 you need to see, you know, any other portion, I'm happy
3 to scroll to that portion or you can -- you should have
4 the declaration in front of you as well, so you can take
5 a look at that.

6 A. Understood.

7 Q. Okay. So I'm going to jump ahead to --
8 actually, let me grab it. This will be faster --
9 page 45.

10 So 45 we have a section that says Magnetic
11 Shielding For Wallets Was Well Known in the Prior Art.
12 Do you see that?

13 A. Yes.

14 Q. In paragraph 70, you say, and I quote: At the
15 outset, the problem of magnets being located near
16 magnetic cards and corrupting the information on those
17 cards was notoriously well known before the '641 patent.

18 Do you see that?

19 A. Yes.

20 Q. And that's your understanding of what those
21 skilled in the art would have known; is that right?

22 A. Yeah. I think that's right.

23 Q. What is it about magnets being located near
24 magnetic cards that would corrupt the information on
25 those cards?

1 A. Well, this gets to something I discuss in
2 paragraph 72 about how there can be magnetic clasps in
3 things like in purses and wallets. So there can be
4 permanent magnets. And, you know, one -- one type of
5 thing is just the coercive force that could change some
6 of the magnetization of a magnet strip or -- so things
7 like that that can cause reorientation of magnetic
8 materials in -- in -- in magnetic stripe cards.

9 **Q. If I heard you correctly, I think you said the**
10 **corrosive or --**

11 A. Coercive.

12 **Q. -- coercive effect. What is that?**

13 A. If a DC magnetic field is large enough, it can
14 cause a -- a magnet -- a magnetic material to change its
15 orientation. You can think of it like a -- like a
16 little microscopic magnet itself, the magnet stripe
17 material, in aligning with an applied magnetic field.
18 That's -- that's a thing that can happen.

19 **Q. To put this in layman terms -- and please**
20 **correct me if I've described this inaccurately -- the --**
21 **the magnetic, I guess, aspects of the magnetic strip can**
22 **be changed by a nearby magnet. Is that what the known**
23 **problem was?**

24 A. The -- the problem is often described as things
25 like, you know, corruption or degradation, but the, you

1 know, underlying type of reason can, yeah, be
2 realignment of magnetic materials in response to
3 environmental fields.

4 **Q. In your report you rely on prior art that goes**
5 **back at least to 1984 regarding magnetic shields that**
6 **purportedly address this problem. What is your**
7 **understanding of how long this problem of magnets of --**
8 **I guess, magnets located near magnetic cards corrupting**
9 **them was known?**

10 A. So I'm relying on multiple references in this
11 section that we're discussing, including the kitchen
12 reference and Godfrey, Goto, LeBlanc, and Kamens. And,
13 you know, there's a range of dates there as far as those
14 disclosures.

15 So they -- I think sitting here, that would be
16 -- an answer I could give is just those dates, I -- in
17 the industry, I've heard of that being expressed as a
18 concern.

19 **Q. Yeah. I don't see the dates handy in the**
20 **references cited in those sections. But I know -- it**
21 **looks like Goto is a 1984 patent. So at least since**
22 **1984; is that accurate?**

23 A. Yeah. I think that's roughly right. You know,
24 it's like if we take that earlier -- earlier one, you
25 know, since that time, approximately.

1 Q. So I'm trying to understand. How does a nearby
2 magnet demagnetized or -- or, I guess, let me strike
3 that.

4 How does a nearby magnet affect a magnetic
5 strip in terms of, you know, what's -- what it's doing
6 to that strip. For example, is it generating these
7 static magnetic fields that have an impact or affect the
8 magnetic strip? What's the physical phenomenon that you
9 understand is taking place?

10 MR. TANG: Objection. Form.

11 THE WITNESS: I think it would fundamentally be
12 related to the interaction of materials in a magnetic
13 strip or a magnetic material with the environmental
14 magnetic field. So it's -- it's -- like I said, you can
15 think of those materials as being themselves composed of
16 microscopic magnets or magnetic regions or domains that
17 can be aligned with an external magnetic field. And
18 that -- that type of response, I think, is the
19 underlying phenomenon for what's mentioned in these
20 references as degradation or corruption and things like
21 that.

22 BY MR. CORDREY:

23 Q. What is your understanding of the path that the
24 magnetic field travels in affecting the magnetic strip?
25 For example, you know, would it be -- is it a straight

1 linear -- is it the shortest linear path? Is it more
2 complicated in that it's -- it can consist of several
3 paths? What is your understanding as to how that
4 magnetic field impinges on the magnetic strip?

5 MR. TANG: Objection. Form.

6 THE WITNESS: Part of your question was, or is
7 it more complicated? And that's -- that's basically the
8 answer. The magnetic field describes closed loops that
9 you can think of as originating from a permanent magnet.
10 But they -- they can go out into space. They need to
11 loop back and then return to the -- the permanent
12 magnet.

13 And so a lot of this goes back to that -- that
14 answer I had regarding shorting a magnet. You know,
15 it's possible to guide that magnetic flux using
16 different materials. So that's quite a complicated
17 issue. You know, it can preferentially go in some
18 directions that we say are more permeable to magnetic
19 flux.

20 BY MR. CORDREY:

21 Q. Let me try using a more concrete example than
22 -- I'm going to turn to page 100 of your report. Hold
23 on one second. Sorry.

24 So here in paragraph 158, you state that cards
25 stored in the Berkley-Baca wallet would have been

1 susceptible to this type of magnetic damage at least due
2 to their proximity to Baca's magnets used to attach
3 Berkley's wallet to a mobile device.

4 Can you elaborate on what you meant here?

5 A. Well, similar to what I had mentioned
6 previously with magnets that can be in clasps and can be
7 in environments, you know, that a card might be around,
8 like in a purse, the -- the Berkley-Baca wallet in the
9 combination that I proposed includes a -- also includes
10 magnets for attaching. And those are in -- you know,
11 they're near the storage compartment for cards. So
12 that's -- you know, if -- you know, whether or not the
13 wallet is attached, there can be these -- these magnetic
14 regions that are close to the cards.

15 Q. Would you determine that there would be
16 magnetic damage due to the proximity of the magnets?

17 MR. TANG: Objection. Form.

18 THE WITNESS: I think I didn't hear the very
19 first part of that question.

20 BY MR. CORDREY:

21 Q. Sure. I'll repeat it.

22 With regard to your statement here that, you
23 know, cards stored in the Berkley-Baca wallet would be
24 susceptible to this type of magnetic damage at least due
25 to their proximity to Baca's magnets, how would you

1 determine what proximity would cause potential damage to
2 the cards stored in Berkley?

3 MR. TANG: Objection. Form.

4 THE WITNESS: You could -- if you had a
5 particular design, you could -- at least as far as the
6 magnets, you could test it. You could try to erase the
7 cards using different separations. There's just
8 different things you could do from an engineering
9 perspective to -- to figure out that -- that -- the
10 answer to your question.

11 BY MR. CORDREY:

12 Q. In your experience, with somebody skilled in
13 the art, is there any type of calculation they can make
14 other than simply just kind of a trial-and-error process
15 that you refer to?

16 MR. TANG: Objection. Form.

17 THE WITNESS: I think they could. This -- this
18 is -- it's -- it's possible to model this type of
19 problem.

20 BY MR. CORDREY:

21 Q. Let me -- let me look quickly here at Baca.
22 Let's see. I'm going to show you -- and let me -- I'll
23 provide it to you as well in the chat. This is
24 Exhibit 1006 in this matter.

25 Let me know when you've had a chance to look at

1 **this exhibit and are ready.**

2 A. Yes.

3 **Q. Do you recognize this exhibit?**

4 A. Yes.

5 **Q. What do you recognize it to be?**

6 A. So this is -- I usually just call it Baca.

7 It's Exhibit 1006. And it's used, for instance, in the
8 first set of grounds.

9 **Q. And what do you use Baca for in your first set**
10 **of grounds?**

11 A. There's -- there's different claim elements.
12 For instance, a first arrangement of magnetic material,
13 so, like, 1-B. This is my paragraph 165 of my
14 declaration. That's showing Baca and where I identify
15 one of the groups of magnets. It's vertical. I
16 identified that as a first arrangement. So that's
17 exemplary. You know, as you go through, those -- the
18 first arrangement, the second arrangement, and things of
19 that nature are -- I'm relying on Baca, Exhibit 1006,
20 for that.

21 **Q. Is it accurate to say that you rely on Baca for**
22 **Baca's teaching of using these magnetic arrays?**

23 MR. TANG: Objection. Form.

24 THE WITNESS: I cite to it in this -- for this
25 first arrangement, the second arrangement, and the --

1 those have these different north/south arrays. So that
2 seems -- seems like a -- it could be a synonym here.
3 I'm not aware that it's -- that that has some special
4 meaning for us, arrays. But I think I -- I think I see
5 what you're saying, yes.

6 MR. TANG: Greg, we've been going for about an
7 hour, so whenever you get a chance, take a break.

8 MR. CORDREY: Sure. Just let me -- I'm close
9 to a good stopping point. So let me just ask a couple
10 more questions, and then we'll -- we'll take a quick
11 break.

12 BY MR. CORDREY:

13 Q. So I'm back on Baca Exhibit 1006. Confirm your
14 understanding of how you understood Baca.

15 So Baca discloses the use of magnetic arrays or
16 arrays of magnets. Oops. Sorry. Oh, no wonder.
17 Sorry. I had the wrong exhibit up.

18 So in Baca here at paragraph 80 -- do you see
19 it?

20 A. Yes.

21 Q. You can take a second to familiarize yourself
22 with it. I won't read it into the record. Just let me
23 know when you've had a chance to review this.

24 A. Okay. I've reviewed that.

25 Q. So is it your understanding Baca here is

1 teaching the use of rare earth metals, including alloys
2 of neodymium and samarium-cobalt magnets?

3 A. As a preferable embodiment for magnets 200 and
4 500, that's what that -- this passage is saying.

5 Q. Baca goes on to disclose that neodymium magnets
6 of grade N48 and higher are preferred and neodymium
7 magnets of grade 52 and higher are more preferred. Do
8 you see that?

9 A. Yes.

10 Q. And was that the understanding you relied on
11 when you referred to Baca's magnets in your declaration?

12 A. I'd say I considered what Baca disclosed, but I
13 think it -- you know, it -- I didn't rely on a specific
14 embodiment or a specific even preferred embodiment in
15 Baca. You know, it could be more things than that.

16 Q. Were there any other portions of Baca that you
17 relied on regarding the types of magnets that Baca was
18 disclosing?

19 A. I think as far as materials, I didn't -- I
20 didn't -- I don't recall that I cited to a different
21 passage of Baca to show different materials other than
22 the ones you mentioned.

23 Q. I'm going to go back to your declaration at
24 paragraph 158 we were talking about earlier. Here we
25 are.

1 So we were talking earlier about your statement
2 that cards stored in the Berkley-Baca wallet would have
3 been susceptible to this type of magnetic damage at
4 least due to the proximity to Baca's magnets used to
5 attach Berkley's wallet to a mobile device.

6 Is it accurate to say this is the basis for
7 your modification of the Berkley-Baca wallet to add the
8 shielding disclosed in the Goto patent?

9 MR. TANG: Objection. Form.

10 THE WITNESS: I'm sorry. I -- could you --
11 could you please just ask that again? I'm just going
12 to --

13 MR. CORDREY: No apologies necessary. It was a
14 long question.

15 Holly, can I ask you to read that back?

16 THE COURT REPORTER: Yes.

17 (The requested question was read back by the
18 court reporter.)

19 MR. TANG: Objection. Form.

20 THE WITNESS: I'd say it's -- it could be part
21 of the basis because I have an entire section about the
22 motivation to make this combination. And so I think
23 this could be part of it.

24 BY MR. CORDREY:

25 Q. What other was the -- what other parts -- what

1 would be the other reasons why you proposed to modify
2 the proposed Berkley-Baca wallet with the shielding of
3 Goto?

4 A. As an example, paragraph 155 alludes to, you
5 know, another section that I have in the background
6 section about there being other -- other references
7 where -- showing that it was a well-known problem for
8 magnetic cards to become corrupted, especially when
9 exposed to magnetic fields. So, you know, there can --
10 there's just -- in this section, I try to, you know, put
11 all those reasons for that motivation.

12 Q. I'm not sure I follow. Is it that you're
13 adding the fact that your statement that it was a
14 well-known problem for magnetic cards to become
15 corrupted, especially when exposed to magnetic fields as
16 another reason why you proposed to modify the
17 Berkley-Baca wallet to add the shielding of Goto?

18 MR. TANG: Objection. Form.

19 THE WITNESS: I think that's right. I think
20 that's what I'm saying, that this section is about the
21 motivation to combine Berkley and Baca with Goto, and
22 this starts at paragraph 154. And there's -- you know,
23 so I pointed us to, you know, paragraph 155, but there's
24 others where I -- in this section I try to put all that
25 -- that motivation for a person of ordinary skill to

1 make -- to make the combination.

2 BY MR. CORDREY:

3 Q. The combination of adding the shielding of
4 Goto?

5 A. I think that's a fair way to put it because
6 that's really what this section is about. It's adding
7 Goto to the -- to the Berkley-Baca combination.

8 Q. Okay.

9 MR. CORDREY: Why don't we go off the record?
10 Let's -- would ten minutes be sufficient?

11 THE WITNESS: Yes.

12 MR. CORDREY: Okay. We'll resume at
13 approximately 11:26.

14 And with that, I will ask Holly to go off the
15 record.

16 THE COURT REPORTER: Off the record.

17 (Break was taken.)

18 THE COURT REPORTER: Back on the record.

19 BY MR. CORDREY:

20 Q. Dr. Phinney, you recognize you're still under
21 oath?

22 A. Yes.

23 Q. We just took a quick break here. During that
24 break, did you speak with your counsel about your
25 testimony here today?

1 A. No.

2 Q. Are you familiar with ISO standards governing
3 the placement of magnetic card magnetic strips?

4 MR. TANG: Objection. Scope.

5 THE WITNESS: I might have seen them, yes.

6 BY MR. CORDREY:

7 Q. Let me step back a moment.

8 In your declaration you refer to various times
9 cards that are stored in the Berkley-Baca wallet being
10 susceptible to magnetic damage. What types of cards are
11 you referring to?

12 A. One that was occurring to me was a -- we
13 sometimes say it has a magnetic stripe. It has -- it's
14 offset from the -- the -- the middle long axis.

15 Q. So my -- okay. So back to my question, then.
16 So are you familiar with the ISO standards that govern
17 the placement of those magnetic stripes?

18 MR. TANG: Objection. Scope.

19 THE WITNESS: I -- I may have seen them, yes.

20 BY MR. CORDREY:

21 Q. Sitting here today, do you know the specific
22 ISO standard that refers to the placement of those
23 magnetic stripes on cards?

24 MR. TANG: Objection. Scope.

25 THE WITNESS: I can see if I included it, but

1 -- in my report. But unless I made a record of it, I
2 would have only -- I would have encountered it in a --
3 in dealing with readers in previous project work. But
4 not -- I don't recall citing -- citing to that here.

5 BY MR. CORDREY:

6 **Q. What's your understanding of what types of data**
7 **is stored on a card's magnetic stripe?**

8 A. It could depend. There could be stored value
9 or credentials or other things.

10 **Q. So, for example, if the card is a credit card,**
11 **it may have an account number, expiration date, security**
12 **code. Would that be an example?**

13 MR. TANG: Objection. Scope.

14 THE WITNESS: The -- the CVV code I don't think
15 is often on there. But the -- a lot of the indicia that
16 you would see on the front of a card can be encoded on
17 the -- on the magnetic stripe, things like an account
18 number.

19 BY MR. CORDREY:

20 **Q. What is your understanding as to where the data**
21 **that is stored on that magnetic stripe is stored?**

22 MR. TANG: Objection. Form.

23 BY MR. CORDREY:

24 **Q. Do you understand my question?**

25 A. Yeah. I -- I think I understood it. It can be

1 stored along a track on a magnetic stripe. That's -- in
2 magnetic recording, that's sometimes how we refer to
3 that.

4 Q. Is it your understanding the data can be stored
5 from one end of the stripe to the other end of the
6 stripe on the card?

7 A. That's -- that's more or less -- yeah. No.
8 I've understood it. It's a track that's along that
9 magnetic stripe, and that's -- it's why you have to pass
10 that through a read head by swiping.

11 Q. Is it fair to say the ISO standards governing
12 the -- you know, where the magnetic stripe is positioned
13 on a card and the kinds of information that is stored on
14 the card and the location of where that information
15 within the magnetic stripe is stored, is that something
16 that you regularly are familiar with?

17 MR. TANG: Objection. Scope. Objection.
18 Form.

19 THE WITNESS: I have -- some parts of that
20 information that you described, I have dealt with in the
21 mechanical design of card readers, and so discussing
22 those. But I don't think I cited to some of those --
23 those types of standards in -- in this report.

24 BY MR. CORDREY:

25 Q. What aspects of those that I listed are you

1 familiar with in the context of card readers?

2 MR. TANG: Objection. Scope.

3 THE WITNESS: Just in my prior work, I've dealt
4 with parking meters that had payment -- payment methods
5 that weren't for coins, and -- and that included the
6 design of card readers that had to be inserted where the
7 card had to be inserted a certain amount into the --
8 into the payment portion of the device.

9 So where -- where that was and where it can fit
10 mechanically in a retrofit parking meter was -- is
11 actually -- you know, it was the subject of a patency.

12 BY MR. CORDREY:

13 Q. Do you have an understanding of the term
14 "coercivity"?

15 A. Yes.

16 Q. What is your understanding?

17 A. Coercivity would be a magnetic field that you
18 would need to apply to create, like, a domain change or
19 shift in a particular direction. So, for instance,
20 that's related to what I mentioned before, the coercive
21 force. That would be an applied magnetic field strength
22 you'd apply to effect a shift in magnetic domain
23 direction.

24 Q. Is it your understanding that cards having a
25 magnetic stripe will have different coercivity values?

1 MR. TANG: Objection. Scope.

2 THE WITNESS: I think they could. I think it
3 could depend on what type of magnetic material they --
4 they have.

5 BY MR. CORDREY:

6 Q. For example, do you have an understanding of
7 what the coercivity value is for a credit card?

8 MR. TANG: Objection. Scope.

9 THE WITNESS: As far as a particular number or
10 something, I don't -- I don't think I could tell you one
11 right now. I think I would need to -- but that's -- I
12 don't think I discuss such a number in this declaration.

13 BY MR. CORDREY:

14 Q. Would the -- would that be the same response
15 for cards that have information stored on magnetic
16 stripes by using a low coercivity value --

17 MR. TANG: Objection. Scope.

18 BY MR. CORDREY:

19 Q. -- such as hotel cards or gift card?

20 MR. TANG: Objection. Scope.

21 THE WITNESS: As far as giving a numeric value,
22 that's not something I did in the context of this
23 declaration that I recall. I'm not sure I can give you
24 a number.

25 Also, if I could mention, degradation or

1 demagnetization doesn't just involve that type of
2 coercive force that you'd expect for writing. It can
3 occur at lower magnetizations, especially AC
4 magnetizations.

5 BY MR. CORDREY:

6 **Q. Can you elaborate on that a little bit more?**

7 A. Yeah. I've done a lot with electronic article
8 surveillance, which can involve magnetized strips and
9 they can be demagnetized. This is a type of no-go tag
10 that often has what looks like a strip of -- it's
11 actually magnetostrictive material that's within a
12 compartment, and then it's affixed to an article.

13 And the demagnetizers, for those, as an
14 example, use an AC magnetic field. They don't -- they
15 don't require a -- you know, they're not using a large
16 DC coercive field to -- to change the magnetization,
17 rather they can -- in the AC magnetic field environment,
18 they can be demagnetized.

19 And my point is that fields other than coercive
20 fields that are used for writing can affect changes such
21 as demagnetization in magnetic materials.

22 **Q. And they can affect -- they can demagnetize**
23 **cards at a lower coercivity value?**

24 MR. TANG: Objection. Form.

25 THE WITNESS: That's not quite what I'm saying.

1 What I'm saying is that magnetic fields that are lower
2 than a coercive magnetic field can still cause changes
3 in magnetization that could result in degradation, you
4 know, deterioration, you know, these other types of
5 words, like, even though those magnetic fields can be
6 less than the coercive force used for writing.

7 BY MR. CORDREY:

8 Q. You rely on the Berkley reference of force
9 disclosure of a wallet, correct?

10 A. Yes, in part.

11 Q. Did you reach any understanding as to the types
12 of cards that were intended to be stored in Berkley in
13 terms of whether they were low coercivity value cards
14 versus high coercivity value cards or both?

15 A. I have Exhibit 1,013. I don't know. Is it
16 okay if I'm looking at that?

17 Q. Sure. That's -- that's -- is that the Berkley
18 reference?

19 A. Yes.

20 Q. And for the record, I'll go ahead and -- oops.
21 Excuse me. I'll go ahead and share it with counsel
22 while you're looking at it.

23 THE WITNESS: Excuse me.

24 MR. CORDREY: If you need to pause to get a
25 drink of water, by all means, take the minute or two you

1 need.

2 THE WITNESS: I'm good. Thank you.

3 I -- I would say that the reference to cards
4 that are in Berkley are -- it's -- it's an inclusive
5 list. It includes things like credit cards,
6 identification cards, bank cards. So I would say it
7 doesn't talk about cards with that type of technical
8 specificity in your question.

9 BY MR. CORDREY:

10 Q. Those types of cards that you reference that
11 Berkley identifies, do you have any understanding as to
12 -- those would include cards that are both low
13 coercivity and high coercivity cards?

14 A. I would say, because it's an expansive list, if
15 the card fits, that's -- that's the type of card that
16 you'd put in a Berkley cosmetic wallet.

17 Q. You also refer to folio wallets disclosed in --
18 I don't know if I'm pronouncing this correctly -- but
19 Z-H-U, Zhu, and Kinshi. Do you recall those?

20 A. Yes.

21 Q. And do you have an understanding as to the type
22 of cards that would ordinarily be used in connection
23 with a Zhu and Kinshi folio wallets?

24 A. I think I give the same type of answer as I did
25 for Berkley. That if the card fits, that would be -- I

1 think the types of cards are intended to be expansive.
2 You know, an inclusive list can include credit cards,
3 bank cards, and the other types of things that I
4 mentioned for Berkley.

5 **Q. Is it accurate that if I have a magnet -- a**
6 **magnet that produces a magnetic field level that exceeds**
7 **the coercivity value of the magnetic stripe in a**
8 **particular card, that would potentially corrupt that**
9 **card?**

10 MR. TANG: Objection. Scope.

11 THE WITNESS: I think that can depend on the
12 same kind of factors that we had talked about before,
13 like distance, mitigating structures, the size of the
14 magnet. So I think it could depend on the circumstance.
15 BY MR. CORDREY:

16 **Q. Is it accurate that the entire magnetic stripe**
17 **doesn't have to be corrupted in order to render that**
18 **functionality of the magnetic stripe nonoperational or**
19 **nonfunctional?**

20 MR. TANG: Objection. Scope.

21 THE WITNESS: In that type of linear magnetic
22 recording, I'm -- there's many different types of tracks
23 and encodings that can be recorded, and I -- I am aware
24 of some that include error correction or include means
25 for error detection, if not correction. So in the right

1 setting, it would be possible to corrupt part of a
2 magnetic stripe yet still be able to retrieve data or,
3 you know, correct for that -- that error. But it
4 depends on the circumstance.

5 BY MR. CORDREY:

6 Q. Do you have any understanding as to whether, in
7 a credit card application, corrupting part of that
8 magnetic stripe would render that -- render that
9 magnetic stripe nonfunctional?

10 MR. TANG: Objection. Scope.

11 THE WITNESS: I didn't really get into -- into
12 that for this declaration, you know, at that level of
13 detail. I -- for -- for a credit card, I think I would
14 need just to investigate that more.

15 BY MR. CORDREY:

16 Q. I didn't catch that last part. Sorry. For a
17 credit card...

18 A. I think I would need to investigate that more.
19 I don't -- that's not something I did for this
20 declaration.

21 Q. In your declaration -- let's see -- at
22 paragraph 147 -- here we go -- you talk about various
23 ways Berkley describes to attach the wallet to the
24 handheld device. Do you see that?

25 A. Yes.

1 Q. One of the ways you mention is that Berkley
2 states that the -- and I'll quote you: Berkley states
3 that attaching a wallet to a smartphone can be performed
4 using a -- using, quote, a magnet that is placed on the
5 base of the device, which enables the entire improved
6 compact to stick to a set of corresponding magnets that
7 are attached by a user to a smartphone, closed quote.

8 Do you see that?

9 A. Yes.

10 Q. Did you reach an understanding as to the type
11 of magnet Berkley was referring to here?

12 A. I think this -- this part of Exhibit 1,013, and
13 just a few sentences around there, that's about all of
14 the disclosure we have there. So I think it just refers
15 to a magnet or magnets, plural. And I think that's the
16 only disclosure it gives. It's -- I can point you to
17 where I discuss that in a little more detail in the
18 declaration.

19 Q. I've pulled up Berkley Exhibit 1013 at
20 paragraph 29, which I believe is the portion you cited
21 to in your declaration. And this is -- if you look --
22 if you take a minute and review this, is this the
23 portion of Berkley you're referring to that discloses
24 the use of a magnet?

25 A. Yes. This is at paragraph 29. And I think

1 that's the only part that refers to the magnet.

2 **Q. Berkley doesn't describe the type of magnet**
3 **here, correct?**

4 A. As far as what type of material, I think I'd
5 agree with that.

6 **Q. And did you reach any -- I'm sorry if I'm**
7 **asking this again. But now having reviewed this, do you**
8 **recall if you reached any understanding as to the type**
9 **of magnet Berkley was referring to in this section?**

10 A. This is like my paragraph 148 of my
11 declaration. The short answer is, no, Berkley doesn't
12 provide more detail about what type of magnet that is as
13 far as the material. And that's what I'm trying to
14 express here at the beginning of paragraph 148.

15 **Q. I see that. You state, Berkley does not**
16 **expressly provide additional details for how to**
17 **implement this magnetic attachment?**

18 A. Yes. And I just used the word "explicitly"
19 instead of "expressly."

20 **Q. Oh. I'm sorry. My bad.**

21 **Is it accurate that Berkley doesn't disclose**
22 **the use of rare earth magnets?**

23 A. I believe that is true. It doesn't -- it
24 doesn't use the words "rare earth" or, like I was saying
25 here in 148, doesn't provide additional details for how

1 to implement that magnetic attachment.

2 Q. And in addition to not using the words "rare
3 earth," it doesn't disclose any species of any rare
4 earth magnets like neodymium or any other rare earth
5 magnet species, correct?

6 A. I think that is correct.

7 Q. Is it also accurate that Berkley doesn't
8 disclose a magnetic shield?

9 A. I think I agree with that.

10 Q. We discussed earlier that you relied on the
11 Goto reference -- that's Exhibit 1,012 -- to provide the
12 ferromagnetic shield or metallic plate in the recited
13 claims of the '641 patent; is that right?

14 A. Yes. I rely on Goto for -- for those claim
15 elements.

16 Q. So I'm looking at page 80 -- starting at
17 page 80, paragraph 129, under the subsection "Goto"
18 where you discuss Goto's disclosure. And you -- in
19 paragraph 130, you state, to address this problem of
20 data stored on magnetic cards that may be negatively
21 affected or become unusable when exposed to a magnetic
22 field, that Goto describes a magnetic cardholder, which
23 is depicted in Figure 17.

24 It's on page 82 of your declaration. Do you
25 see that?

1 A. Yes.

2 Q. This -- this was the embodiment from Goto that
3 you relied on in forming your opinions?

4 A. The figure -- the Figure 17, which is also
5 shown in Figures 16 and 18, as I'm indicating there in
6 paragraph 130.

7 Q. This is Exhibit -- I've put on the screen
8 Exhibit 1,012. I've lost track. Did I include that?

9 MR. TANG: Not yet, I don't think.

10 MR. CORDREY: Okay. Let me go ahead and just
11 add it for the record.

12 BY MR. CORDREY:

13 Q. Okay. Do you recognize Exhibit 1,012?

14 A. Yes.

15 Q. Okay. Okay. So here is Figure 16, 17, and 18.
16 These are the embodiments that you relied on in your
17 declaration?

18 A. I think that's right. There could be some
19 other material. But as far as the cardholders, those
20 are the depictions that I relied on.

21 Q. To be clear, what is your understanding of what
22 -- what feature shown in these embodiments is the
23 magnetic or ferromagnetic shield?

24 A. It's called the magnetic shield plate 54 or
25 magnetic shielding plate 54.

1 **Q. And in this embodiment, what is the object**
2 **that's being protected by the shield?**

3 A. So magnetic card 68.

4 **Q. How is magnetic card 68 protected by the**
5 **shields of 54?**

6 A. One way is just through the permeability of the
7 magnetic shielding plate, which can include an iron
8 core, so it's a ferromagnetic core, that will tend to
9 guide magnetic flux. Another way can be through
10 conduction currents that are induced in a conducting
11 foil or film in response to magnetic fields.

12 **Q. Let's take the first one.**

13 **You stated the permeability can guide the**
14 **magnetic flux. Can you elaborate on how the shields**
15 **would guide the magnetic flux?**

16 A. Yes. It's -- it's a whole world of magnetics
17 with many terms that are -- sound quite similar to
18 electrical terms but are going to be a little different.

19 So just like we have, like, wires, conductors
20 that have high conductivity and can guide electric
21 current. And those you can think of as providing a
22 preferential path for an electric current. There are --
23 in the magnetic world, there are permeable materials,
24 and that includes things like ferromagnetic materials,
25 like iron, which is one thing that Goto is disclosing.

1 And that provides -- that material provides a
2 preferential path for magnetic flux. And that's -- it
3 can -- it basically can guide things away from the inner
4 compartment if you surround that compartment with
5 permeable material.

6 Q. If -- looking at Figure 18 as an example, if I
7 have a situation where the card -- the protected object
8 shown as the card 68 is exposed, is outside the magnetic
9 shields 54, as shown in Figure 18, would the magnetic
10 stripe, assuming there's one on the exposed portion of
11 card 68, would that be susceptible to corruption by a
12 close-by magnetic field or magnets?

13 A. Generally speaking, I'm not sure we could
14 answer, but it could be. It would depend on the
15 proximity and orientation of those magnets with respect
16 to this exposed -- now exposed magnetic stripe. But
17 yes, it could -- it could be susceptible to corruption.

18 Q. Well, I guess what I'm trying to understand is
19 if the protected object, 68, is completely surrounded by
20 the magnetic shields, then is it accurate that the risk
21 of corruption in that instance, assuming those shields
22 are -- have -- I guess would it be a high permeability?

23 A. Yes, a high permeability.

24 Q. Yeah -- would be lower as opposed to a
25 situation where the card -- the protected object, 68,

1 extends beyond the ferromagnetic shields as shown in
2 Figure 18?

3 MR. TANG: Objection. Form.

4 THE WITNESS: Again, I think it could depend.
5 But it -- the risk could be lower, yes, but I think it
6 could depend on the circumstance.

7 BY MR. CORDREY:

8 Q. Well, what I'm trying to understand is this
9 concept of the permeability guiding the magnetic flux.
10 If I have a situation where the card is partially
11 exposed, do I get the same level of protection that I
12 would under the same circumstances if the card was
13 completely surrounded by the magnetic shields?

14 MR. TANG: Objection. Form.

15 THE WITNESS: I think it could just depend on
16 the circumstance. It's a -- it's sort of a
17 three-dimensional problem that can depend on the -- the
18 source. You know, what is the source of magnetic flux
19 and how is the -- what are the -- what is the strength
20 of the magnetic field around the cardholder and card?

21 BY MR. CORDREY:

22 Q. Is it accurate that adding a ferromagnetic
23 shield or magnetic plate as disclosed in the Goto patent
24 would add cost to a wallet?

25 MR. TANG: Objection. Scope.

1 THE WITNESS: I don't think I really addressed
2 issues of cost, but it does seem to be like an
3 additional layer. It seems like that. But --

4 BY MR. CORDREY:

5 Q. Is it accurate that adding a magnetic shield or
6 magnetic plate would increase the -- at least the
7 manufacturing complexity?

8 MR. TANG: Objection. Scope.

9 THE WITNESS: I didn't really address that in
10 my declaration, either. It -- you know, it could, but I
11 -- you know, it would depend on -- it could depend on a
12 lot of details of that manufacturing.

13 BY MR. CORDREY:

14 Q. Do you have an understanding as to whether
15 adding a ferromagnetic shield or metallic plate to, say,
16 the wallet of Berkley would increase the thickness of
17 the wallet?

18 A. Again, it's not something I think I
19 specifically considered. Again, it could. It could
20 increase thickness if that's how the wallet were
21 designed or, you know -- but it's also possible that an
22 additional layer can be accommodated within the same
23 space as, you know, some comparable design without that
24 shield. So I think it could depend .

25 Q. Is it accurate that adding a ferromagnetic

1 shield or metallic plate to the wallet of Berkley would
2 increase its weight?

3 A. Again, it's not something I considered
4 specifically. I give the same type of answer. I think
5 it could depend on the design of the wallet and its
6 other materials, the materials that would, you know,
7 presumably be displaced by the shield or if there were
8 materials displaced or merely something added. So it
9 could depend.

10 Q. Let me look at your declaration again.
11 Page 177. Here we go.

12 So in paragraph 273, you state, a POSA or --
13 which is, I understand, a person of ordinary skill in
14 the art -- would have been further motivated to modify
15 the Zhu -- or Zhu-Kinshi wallet to include Goto's
16 iron-foil, magnetic shielding plates to avoid erasing
17 data stored magnetically on cards.

18 Do you see that?

19 A. Yes.

20 Q. Was this the sole reason in your analysis in
21 your declaration for adding Goto to the combination of
22 the Zhu-Kinshi wallet?

23 MR. TANG: Objection. Form.

24 THE WITNESS: I describe this motivation in
25 that section that we had mentioned previously. So I

1 wouldn't characterize just one way of expressing this as
2 my sole reason. You know, we've looked at other ways of
3 describing this, for instance, that don't involve, like,
4 erasing data, per se, but can involve things like
5 corrupting or making the card unusable in other ways.

6 So I -- I would refer you to that motivation
7 section, for instance, in the first ground as a place
8 where I try to list a lot of those reasons.

9 BY MR. CORDREY:

10 **Q. Why don't you take a minute -- just so we're**
11 **clear on the record, what section of your declaration**
12 **are you referring to?**

13 A. So one place is in ground -- the first set of
14 grounds, and it starts at page 98. And so this is
15 called section -- it starts on paragraph 154. So there
16 I'm providing, you know, reasons why a person of
17 ordinary skill would make the combination of Berkley and
18 Baca with Goto. But I have similar sections for the
19 other grounds.

20 **Q. Can you take a second and point me to that**
21 **section with regard to your other grounds?**

22 A. So starting at paragraph 273, this is talking
23 about the second ground with Zhu and Kinshi, and this is
24 in a bigger section about motivation that starts at
25 paragraph 266. So that's for the second ground.

1 And then for the -- the third ground, it starts
2 at page 256. This is paragraph 393.

3 **Q. Sorry. For the last ground, it starts at**
4 **paragraph 393?**

5 A. Yeah, paragraph 393. That's right.

6 **Q. Okay. I got you.**

7 So these sections are the sections where you
8 identified the features of -- strike that. Let me
9 rephrase that.

10 Okay. So these sections that you identified
11 are the sections that identify the reasons why you would
12 have combined the Goto reference with the other
13 references in your declaration; is that right?

14 A. Yeah. I think that's -- yeah. I think that's
15 right.

16 **Q. Okay.**

17 MR. CORDREY: Let's -- we've been going about
18 another hour, and I have to take a quick call here. Can
19 we go off the record for about ten minutes? Would that
20 work?

21 THE WITNESS: Sure.

22 MR. CORDREY: Okay. Let's reconvene again at 1
23 -- I'm sorry -- 12 -- 12:24, 12:25?

24 MR. TANG: Sure.

25 MR. CORDREY: Okay.

1 Okay. We can go ahead and go off the record,
2 Holly.

3 THE COURT REPORTER: Okay. Off the record.

4 (Break was taken.)

5 BY MR. CORDREY:

6 **Q. Let me share my screen again.**

7 A. And just to check, sound check for me because I
8 switched to a headset. So just as long as I'm --

9 **Q. Yep. You sound fine on my end.**

10 Okay. But again, Dr. Phinney, you recognize
11 you're still under oath?

12 A. Yes.

13 **Q. Okay. And did you have any conversations with**
14 **counsel about your testimony between the break?**

15 A. No.

16 **Q. So I'm going to refer you back to your**
17 **declaration at paragraph 273. We were talking about**
18 **that -- your statement or your opinion that a person of**
19 **ordinary skill in the art would have further been**
20 **motivated to modify the Zhu-Kinshi wallet to include**
21 **Goto's iron foil magnetic shielding plates to avoid**
22 **erasing data stored on -- stored -- erasing -- strike**
23 **that -- to avoid erasing data stored magnetically on**
24 **cards.**

25 Do you recall -- or strike that.

1 Is it your understanding that Zhu does not
2 disclose or mention any risk of corruption from the use
3 of the magnets in its folio wallet?

4 A. That's my recollection.

5 Q. Is it also your recollection that Kinshi also
6 does not mention any risk of corruption from the use of
7 magnets in its folio?

8 A. That's what I recall.

9 Q. Did you do any analysis of the field strength
10 of the magnets disclosed in the Zhu or Kinshi folios?

11 A. I didn't do that, no.

12 Q. Is it your understanding that Zhu doesn't
13 specify the grade or type of magnet used in its folio?

14 A. I think you asked for Zhu?

15 Q. Yeah. Exactly.

16 A. That's my recollection. I could check
17 Exhibit 1,008.

18 Q. Why don't you do that, and I'll add it while
19 you're doing that.

20 I'm going to go ahead and add Exhibit 1010,
21 which is the Kinshi reference, also.

22 A. And I think your questions were the grade of
23 magnet or type, did you ask?

24 Q. Actually, let's just start with the grade. Did
25 Zhu -- strike that.

1 **Did Zhu specify the grade of the magnet used in**
2 **its folio?**

3 A. I don't see that. I don't recall that, either,
4 any kind of energy product or, you know, BH product or,
5 you know, grade like that.

6 **Q. How about the type of magnet used in its folio?**

7 A. I don't -- I don't recall that, and I -- and I
8 don't see it now as I'm searching.

9 **Q. Just let me know when you're done searching the**
10 **Zhu reference.**

11 A. I don't see it in here.

12 **Q. Does the Kinshi reference mention any --**
13 **mention the grade or type of magnet used in its folio?**

14 A. Okay. I -- I just saw I was on mute, which is
15 very strange. And I also saw a Zoom Workplace alert
16 show up. So did you hear an answer? Did I give --

17 **Q. No.**

18 MR. TANG: No.

19 BY MR. CORDREY:

20 **Q. No, not since my question. No, we haven't**
21 **heard anything.**

22 A. Oh, I'm so sorry. I guess I must have
23 disappeared.

24 Okay. As far as the material of the magnet's
25 concerned in Kinshi, I don't see that. I don't see

1 information regarding the grade. And that's -- that's
2 what I recall, too. So checking over Kinshi, I don't --
3 I don't see those -- those two things, at least as far
4 as the material of the magnet, if that's what you mean
5 by type.

6 Q. Yes.

7 In light of Kinshi's disclosure, do you have an
8 understanding of what type or grade a magnet Kinshi was
9 disclosing?

10 MR. TANG: Objection. Scope.

11 THE WITNESS: I guess I'd answer that, as far
12 as disclosing a particular type, I don't think Kinshi
13 does that, as I said, but that, you know, a person of
14 ordinary skill would also understand that the
15 application includes, you know, securing a mobile device
16 in this folio and that -- and so as I -- as I describe
17 -- as I describe in more detail for something like claim
18 3, you know, it just makes it explicit that -- that
19 these magnets can be strong enough to, you know, keep --
20 keep the mobile device in there or you could also just
21 hold the entire folio, plus mobile device, by the mobile
22 device and it doesn't just, you know, fall off.

23 So apart from that sort of functional context,
24 I don't -- I don't see that Kinshi is describing the
25 material or type of magnet.

1 BY MR. CORDREY:

2 Q. So if I understand your response, the -- a
3 person of ordinary skill in the art, in your opinion,
4 would look to at least the disclosed functionality, for
5 example, of the magnets being strong enough to hold the
6 -- the personal electronic device within the folio as an
7 indication of the type of magnet that Kinshi would be
8 disclosing; is that right?

9 A. Yeah. I think that's a fair way of putting it.
10 They would know that it's possible and that, you know,
11 there could be different options to achieve that goal.

12 Q. What's your response to the same question
13 regarding the Zhu folio?

14 A. I'd say it's quite similar that, you know, even
15 though I didn't reference or find out, again, a part
16 talking about the material or type of magnet, that the
17 use case would inform a person of ordinary skill about
18 things like the required strength of the magnets.

19 Q. Did you take any -- strike that.

20 Did you undertake any analysis regarding
21 whether adding Goto's shield to Zhu would increase the
22 cost of manufacturing this product?

23 A. I didn't undertake an analysis like that, no.

24 Q. Did you undertake any analysis regarding
25 whether adding Goto's metallic plate or ferromagnetic

1 shield to Zhu's folio would increase the manufacturing
2 complexity?

3 A. I didn't do that analysis in my declaration,
4 no.

5 Q. Same question with regard to whether it would
6 increase the thickness of Zhu's folio.

7 A. Well, like I said earlier, I think it could
8 depend on the design. But I didn't -- I didn't
9 undertake a specific analysis, you know, where I assume
10 that it, for instance, you know, would increase the
11 thickness and by how much. I didn't -- I didn't do that
12 analysis.

13 Q. How about the weight?

14 A. I give the same answer for the weight. Again,
15 it would -- you know, it could depend on the design,
16 like the weight of displaced material and what that
17 other material is or if there is material displaced. So
18 I didn't -- I didn't do that analysis for -- for
19 purposes of this declaration.

20 Q. Are the responses to those questions the same
21 for the Kinshi reference?

22 A. Yeah. That's fair.

23 Q. Looking a little further back to your
24 declaration, in the same section we were in, now moving
25 ahead to paragraph 275. You state toward the bottom of

1 paragraph 275: When the mobile phone is removed and the
2 folio is closed, the cards become exposed to the magnets
3 in back plate 210 of Zhu, parens, or base piece 3 of
4 Kinshi. This may expose the cards stored in the
5 plurality of pockets described in Kinshi to potential
6 magnet damage. Section VI.C.

7 Do you have in your declaration an example
8 showing what this configuration looks like with the
9 mobile phone removed and the folio closed?

10 A. I don't think I do. I am -- I recalled
11 somewhere we're bending it back, showing it that way,
12 but with the mobile phone removed and then sort of
13 closed, clam-shell style but with nothing in the middle.
14 I can look, but I don't believe there's such a
15 depiction.

16 Q. I ask because I also could not find an example
17 in your declaration of that configuration. But to be
18 clear, I guess, so we understand what configuration
19 you're describing, this is a configuration where the --
20 actually, hold that thought for a second. Let me see if
21 I can find -- well, let me...

22 So I'm looking -- I put on the screen the Zhu
23 reference. So let's go to the figures. See if they can
24 -- here we go.

25 So looking at Figure 4, which should be on your

1 screen. Do you see it?

2 A. Yes.

3 Q. So the configuration you described, I believe,
4 is at paragraph 275 that I just read into the record, is
5 it accurate that this is the configuration where panel
6 or cover 230 would be folded over and in contact with
7 panel 210 as shown in Figure 4 of Zhu?

8 A. Yeah. That's what I'm getting at.

9 Q. And do you regard this configuration an
10 ordinary or normal operating configuration for a folio
11 of Zhu?

12 A. I think people would buy a product like Zhu to
13 put around their phone, and I would regard that use with
14 a phone or the mobile device that's designed to mate
15 with this folio-style wallet as being the normal case.
16 So, you know, I think it would -- for most people, it
17 would be less common for them to ever have the -- the
18 folio wallet empty with cards folded over.

19 Q. In this configuration, you stated in
20 paragraph 20 -- I'm sorry -- 275, that this may expose
21 the cards stored in the plurality of pockets to
22 potential magnetic damage. Can you elaborate?

23 A. Yeah. So there's, first of all, the whole
24 issue that Zhu has these slots, which aren't really
25 labeled, on the left that cover 230 and they're not

1 described very much, which is why I've got the -- sort
2 of the Kinshi combination where I'm replacing that cover
3 230 by -- you know, I'm showing a combination where
4 Kinshi is providing that -- that cover where it does
5 describe those slots as being for cards, and they're
6 shown as like a -- sort of a racetrack shape. You know,
7 they have rounded edges.

8 And -- and I'm really sorry. Would you mind
9 repeating your question?

10 **Q. That's okay.**

11 MR. CORDREY: Holly, could you read that back?
12 (The requested question was read back by the
13 court reporter.)

14 THE WITNESS: Now -- so taking that -- that
15 Kinshi part of it, you know, where there would be cards
16 in card slots on that cover, on the inside part of it,
17 inside slots of this cover, folding them over could
18 bring them in closer proximity to the magnets in the --
19 in the back, that back panel 210. And that's the --
20 that's the -- the -- you know, that's the basis for
21 potential for magnetic damage or degradation.

22 BY MR. CORDREY:

23 **Q. Just a couple of follow-up questions on that.**

24 So you pointed out first, I guess, as an
25 initial matter that looking at Zhu panel 210, you see

1 those three horizontal, oval features. I think you
2 refer to them as slots. It's accurate to say Kinshi --
3 I'm sorry -- Zhu doesn't describe what those are or what
4 they're used for in any respect, correct?

5 A. That's my recollection is that, you know, they
6 sure look like something like you see in Kinshi, but
7 they're really not described in that -- in Zhu's
8 specifications. So I think that's accurate what you --
9 what you said.

10 Q. Next you refer to the cards -- assuming this
11 for the sake of argument, let's assume those are slots
12 to insert cards into -- let me show you from your
13 declaration on page 178. No. Sorry. It's going to be
14 page 28 of your declaration.

15 Okay. Paragraph 50, do you have that in front
16 of you?

17 A. Yes.

18 Q. So when you were describing that configuration
19 in Zhu about potentially corrupting the cards when
20 closing the folio without the phone inserted to the back
21 panel, the cards would be inserted into the cover panel
22 as shown in the upper-left figure on page 28?

23 A. Yeah. That's about right.

24 Q. Okay. And would the same discussion apply to
25 the Kinshi reference, which is to say that, when you

1 refer to the potential corruption of the cards in the
2 Kinshi folio with it closed, the cards would be in the
3 same position and the phone would be removed as we
4 discussed in connection with Zhu?

5 A. Yeah. That's -- that's right.

6 Q. Let me go back to -- here we go -- the Zhu
7 reference.

8 So in panel 210 on Figure 4, it's accurate to
9 say that the features identified by 240 are the magnetic
10 groups; is that right?

11 A. Yes.

12 Q. What is your understanding as to how the
13 pathway created by the electronic -- the magnetic field
14 from those magnets would potentially corrupt the cards
15 that would be inserted in panel 230 --

16 MR. TANG: Objection. Form. Objection.
17 Foundation.

18 BY MR. CORDREY:

19 Q. -- in your hypothetical.

20 A. So where there's adjacent north and south
21 magnets but no mating magnets, that's the situation
22 we're talking about. Because the mobile device has been
23 removed with its mating array. And so you can think of
24 a flux coming out perpendicular from the page at the
25 north magnets and preferentially entering the page at

1 the south magnets or some other similar kind of
2 arrangement. So there would be sort of a fringing field
3 between the north and south pairs of magnets in a magnet
4 group, plus other fringing flux that's finding other
5 paths.

6 Q. Is it accurate that the -- when the magnetic
7 stripe on the cards is exposed to that magnetic flux,
8 then that raises the likelihood that those stripes will
9 be corrupted?

10 A. That's the general idea. That's exposing to a
11 magnet in quite close proximity. It's something that,
12 you know, could cause some sort of degradation.

13 Q. Go back to the discussion at 178, page 178,
14 paragraph 276. Now we're talking about a different
15 configuration of the mobile -- mobile phone within the
16 folio. And you state in paragraph 276, even when the
17 mobile phone is attached to the folio, it was common for
18 a user to fold the cover back, parens, like bending the
19 spine of a paperback novel, closed paren, when using the
20 mobile device while in the folio.

21 You provide -- you say -- then you say that
22 you've provided several examples of this operation in
23 Section VI. Let's see. I think that's back on page 28.

24 Here we go. So looking at page 28 of your
25 declaration, the bottom image, is that an example of the

1 configuration you're describing?

2 A. Yes, that's right.

3 Q. And is this another configuration that you
4 regard as a kind of normal operating configuration for
5 this folio wallet?

6 A. Yes, I think so. In paragraph 276, I say it
7 was common for a user to fold the cover back. That's
8 something that makes sense to me. There's even a clasp
9 for keeping the folio in that bent-back position.

10 Q. And it's your opinion that in this
11 configuration, the cards, for example, as shown in the
12 slots in the image in -- on page 28, would be subject to
13 being corrupted by magnets in the folio?

14 A. Yeah. They could be because they'd be in
15 closer proximity.

16 Q. And again, in this configuration, can you
17 describe how the cards would be -- strike that. Let me
18 rephrase that.

19 In this configuration, can you describe how the
20 magnetic flux from the magnets would impinge on the
21 cards shown in the pockets?

22 MR. TANG: Objection. Form.

23 THE WITNESS: So it would depend on, you know,
24 exactly where the magnets are. But generally speaking,
25 this would be a fringing flux from the magnets. To give

1 you an idea, magnetic fields are not readily blocked by
2 materials other than ferromagnetic materials or
3 permeable materials. So most things are sort of
4 invisible to magnetic materials, things like leather and
5 paper and plastics. So that fringing flux from the
6 magnet groups or from adjacent magnets -- adjacent
7 magnetic regions, that as it impinges on a card's
8 magnetic strip.

9 BY MR. CORDREY:

10 Q. Is it accurate that the magnetic flux created
11 by the magnets will -- it takes on several paths. It's
12 not just a single path. I'll use the analogy of an
13 electric circuit where you might have just one path for
14 the -- you know, for the electricity to flow. Here with
15 the magnetic flux, it's a field, is that right, that can
16 flow in three dimensions in any number of paths?

17 MR. TANG: Objection. Form.

18 THE WITNESS: Generally speaking, that's true.
19 Even where a permeable magnetic circuit is provided,
20 there still can be leakage flux and other types of
21 fringing fields, magnetic fields, around the permeable
22 pathway. And especially in the case where if you had
23 two magnetic regions that are separated, generally
24 speaking, between them, there will be a magnetic --
25 magnetic fields in really all the space around these

1 that is taking a path from one magnet to the other
2 through space.

3 BY MR. CORDREY:

4 Q. Let me take you to page 196 now of your
5 declaration. This is where we're discussing -- I'm
6 sorry. Get to 196. I keep confusing -- there we go.
7 That's not it. Here we go.

8 Okay. So do you see the image at -- this is in
9 paragraph 294, page 290 -- sorry -- page, yeah, 296 of
10 your declaration?

11 A. Yes, I see that.

12 Q. This is referred to as Exhibit G, correct?

13 A. I think I call it Figure G.

14 Q. Oh, Figure G. I'm sorry. Figure G.

15 So can you just -- can you describe what you've
16 created here in Figure G.

17 A. So the way -- the way I describe this in the
18 text is there's magnetic shielding plates in both the
19 front and back of Zhu's panel 230. And so -- which --
20 but what I'm really -- this is already a hybrid figure
21 where I'm showing the left side of that cover being not
22 -- not from Zhu but now from Kinshi that includes those
23 compartments.

24 So there's -- on both sides there's -- there's
25 a frontside shielding plate and a backside shielding

1 plate. And I can go into more detail to tell you how
2 that could be constructed with -- with multiple slots on
3 the so-called front side.

4 Q. So looking at the front side of this -- this is
5 the hypothetical. I'll call it the Zhu-Kinshi folio.

6 Looking at the front side, you've annotated
7 what you're calling the frontside shielding plate, and
8 there's four of them. Those are the darkest colored
9 regions on panel 2; is that right?

10 A. Yes. That's right.

11 Q. And there's a series of dash lines. Well,
12 Strike that for a second.

13 There's a lighter color that surrounds the
14 frontside shielding plates. What does that represent?

15 A. So that's the one continuous backside shielding
16 plate. And what I'm trying to show with -- -- what I'm
17 trying to show with the frontside shielding plate is it
18 would be almost like if you had a fan arrangement --
19 maybe you can call it a staggered arrangement -- of four
20 frontside shielding plates that overlap one another, but
21 they -- you know, each successive one is sort of
22 sticking its head out of its corresponding slot. So
23 it's -- it's on the front wall of every slot, every
24 compartment.

25 Q. And the backside shielding plate, then, is

1 behind all four of them?

2 A. Yeah. And so, you know -- and now that I'm
3 looking at this, let's say this actually is just showing
4 three compartments, then the -- there really wouldn't be
5 a front. The topmost one really wouldn't -- the topmost
6 frontside shielding plate wouldn't have poked its head
7 up there because that would really be -- there is no
8 front of that one. Does that make sense?

9 Q. That makes sense.

10 So that fourth -- that top plate, you wouldn't
11 have a need for that one?

12 A. Yeah. There wouldn't be material there to put
13 the frontside one in. You know, if you imagine, each of
14 these compartments, it's like a little -- you can put
15 your finger in that and sort of pull a front material
16 forward, and wherever you can do that, you would put a
17 frontside shielding plate in it.

18 Q. So there's a series of dash lines that look
19 like they surround each pocket, I guess. What are
20 those?

21 A. I'll answer in the -- just to get us a little
22 further, that they're from Kinshi. I don't remember
23 describing in more detail what those are in my
24 declaration.

25 Q. It can't be stitching for the pockets, right?

1 Because that would -- effectively the top, the
2 horizontal one, would seal the pocket, right? So I
3 assume that's not stitching.

4 A. You see it could be because let's say the very
5 top dashed one, maybe that's the front and back -- the
6 -- it would depend on how deep the stitching goes. So
7 the very topmost horizontal dashed line --

8 Q. Oh.

9 A. -- yeah, that could sort of stitch the material
10 on one side and the other side where inside there could
11 be a backside shielding plate. But it wouldn't seal off
12 a card slot, which would then be defined just above the
13 horizontal dash line that's one -- the next one down.
14 You know, if that stitching only went, again, through
15 two layers of material such that there was another --
16 yet another frontside shielding plate now sort of
17 between those two stitched layers there.

18 Q. So with the shielding in place, as you propose
19 in this hypothetical -- I'm going to take you to another
20 image in your declaration. Similar to what we looked
21 at, but this is just a different place.

22 So back on page 258. You see those images, the
23 one at the bottom?

24 A. Yeah.

25 Q. So with the shielding in place, the cards would

1 be inserted as shown in this lower image on page 258?

2 A. Yes. That's what I was thinking of.

3 Q. Oh. And you can see on page 258, there is
4 stitching. Do you see that?

5 A. Yes.

6 Q. So maybe that ties back to what you were
7 describing with your Figure G.

8 A. Yeah. That's -- you know, I don't think I
9 described those dash lines in more detail anywhere. But
10 that kind of makes sense because there's just multiple
11 layers that are used to build up this wallet -- folio
12 wallet structure.

13 Q. On page 259, looking at paragraph 395, the
14 bottom image here with the -- this is the second
15 configuration with the cover folded back onto the bottom
16 panel. Do you see that?

17 A. Yes.

18 Q. If you had the shield that you proposed in your
19 Figure G, the back shielding, the big piece, would that
20 stop the magnets from securely holding the case open as
21 it's shown in this image?

22 A. I don't think they would have to stop that --
23 that backward clasp action if you, you know, took
24 that into account. For instance, if you made a cutout
25 to allow magnets to attach, you know, to secure in that

1 folded back position. I don't think it would just stop.

2 **Q. Would you need a cutout?**

3 A. I don't think you necessarily need a cutout.

4 You could have -- you could have just a ferromagnetic
5 piece of material on the front side now folded back, and
6 then on the rear, the clasp could be a permanent magnet.

7 And that's just an example where you could -- you could
8 -- the thing actually providing the clasping action
9 could in part be the -- could be part of the shield.
10 You know, you wouldn't necessarily need to create a
11 cutout.

12 **Q. So if I understood your description here, and**
13 **I'm not sure I did, you could put a magnet on a -- kind**
14 **of like on the backside of that full -- the full shield**
15 **on the back that would then be able to clasp to the**
16 **magnets on the base piece that's holding the phone?**

17 A. I think that's close to what I was saying.
18 Let's -- what I'm saying is if on the very rear of the
19 phone you had a permanent magnet to now act as a clasp
20 that's like a recessed thing, that would -- that could
21 work as well without -- that could work as well with a
22 shield without a cutout, which is ferromagnetic that
23 bends backwards and that could still provide a holding
24 force between the -- so at the very front of the phone,
25 you know, beneath one outer layer, there could be this

1 ferromagnetic shield, and that could be -- provide
2 sufficient holding force, depending on the design, with
3 a permanent magnet at the very back of the device.

4 MR. CORDREY: Okay. I think that's all I have.
5 Counsel?

6 MR. TANG: Can we take a five-minute break,
7 then?

8 MR. CORDREY: Sure. Come back on at 1:18?

9 MR. TANG: Sounds good.

10 MR. CORDREY: Okay.

11 THE COURT REPORTER: Off the record.
12 (Break was taken.)

13 THE COURT REPORTER: Back on the record.

14 MR. TANG: Thanks. We have no further
15 questions.

16 MR. CORDREY: Okay. That was easy.

17 Holly, just not to hold you to this, but can
18 you give me an ETA about when you think you might be
19 able to send me a rough transcript?

20 THE COURT REPORTER: Yeah. I can get the rough
21 out to you before 5:00, if that works.

22 MR. CORDREY: I'm sorry. What time?

23 THE COURT REPORTER: Before 5:00, end of
24 business day.

25 MR. CORDREY: Yeah, yeah. That's perfect.

1 (Deposition concluded at 1:20 p.m.)
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1 CERTIFICATE OF STENOGRAPHIC REPORTER

2 * * * * *

3
4 I, Holly Darino, Stenographic Certified
5 Shorthand Reporter of the State of California do hereby
6 certify that the foregoing proceedings were taken
7 remotely before me at the time and place herein set
8 forth; that any witnesses in the foregoing proceeding,
9 prior to testifying, were placed under oath; that a
10 verbatim record of the proceedings were made by me using
11 machine shorthand, which was thereafter transcribed
12 under my direction; further, that the foregoing is an
13 accurate transcription thereof.

14 I further certify that I am neither financially
15 interested in the action, nor a relative or employee of
16 an attorney of any of the parties.

17 IN WITNESS WHEREOF, I have subscribed my name
18 this 28th day of April 2026.

19
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21
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23 

24
25 HOLLY DARINO, RPR, CSR NO. 14940

DECLARATION UNDER PENALTY OF PERJURY

Case Name: Apple Inc.
vs. 1LSS, Inc.

Date of Deposition: 04/23/2026

Job No.: 10189146

I, JOSHUA PHINNEY, PH.D., P.E., hereby certify
under penalty of perjury under the laws of the State of
_____ that the foregoing is true and correct.

Executed this _____ day of
_____, 2026, at _____.

JOSHUA PHINNEY, PH.D., P.E.

NOTARIZATION (If Required)

State of _____

County of _____

Subscribed and sworn to (or affirmed) before me on
this _____ day of _____, 20____,
by _____, proved to me on the
basis of satisfactory evidence to be the person
who appeared before me.

Signature: _____ (Seal)

1 DEPOSITION ERRATA SHEET
Case Name: Apple Inc.
2 vs. 1LSS, Inc.
Name of Witness: Joshua Phinney, Ph.D., P.E.
3 Date of Deposition: 04/23/2026
Job No.: 10189146
4 Reason Codes: 1. To clarify the record.
2. To conform to the facts.
5 3. To correct transcription errors.

6 Page _____ Line _____ Reason _____
7 From _____ to _____

8 Page _____ Line _____ Reason _____
9 From _____ to _____

10 Page _____ Line _____ Reason _____
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12 Page _____ Line _____ Reason _____
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1 DEPOSITION ERRATA SHEET

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19 From _____ to _____

20 Page _____ Line _____ Reason _____

21 From _____ to _____

22 _____ Subject to the above changes, I certify that the
23 transcript is true and correct
24 _____ No changes have been made. I certify that the
transcript is true and correct.

25 _____
JOSHUA PHINNEY, PH.D., P.E.

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