UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,

Petitioner,

V.

ONE-E-WAY, INC.,

Patent Owner.

Case: IPR2025-01516
U.S. Patent No. 10,468,047

HYBRID VIDEOTAPED DEPOSITION OF

DR. JOSE LUIS MELENDEZ

Thursday, August 20, 2026

Reported by:

LISA M. MURACO, RPR, CCR-NJ

JOB NO. 57717

Thursday, August 20, 2026
9:00 a.m.

HYBRID Deposition of DR. JOSE LUIS MELENDEZ, held VIA ZOOM, before LISA M. MURACO, a Registered Professional Reporter, CCR-NJ, a Notary Public of the State of New York, New Jersey, Florida, Massachusetts.



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IPR2025-01541

A P P E A R A N C E S:

(REMOTE)

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ALSO PRESENT:
Legal Video Specialist, Sandra Suarez
Edward Jenks, Notary
Sandra Suarez, Legal Video Specialist

IT IS HEREBY STIPULATED AND AGREED by and between the attorneys for the respective parties herein, that filing and sealing be and the same are hereby waived.

IT IS FURTHER STIPULATED AND AGREED that all objections, except as to the form of the question, shall be reserved to the time of the trial.

IT IS FURTHER STIPULATED AND AGREED that the within deposition may be sworn to and signed before any officer authorized to administer an oath, with the same force and effect as if signed and sworn to before the Court.

- oOo -



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THE VIDEOGRAPHER: We're now on the record. Today's date is August 20, 2026, and the time is 9:22 a.m.

This is the recorded video deposition of Dr. Jose Luis Melendez in the matter of Samsung Electronics Co., Ltd. versus One-E-Way, Inc. in the United States Patent and Trademark Office. Case IPR 2025-01516.

This deposition is being held at Regis Metro Office Park in Guaynabo, Puerto Rico.

My name is Sandra Suarez from Everest Court Reporting, and I'm the video specialist. The court reporter today is Lisa Muraco, also from Everest Court Reporting.

Counsel will now state your appearances for the record.

MR. KAPADIA: My name is Vimal Kapadia from Greenberg Traurig LLP, and I represent the petitioner, Samsung Electronics Co., Ltd.

MR. SCHMID: I'm Daniel Schmid from DiNovo Price LLP, and I represent the

1 patent owner One-E-Way, Inc.
2 (Notary administers the oath.)
3 D R. J O S E L U I S M E L E N D E Z,
4 called as a witness, having been duly sworn by
5 a Notary Public, was examined and testified as
6 follows:
7 THE WITNESS: Dr. Jose Luis
8 Melendez.
9 I would like to note that she only
10 mentioned one IPR.
11 MR. KAPADIA: I was going to address
12 that as well.
13 THE WITNESS: He only swore me in --
14 MR. KAPADIA: Excuse me. I believe
15 he needs to be sworn in for all three IPRs.
16 I believe you only mentioned one. We need
17 to be deposed in three different IPRs, IPR
18 2025-0516 and then it's -01540 and -01541.
19 THE VIDEOGRAPHER: Now it's on the
20 record, the numbers.
21 MR. KAPADIA: We might need to
22 readminister the oath.
23 It's consolidated.
24 THE NOTARY: Okay. Can you please
25 state your name for the record.



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THE WITNESS: Dr. Jose Luis Melendez.

(Witness sworn.)

EXAMINATION BY

BY MR. KAPADIA:

Q. Okay.

Thank you and good morning.

A. Good morning.

Q. As we have just heard this is a single-consolidated deposition for the three IPRs filed by Samsung Electronics on three separate patents. The IPR 2025-01516 is for U.S. patent number 10468047.

Is that your understanding?

A. That's my recollection, yes.

Q. Okay.

And for IPR 2025-01540 it's for IPR 10129627?

A. You said IPR, but I think you meant U.S. patent, and that's the patent number.

Q. Yeah, yes, that is correct.

A. Thank you.

Q. And the final IPR is 2025-01541 and that's for U.S. patent number 910700?

A. That's my recollection, yes.

Q. Okay. Thank you.

I've handed you already what has been marked as Exhibits 1 through 6.

(Exhibit 1-6, premarked, marked for identification.)

MR. KAPADIA: Exhibit 1 is your declaration and the -- what I'll call the '047 IPR.

A. Okay.

Q. If I refer to IPR 2025-01516 as to '047 IPR, will you understand what I'm referring to?

A. I believe so, and if I'm confused I'll ask.

Q. All right.

And then similarly for the 1540 IPR, if I refer to that as the '627 IPR, will you understand that to be IPR 2025-01540?

A. I believe so, yes.

Q. Okay.

And finally, if I refer to the '000 IPR, you'll understand that refers to IPR 2025-01541?

A. That patent number refers to that IPR, yes.

Q. Great.

I've also handed you what I've marked as Exhibits 4, 5, and 6.

MR. KAPADIA: Exhibit 4 is U.S. patent number 10468047.

Exhibit 5 is U.S. patent number 10129627.

And Exhibit 6 is U.S. patent number 9107000.

BY MR. KAPADIA:

Q. Do you have all of those exhibits in front of you?

A. I have those Exhibits 1, 2, 3, 4, 5, and 6, yes.

Q. Okay.

MR. KAPADIA: Counsel, to hopefully, you know, to speed things along and not go through this three times, I suggest that we try to go through the declarations, you know, combined as -- so I will refer to the 047 declaration as the exemplary declaration. And then instead of going through and asking the same exact questions for the other two, and if there's any differences, you know, I'll direct it to --

1 questioning to respective declaration.
2 Is that okay with you?
3 MR. SCHMID: That works for us. I
4 know there's some minor differences between
5 three. We will try to keep an eye on, but,
6 yes, that makes sense to me.
7 BY MR. KAPADIA:
8 Q. Dr. Melendez, are you okay with that
9 as well?
10 A. Yes I would not characterize the
11 differences as minor differences, but other
12 than that, I think there is a lot of
13 similarities certainly in my declaration in
14 terms of the arguments, so.
15 Q. Okay. Understood.
16 I'm going to go through some ground
17 rules.
18 I'm going to ask that all of your
19 answers to my questions be verbal and out loud.
20 Please do not respond with a -- simply a nod or
21 a shake of your head if possible.
22 If you don't understand what I say,
23 please say so, and I'll try to rephrase and ask
24 a better question.
25 If you do answer, I'll assume that



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you understood my question.

We can take a break generally whenever you would like. Except if there's a question pending.

And at times your counsel may object; however, unless you are instructed not to answer due to privilege, you will be required to answer the question.

If at any point in this deposition, you recall that, you know, one of your prior answers needs to be changed, please let me know.

And I'll be happy, you know, to explore your new answer.

Do you understand those instructions?

A. Yes, I do.

Q. Okay.

Is there anything preventing you from giving your full and honest testimony today?

A. No, not to my knowledge.

Q. Do you have any illnesses or medical conditions that would prevent you?

A. No, I do have a strain in my neck



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that may cause me to need a break, but --

Q. Understood.

A. -- it's not going to prevent me from giving honest testimony.

Q. Okay.

Yeah, please just let us know when you need to take a break.

Okay.

When were you retained in these IPRs?

A. Let's see.

I know the notice came a couple of months after I filed my declaration. So working backwards, around four months ago.

Q. Were you retained specifically for these IPRs?

A. Yes.

Q. Were you -- do you understand that there are District Court litigations involved in the same patents that are currently pending?

A. I understand that there is litigation. I'm not familiar with the details of that.

Q. Have you been retained in those litigations as well?

A. I'm -- not to my knowledge, unless the retention agreement is more general than the specific IPRs. I think the agreement is specific to IPRs.

Q. Okay.

How much time did you spend in preparing for your deposition today?

A. It was two really long days. So I would say maybe 20 hours.

Q. Okay.

Did you meet with anyone as part of your preparations?

A. Briefly I met this morning with counsel.

Q. Okay.

A. We drove over together in the Uber from the hotel.

Q. Oh, excellent.

Did you speak with anyone else as part of your preparations?

A. For the deposition, not specifically for the deposition.

Q. How about in preparing your declarations in these IPRs?

A. I did have the opportunity to speak

with at least the inventor with counsel present. And I recall there was someone else from the company, One-E-Way, but I didn't see them. I only heard a voice. I don't remember a name.

Q. You said you don't remember her name?

A. It was a lady, a female voice. I mean, it's hard to tell sometimes.

Q. Okay.

A. But that's my recollection.

Q. Did you speak with any other experts as part of your preparation for the declaration or preparation for this deposition?

MR. SCHMID: Objection. Form.

A. No, I did not.

Q. All right.

And let me ask a better question.

Did you speak with any other experts as part of your preparation for this deposition?

MR. SCHMID: Same objection.

A. No, I did not.

Q. Did you speak with any other experts as part of your preparation for the

declarations that you filed in these three IPRs?

MR. SCHMID: Same objection.

A. No, I did not.

Q. Okay.

Are you aware that One-E-Way had retained a different expert in its past IPRs?

MR. SCHMID: Objection. Scope.

A. I have no recollection of any expert in any other matter related to One-E-Way, other than Mr. Davies, and he was retained, I understand, by Samsung or Samsung counsel.

Q. Okay.

Did you review any of the materials for any of the past IPRs involving One-E-Way?

MR. SCHMID: Objection. Form.

A. If I did, that would be in my declaration.

Q. Okay.

So if it's not -- sorry.

A. And it would have been specific to an argument in the declaration. I didn't -- if I did look at it, it would be in there. And if I did look at it, I wouldn't have read the whole thing. I would have just looked at

1 something -- I know I looked at some reference
2 materials related to claim construction. And I
3 don't recall specifically if that -- where that
4 came from. But it's sort of throughout the
5 petition and Mr. Davies' and mine.
6 I -- I feel like at some point I
7 must have looked at the original source of
8 that. But that must have been a District Court
9 ruling, not a PTAB ruling. I'm not sure.
10 Q. Okay.
11 Can you go to Exhibit 1 and turn to
12 paragraph 15, which is on page 9.
13 A. I'm there.
14 Q. Okay.
15 Can you review that paragraph to
16 yourself. And let me know when you're
17 finished.
18 (Document review.)
19 A. I've read it.
20 Q. Okay.
21 Do you see where it says on the top
22 of page 10 refers to the '047 patent
23 prosecution history. And then it has a
24 parenthetical: Or at least the pertinent parts
25 thereof?



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A. Yes.

Q. What did you mean by the '047 patent prosecution history?

MR. SCHMID: Objection. Form.

A. I think that it's sufficiently defined. There's a prosecution history associated with the '047, what I understand it could be referred to as a file rep or a file history, that includes what was, I suppose, designated as that by the patent office officially.

I'm not really sure exactly how that -- that works. But that's what I'm referring to when I say the prosecution history of the '047 patent.

Q. So you are referring to, you know, what I'll refer to as the back and forth between the applicant and the patent office specifically with respect to the '047 patent?

MR. SCHMID: Objection to form.

A. I'm sorry, I don't think you actually asked me a question.

Q. So is it your understanding that the '047 patent prosecution history is limited to the back and forth between the applicant and

the patent office specifically with respect to the '047 patent?

MR. SCHMID: Same objection.

A. Not sure. It was really long. There's a lot of legal stuff and portions of it that I usually wouldn't look at because I don't think there's any substantive information related to the specific patent.

I would say that it at least includes back and forth with the patent office and the applicant in terms of what ultimately became the '047 patent.

Q. Do you understand that '047 patent is part of a family of patents that are related to each other?

A. Yes.

Q. Are you including the file histories of all of those other patents as part of the '047 patent prosecution history?

MR. SCHMID: Objection. Form.

A. I am including exactly what I referred to previously. The prosecution history for the '047 patent. And that's a document that I received that I understood is registered with the patent office as the file

history for that patent. When I refer specifically to this patent prosecution history or at least the pertinent parts thereof, that's intended primarily to say it's a very long history and there's certain things that aren't really relevant to my declaration or the petition.

Q. Can you pull up Exhibit 4 in front of you?

A. Yes.

Q. And do you see in the middle of the page on the left where it says: Related U.S. patent application data. And there's a 63 in parentheses to the left of it?

A. Sorry, I just have it up in front of me now.

Q. Yup.

A. Can you repeat the question?

Q. Sure.

Do you see on the left in around the middle of the page where it says: Related U.S. patent application data?

A. Yes.

Q. And do you see under there it says continuation of application number 15 dash --

15, slash, 003, 242 filed on January 21, 2016, now patent number 10129627?

A. Yes.

Q. When you referred to the '047 patent prosecution history, are you also including as part of that the '627 patent prosecution history?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. I'm just trying to understand what you meant on your paragraph?

A. I literally meant exactly what I've already said several times, which is my understanding is at the patent office, for the '047 patent, there's a file history. And that's what I mean by the prosecution history.

Q. So you are not including the prosecution history for other patents as part of the '047 patent prosecution history; is that correct?

MR. SCHMID: Same objection.

A. I would say to the -- in that reference there, to the extent that the prosecution history isn't included within the official document for the '047, I did not pull

1 up in reviewing the '047 the file histories,
2 for example, for the 0, I would have pulled
3 that up for the '000. I don't have that
4 declaration in front of me.
5 But that's what I mean by that. And
6 I certainly would've read the patent.
7 Q. Can you open up Exhibit 2 and go to
8 paragraph 15.
9 A. I am there.
10 Q. And you see at the top of page 10
11 you refer to the '627 patent prosecution
12 history?
13 (Document review.)
14 A. The '047 patent prosecution history,
15 Exhibit 1.
16 What exhibit am I supposed to be in?
17 Q. Looking at Exhibit 2.
18 A. Sorry.
19 Q. I just want to confirm that you've
20 reviewed -- that you've reviewed the '047
21 patent prosecution history, the '627 patent
22 prosecution history, and the '000 patent
23 prosecution history?
24 A. Okay. That was paragraph?
25 Q. 15.

A. 15.

(Document review.)

A. Yes, it says that I reviewed the '627 patent prosecution history.

Q. Okay.

So you've reviewed the patent prosecution history for the three patents involving -- involved in the three IPRs for which you are testifying today, correct?

MR. SCHMID: Object to form.

A. That -- sorry.

That's my recollection. I haven't looked at the declaration. But whatever is in the declaration, if it says that I reviewed that, then I would have reviewed at least the pertinent parts of that. I wouldn't have read the entire document for the reasons that I've mentioned.

Q. Okay.

So if you referred to the patent prosecution history for other patents in your declaration, you've reviewed that as well.

Is that what you are saying?

MR. SCHMID: Objection. Form.

A. I've reviewed at least the pertinent

portions.

Q. Okay.

Do you understand that -- well, strike that.

Do you know if there were any prior IPR petitions that were filed with respect to the '047 patent?

MR. SCHMID: Objection. Form.

A. I think we covered that already. But, yes, I do know that there was at least one, and I think there may have been more.

Q. Did you review all the filings in those IPRs?

MR. SCHMID: Same objection.

A. Assuming there were multiple IPRs, which is what I think those IPRs means in your question, I would only have reviewed them to the extent that they were pertinent. And I would have listed that in my -- in my list of things I considered.

Q. Okay.

So the only opinions you have with respect to those IPRs would be included in your declarations; is that correct?

MR. SCHMID: Objection. Form.

A. That's sort of correct, if I understood your question. I don't know what's in those, so there could be things that are in those that overlap with things that are in these. Certainly, you know, things like the claim construction stuff may, since I don't know what was in those, I didn't really actually know there was more than one.

I can't -- I don't think I can answer your question as it was stated. So maybe you can either resay it so I can make sure or restate it.

Q. The declaration -- let's see -- I'll strike that.

Is it fair to say that any opinions you have with respect to any other IPRs would be included in your declarations here?

MR. SCHMID: Objection. Form and scope.

A. I have no opinions with respect to any other IPR. My declarations are specific to these IPRs: 15, 16, 1540, and 1541.

To the extent that they include overlap with things from other IPRs, that's not -- not an analysis that I expressly did.

Q. Did you review the record in IPR 2021-00284?

MR. SCHMID: Objection. Form.

A. If I said it in my declaration, then I did. If not, I have no recollection of what that IPR is by the number.

Q. For completeness sake, do you recall if you reviewed the record in IPR 2021-00285?

MR. SCHMID: Same objection.

A. That number is meaningless to me right here.

Q. Would it help your recollection if I said that these were IPRs that were previously filed by Apple?

A. I seem to recall that I mentioned that in my declaration. I'm really not an expert on who filed what IPR when.

I do recall that in this case there were some other IPRs that were filed that were not instituted. I have no recollection of the numbers.

Q. Okay.

Do you recall if One-E-Way had filed any other expert declarations in those IPRs?

MR. SCHMID: Objection. Form and

1 scope.
2 A. I have no recollection of other
3 expert declarations. I don't recall reading
4 other expert declarations. I would imagine
5 they would have had another expert, because I
6 wasn't the expert.
7 But I don't know that it's a
8 requirement in a PTAB proceeding to actually
9 have an expert. So I don't want to guess for
10 that.
11 Q. Did you review the declaration of
12 Mr. Joseph McAlexander, which was submitted in
13 the two Apple IPRs that I referred to earlier?
14 MR. SCHMID: Objection. Form and
15 scope.
16 A. I think I answered that question
17 already. But I don't recall a Mr. Alexander
18 (sic), and I don't recall looking at any
19 declarations from any other expert, other than
20 Mr. Davies in the present IPRs.
21 Q. Did you review any declarations from
22 Mr. McAlexander with respect to the
23 corresponding Apple District Court litigation?
24 MR. SCHMID: Same objections.
25 A. I think I answered that. But maybe

I wasn't general enough.

I have not reviewed any declarations that I can think of for any other expert and didn't know offhand that there was another expert, unless it's something I specifically referenced that can spark recollection. But I -- there's plenty of documents to review and that wasn't one that came up that I can recall.

If I did review it, I certainly didn't -- it would have been in my declaration noted, and I have no recollection of reviewing it. But certainly none of my opinions are based on any opinions of any other expert.

Q. Do you have an opinion as to whether One-E-Way is bound by the positions it took in its previous IPRs with respect to the '047 patent?

MR. SCHMID: Objection. Form and legal conclusion.

A. Because I'm not familiar with those other IPRs, I can't -- or at least I have no recollection of them, outside of what's mentioned in my declaration.

I can say that generally if, for example, there was claim construction in an IPR

proceeding, there could be the case where each party has a position and ultimately the administrative judge rules on what the construction is.

And for my experience, that normally means that the positions, whether they are from the petitioner or from the patent owner, would become irrelevant in the sense that the Judge would decide what the correct view of that would be.

But I'm speaking there generally, not with respect to that specific IPR. Obviously, if there are positions that lead to ruling that relies on the position, then normally I would expect that either party that would be bound by that. But I really -- I'm not an expert on knowing how the PTAB rulings bind or don't bind the District Court litigation.

And my response is they are all general, because I'm not familiar with the litigation here.

Q. Do you know if One-E-Way is taking any different positions in the Apple IPRs than it has taken in this IPR?

MR. SCHMID: Objection.

MR. KAPADIA: Let me rephrase that.

BY MR. KAPADIA:

Q. Are you aware of any differences in positions that One-E-Way has taken in the Apple IPRs that I referred to as compared to the three IPRs that we're discussing today?

MR. SCHMID: Objection. Form, scope and foundation.

A. I think I've already answered that, but I'm not aware of any differences. I didn't study any other IPR.

Q. Can you open up Exhibits 1, 2, and 3 and put them side by side each other.

Can you turn specifically to page 10 in all of them.

A. For the record, I should say, yes, I can put them side by side. And yes, I can turn to page 10, since you did ask the question that way.

Q. Thank you.

A. You're welcome.

Q. Are you --

A. I am there, on all of page 10 of each one.

Q. And honestly, that should be include rather -- strike that.

That should include the start of Section 3: The statement of legal and claim construction principles?

A. Yes, it does.

Q. Are you aware of any material differences between the three declarations with respect to this section?

MR. SCHMID: Objection. Form.

A. Not with respect to the statement of legaling claim construction principles.

Q. Okay.

A. And by the three patents, I think you mean the patents that these declarations are referred to.

Q. Yeah, I said between the three declarations.

A. Okay.

Q. But, yes.

Can you turn to page 13 in all of them. And you see the start of Section 4: Claim constructions?

(Document review.)

A. Yes, I can turn to page 13 on all of

them. And yes, I can see the start of Section 4: Claim constructions.

Q. Okay.

Are there any material differences that you're aware of in Section 4 across all three declarations?

A. Section 4.

MR. SCHMID: Same objection.

A. Let me briefly review. I would expect them to be the same, but maybe they are not.

(Document review.)

A. They appear to be all the same, having same table, which is what I was instructed that I should use as the constructions for my analysis of these patents and for these three IPRs.

Q. Okay.

Same question for Section 5, which is the person of ordinary skill in the art.

Are there any material differences that you're aware, other than the difference in the reference to the patent number, across the three declarations?

MR. SCHMID: Objection. Form.

(Document review.)

A. The only differences I see there appear to be citations of the petition. I'm not aware of why there would be any differences.

Q. Okay.

Can you turn to Section 7 of your report.

A. Of which one?

Q. All three. Actually, specifically Section 7A.

(Document review.)

A. Yes, I can, and I have done so.

Q. Okay.

And Section 7A is for the -- has the heading: Disclosure of a, quote, direct conversion module, end quote, in the 2003 application.

A. Yes, that's correct, across all three of those declarations.

Q. And is it your understanding that that section is the same across all three declarations?

MR. SCHMID: Objection. Form.

A. I have no recollection that they are

different, but I can tell you that just looking at them real quick.

Q. Yup.

(Document review.)

A. They appear, all three, to be the same.

Q. Okay.

Can you look at the next section, disclosure of a, quote, differential phase shifting -- strike that.

The section is titled: Disclosure of a differential phase shift keying DPSK in the 2003 application.

Do you see that?

A. Yes, I see that.

Q. It --

A. It's in all three patents.

Q. Yup.

A. I mean in all three declarations, sorry.

Q. And are you aware of any -- or strike that.

Is this section the same across all three declarations?

A. Give me a moment, and I will confirm

that.

(Document review.)

A. It appears to be the same, yes.

Q. Okay.

Can you turn to the next section in all three declarations, which is for the heading: Disclosure of a, quote, reduced intersymbol interference, end quote, in the 2003 application.

A. Yes, I have done that.

Q. Okay.

Is that section the same across all three declarations?

MR. SCHMID: Objection. Form.

A. Give me a moment. And I will confirm that.

(Document review.)

A. Yes, it appears to be the same.

Q. Okay.

Can you turn to the next section across all three declarations, which is for the: Summary for support in the 2003 application.

A. Yes, I have done that.

Q. Is that section the same across all

three declarations?

MR. SCHMID: Objection. Form.

A. Give me a moment, and I will let you know.

(Document review.)

A. Yes, it appears to be the same.

Q. Can you turn to Section 8B, as in boy.

A. In all of them?

Q. Yes.

A. Yes, I can, and I have done that.

Q. And that section is headed: Independent CDMA is not taught in Miyake?

A. Yes, that's correct in all three.

Q. Okay.

Is that section the same across all three declarations?

MR. SCHMID: Object to form.

A. Give me a moment. Sorry. Give me a moment, and I will let you know.

Q. Sure.

(Document review.)

A. Sorry, it's a little longer section. I am still going through it.

(Document review.)

A. A lot longer section. I'm almost done.

(Document review.)

It appears to be the same in all three.

Q. Okay.

Can you turn to the next section, which is titled: Independent CDMA is not taught in Walley.

A. Yes, I'm actually already at that section.

Q. Other than the very first sentence in that section in each of the declarations, are you aware of any differences across the three declarations with respect to this section?

MR. SCHMID: Object to form.

A. Give me a moment. Give me a moment, and I will confirm that.

Q. Sure.

(Document review.)

A. I need to clarify a response, I think. In the first sentence of each of these, they are -- I see them to be the same, except for this citation. And when I was answering

the previous questions and going through the text to confirm that they were the same, I did not verify that the citations were the same. I would expect them to be because they should be with respect to that prior art.

But when you asked the question, you noted that the first sentence was different and I see them to be the same as well. The only thing I saw a difference was the citation. So to the extent there's a difference in citation in the rest of the text of the prior sections, that's not something that I spent the time to verify.

If you would like me to do that, I can do that.

Q. Nope. Understood.

And then can you turn to Section 9 of all three declarations.

A. Actually, I'm already there.

Q. All right.

Are there any differences in Section 9 across the three declarations?

MR. SCHMID: Objection. Form.

A. Would you like me to come -- to explore also the citations or just generally

1 look at the content?
2 Q. You can look at the citations. It's
3 not particularly long.
4 (Document review.)
5 A. The only difference I could see
6 relate to the patents that are being referenced
7 in those sections.
8 Q. Is that in paragraph 66?
9 A. That's the one I found, yes. In 66,
10 there's a reference to -- in one -- in the --
11 the relevant -- the patent that is relevant to
12 that particular IPR being the '047, the '627,
13 and the '000.
14 Q. Bless you.
15 So the only difference is the patent
16 number that you see in paragraph 66.
17 There's no other difference in
18 paragraph 66?
19 A. In absence of a document comparison
20 tool.
21 Q. Yup.
22 (Document review.)
23 A. In my review here, they appear to be
24 identical with, outside of that reference to
25 the patent claims.

Q. And in this section is titled: The combination of Walley and Miyake, correct?

MR. SCHMID: Objection. Form.

(Document review.)

A. Yes, in Section 9 in all of the IPRs is titled: The combination of Walley and Miyake.

Q. Okay.

Can you go back to Section 7A of your declaration, which is the '627 patent. So I guess that would be Exhibit 2.

A. Repeat the section, please.

Q. Specifically, you can turn to page 18 of Exhibit 2.

A. I am there.

Q. Do you see Section 7A starts there?

A. Yes, that's Section 7A.

Q. Okay.

And if you turn to the -- turn to page 19, you see at the top on the third line, you see a reference to the '062 patent?

(Document review.)

A. I may be in the wrong place. I don't see a reference where I'm at to the '062 patent.

What paragraph is that in?
Q. If you look at Exhibit 2 --
A. Yes.
Q. -- the third line from the top.
A. Oh, see it. Thank you.
Q. Should that be the '627 patent?
A. I don't think there is an '062 patent. Yes, thank you for catching that mistake.
Q. And then if you look at that same section for the '000 patent, which is your Exhibit 3, I believe there's also a reference to the '062 patent.
Can you confirm that?
Again, it'll be page 19, third line.
A. Paragraph 34, yes, that would also be a mistake.
Q. That should be the '000 patent?
A. Yes, the subject of that particular.
Q. Are you aware of any other errata for your three declarations, other than those two that we just discussed?
A. Well --
MR. SCHMID: Object to form.
A. Leads me to believe that that could

be wrong in the first one, except you didn't ask me to look there.

Q. Oh, if you would like, you can look, for completeness sake. But I do believe it was correct there.

(Document review.)

A. Yes, it is correct there.

Thank you for highlighting those. I would like to have those accurately reflect the patent. I think it's obvious from the context, but thank you for helping me clarify that.

Q. Yup. Okay.

Have you reviewed the patent owner response that was filed in the three IPRs that we're discussing today?

MR. SCHMID: Objection. Form.

A. I have not reviewed all of it. And I only reviewed the parts where my declaration was cited to ensure that the citations were accurately reflected.

But I did review the patent owner response, just not all of it.

Q. All right.

Have you reviewed -- well, strike that.

Are you aware that the patent owner has provided several exhibits in its patent owner response?

MR. SCHMID: Objection. Form.

A. I have no specific recollection of exhibits and the patent owner response. Other than I understand that my declaration was attached to that patent owner response, and I think it's attached as an exhibit. I'm not exactly sure how it works.

And I would expect that what I cite would at least be included somehow. I'm not really sure the mechanics of the composition of a patent owner response in the context of all the exhibits that are attached.

Q. Do you have any testimony in your declarations with respect to Exhibit 2011, which is a paper by C. Rudell?

MR. SCHMID: Objection. Foundation.

A. I have no recollection of what that exhibit number means. I have no recollection of that name. But certainly if I cited it specifically in my declaration, then I would have looked at it at some point.

Q. Okay.

It's titled: Recent developments in high integration multistandard CMOS transceivers for personal communication systems.

A. That doesn't jog any memory. If I've cited it in my declaration, then I would have looked at it some point. And if I didn't, then I have no recollection either way right now.

Q. All right.

What about Exhibit 2015, which is for: Data and computer communication networking and internet working, by Hura, H-U-R-A, et al.?

MR. SCHMID: Same objection.

A. Same response. I have no recollection of that. I don't recall that reference from my declaration. If I've cited it specifically, then I would have looked at it in support of my -- my declaration.

Q. Okay.

How about Exhibit 2017, which is for: Digital communication techniques signal design and detection. Which was published in 1994 by M. Simon, et al.

MR. SCHMID: Objection. Foundation.
A. Same response. I have no recollection of using that reference for any opinions within my declaration. And the title and the date, the author sparked no recollection. And I certainly don't memorize exhibit numbers or attachments to anything, so.
Q. Understood.
And how about Exhibit 2018, which is a Texas Instruments document titled: The design and demonstration of an advanced data collection, slash, position locating system. Which is from 1978.
MR. SCHMID: Same objection.
A. Same response.
Would you like me to articulate the response or is same response okay?
Q. That's fine.
How about Exhibit 2019, which is for a paper titled: Modulated coding for intersymbol interference channels. Which is a 2001 paper by Xiang-Gen Xia.
MR. SCHMID: Same objection.
A. Same response. To the extent that it's cited specifically in my declaration, then

I would have looked at it.

Q. Okay.

A. Right now, I have no specific recollection of relying on that reference for my opinions. I can't think of anything offhand, and I don't recognize exhibit numbers.

Q. How about Exhibit 2020, which is the 1997 edition of the Communications Handbook by Jerry D. Gibson?

A. Gibson I certainly have recollection of. That was something that petitioner had put forward with respect to some of the claim elements and limitations that the petitioner and Mr. Davies argued.

Those weren't substantive in my declaration, in the sense that my rebuttal declaration was specific to rebutting certain aspects of the Davies -- of the Mr. Davies' declaration.

Q. Okay.

A. But that's my recollection of Gibson relates to some of the reception and audio and coding and things like that. But that's just off the top of my head. I don't recall specifically --

Q. Okay.

A. -- using -- using expressly Gibson, but I may have. I may have.

Q. Okay.

But --

A. And I'm sorry. And I don't know what exhibit number that was, just to make sure.

Let me clarify. I don't have any of those documents in front of me. So I'm just going by my recollection.

Q. Okay.

I just want to clarify, there is another exhibit that patent owner had marked, which was Exhibit 2021, which is for the 2022 second edition of the Communications Handbook. And I believe you do cite Exhibit 2021.

If Exhibit 2020, which is the 1997 edition is not cited in your declaration, is it fair to say that you have not provided any opinions with respect to 2021 -- strike that.

Is it fair to say that you didn't provide any opinions with respect to Exhibit 2020?

MR. SCHMID: Objection. Form.

Compound.

A. I have no recollection which exhibit is what exhibit. I can say that -- that I know that Gibson is referenced in the petition. And it's referenced in -- or at least a version of Gibson is referenced in a petition of the -- and it's referenced in Mr. Davies' declaration.

My use of that in my declaration, I think would be very limited. Because my recollection is that -- is that Gibson was used primarily with respect to things that I didn't focus on in my arguments.

Q. Okay.

Have you reviewed Exhibit 2023, which is for U.S. patent number 518577 -- sorry, strike that.

It's for U.S. patent number 5185766, which is a Samsung patent that was filed back on April 24, 1990?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. And the inventor is Song Wong Cho. Have you reviewed this exhibit?

MR. SCHMID: Objection.

A. I don't know what the exhibit is,

what the exhibit is an attachment to. I don't have the document in front of me.

If it's cited in my declaration, then I would have looked at it. No recollection of that. To the extent any of my opinions and my declaration relate to that, then I would have looked at it.

I don't have any -- any of the exhibits that you are referencing and that you've referenced, they are not in front of me. So I only have what information you gave me.

Generally, if I look at a document, I can flip through it and see if something about the document reminds me that oh, yeah, I looked at this.

But, you know, I don't tend to memorize inventor names. I certainly know Woolfork because he invented these patents. I certainly know names like Miyake, because that's one of the prior arts, and Walley, for example. But I don't tend to memorize inventor names.

Even on these patents, it wasn't until later I realized the inventor was Woolfork. It wasn't something that I paid

attention to.

Q. Okay.

But if you have not cited these exhibits in your declarations, then you have no opinion based on those exhibits?

MR. SCHMID: Objection to form.

A. I don't -- that should be like that. But, obviously, a little while ago, you noted errors in, like, I had made a citation to patent that wasn't --

Q. Yeah.

A. -- intended one. So absent an error that I'm unaware of, I didn't rely on -- on them. I tried to be very careful in my declaration when I rely on something to ensure that it's there. That's obviously a little bit different than saying did I look at something and not rely on it.

There's so many exhibits attached to the, you know, these petitions and responses. And I certainly, you know, didn't read most of that, so.

Q. Okay. Fair enough.

So you don't recall reviewing any Samsung patents?

MR. SCHMID: Objection. Form.

A. I looked at patents. Again, for example, Miyake, I don't know who that is assigned to. So if that's assigned to Samsung, I can say I looked at Miyake. I looked at Walley.

I have no recollection of who it's assigned to. I can see who it was originally assigned to, I guess, if you would like me to do that.

Q. But you don't recall reviewing Cho?

MR. SCHMID: Objection to form.

Q. Which would be U.S. patent number 5185766, correct?

MR. SCHMID: Same objection.

A. If I looked at the patent, I can tell you if I have looked at it before. That patent is not a basis of any of my opinions, or I would recognize it.

But I've also worked in this art field for a very long time. So it's possible I looked at that patent at some point in my life.

For example, I worked at Texas Instruments. You mentioned the Texas Instruments patent. I didn't work there in the

time frame you mentioned the patent was issued. But I don't know when it was filed.

So I -- based on the information available to me right now, which is just whatever you put on the record, I don't have recollection of -- of those documents.

Q. Okay.

And how about Exhibit 2024, which is a paper titled: Ultra-wide bandwidth time hopping spectrum impulse radio for wireless multiple access communication. Which is an IEEE article whose authors are Moe Z. Win and Robert A. Scholtz.

MR. SCHMID: Objection to form.

BY MR. KAPADIA:

Q. Do you recall reviewing this article?

MR. SCHMID: Same objection.

A. Based on the information you've provided me, I have no recollection of reviewing a document based on the information that you provided me.

Q. Okay.

A. I may have, but I would need to actually look at the document and look at my --

probably just reviewing the document would be enough. But if I had my declaration -- and this is for, by the way, all the documents you've mentioned.

Based on the information you've provided, I don't have recollection. But certainly if it's cited specifically in my declaration, then that means I would have looked at it.

Q. But if you didn't cite these exhibits in your declaration, then you haven't provided any opinions on them, correct?

MR. SCHMID: Objection. Form.

A. I think it's fair to say that I didn't provide opinions on those patents, generally.

Q. To be clear, by patents, did you mean the exhibits that I had just discussed, which include Exhibit 2011, Exhibit 2015, Exhibit 2017, Exhibit 2018, Exhibit 2019, Exhibit 2023, and Exhibit 2024?

MR. SCHMID: Objection. Form. Compound.

A. Those exhibits, in your questioning, I think I know what you are trying to say, but

I have no short-term memory or long-term memory of those exhibit numbers, so I can't answer your question as you've asked it.

If you would like to restate the question, I would be happy to answer the question I think you are trying to ask.

And that's just because if you told me I wasn't clear on the question, maybe you could close your eyes and write down what all those exhibits numbers are and who they were, but I don't remember.

Q. Do you recall my line of questioning regarding the exhibits which started with an article by C. Rudell titled: Recent developments in high integration multistandard CMOS transceivers for personal communication systems?

A. Yes.

Q. Now -- and do you recall I went through several exhibits that I represented were attached to or a part of the patent owner response?

MR. SCHMID: Object to form.

A. I don't recall that you had mentioned that each of those were attached to

the patent owner response. But if you represent that to me, then I do recall you mentioning several documents. I don't recall that they were -- I think some were articles, maybe one was a book. Since that point, unless you put something in there in between that wasn't, but I accept that representation.

And in that context, now I'm prepared to answer your question.

Could you re-ask the question so I remember what it was?

Q. Sure.

Starting with Exhibit 2011, which was the exhibit that is an article by C. Rudell, et al., titled: Recent developments in high integration multistandard CMOS transceivers for personal communication systems.

Starting off with that exhibit through Exhibit 2024, which was the most recent article we had discussed, which was the paper by M. Win and Robert Scholtz titled: Ultra-wide bandwidth time hopping spread spectrum impulse radio for wireless multiple access communications.

Is it fair to say that if those exhibits were not cited in your declaration, then you have not provided any opinions regarding them?

MR. SCHMID: Objection. Form. Compound.

A. Yes. It's fair to say I have not provided any opinions with respect to those publications, I think that would include the different types that you mentioned.

Q. All right.

MR. KAPADIA: I think now is a good time to take a break.

Can we go off the record.

THE VIDEOGRAPHER: 10:41. We are off the record.

(Recess is taken.)

THE VIDEOGRAPHER: We are back on the record. The time is 10:54.

BY MR. KAPADIA:

Q. Okay.

Welcome back.

A. Thank you.

Q. Can you open up Exhibit 1 and turn to Section 4, which starts on page 13 of your

declaration.

A. Would you like me to leave these other exhibits here?

Q. I think we can set the other declarations aside.

Let's just focus on Exhibit 1 for now.

A. Okay. And remind me the page number, please, that you asked me to go.

Q. Page 13.

A. I am on page 13 of Exhibit 1.

Q. Great.

Do you see the first sentence where it says: I have been asked to assume the claim constructions set forth below?

A. Yes, I do.

Q. And then on the next page is a table which includes claim constructions that you were asked to assume?

A. Yes.

Q. Do you dispute any of those claim constructions?

MR. SCHMID: Objection. Form. Foundation.

A. Can you repeat the question? I just

didn't hear it.

Q. Do you dispute the constructions that you were asked to assume?

MR. SCHMID: Same objections.

A. I -- I have no opinion on the constructions that I was asked to assume. I assumed them. I understand that they came from somewhere. You had asked that question a little bit earlier, or at least some of them came from somewhere. And I'm aware that there's at least some history related to the unique user code, which I assume used that construction.

I just used the constructions. I don't have a separate opinion on the constructions.

Q. So you don't have an opinion as to whether you dispute those constructions?

MR. SCHMID: Objection. Form.

A. I think I answered that question. So maybe I did not understand the original question.

I just assumed them, so I don't see how I would have an opinion on disputing them. I don't have an opinion on them specifically.

I assumed them as I was instructed to do.

Although I understand there's a history, I think I mentioned this already, related to some of these constructions. I assumed that they were constructed as I was asked to assume in this history.

I recall there was district -- not District Court, what was it -- there was some appellate court thing I looked at with respect to unique user code.

And so I assumed this came from that or was related to that construction. I don't -- I don't dispute. I just don't have an opinion either way. I just assumed them.

Q. Okay.

I'm going to mark as Exhibit 7, the first 20 pages of Exhibit 1005 from IPR 2025-01516.

(Exhibit 7, first 20 pages of Exhibit 1005 from IPR 2025-01516, marked for identification.)

A. Sorry. What did you say this was?

Q. This is the first 20 pages of Exhibit 1005.

A. Of the --

Q. Of the IPR petition for the '047 patent.

A. Okay. I'll accept that.

Q. Okay.

And this is an excerpt from what I believe -- or strike that.

I believe this includes what you referred to as the 2003 application in your declaration?

(Document review.)

BY MR. KAPADIA:

Q. Can you flip through Exhibit 7 and confirm if that's correct?

(Document review.)

A. This appears to at least be part of this 2003 application, which I think is what you asked.

Q. Are you aware of anything that's missing from this?

MR. SCHMID: Objection. Form.

A. You said excerpt in your question, so I assume it's not the complete application.

Q. Let me be clear.

So Exhibit 1005 is the full file history -- well, let me be accurate -- strike

that.

Exhibit 1005 is the file history for U.S. application number 10648012 filed August 26, 2003.

And as part of that file history, which I believe was originally about a thousand or so pages, this is the first 20 pages of that much larger exhibit.

And what I'm representing is that the first 20 pages of Exhibit 1005 includes the original application that you referred to as the 2003 application in your declaration.

Does that make sense?

A. Yes, your question makes sense.

Q. So do you recall referring to a 2003 application in your declarations?

A. Yes.

Q. And looking at what I've handed you as Exhibit 7, does this include the entirety of the 2003 application?

MR. SCHMID: Objection. Form.

A. I think I must not have understood your explanation.

Q. I can clarify again.

So the full Exhibit 1005 is the file

history for that application.

When the applicant had filed that patent application that you referred to as the 2003 application, they filed a specification, drawing, and claims for that application.

And what they submitted on August 26, 2003, for that application is included in Exhibit 7.

A. I think you are waiting for me. But I actually don't think you asked me a question.

Q. Okay.

Does that make sense what I said?

A. What you said makes sense to me.

Q. And you're aware that what you referred to as a 2003 application had amendments to the specification that occurred after 2003.

Does that ring a bell to you?

MR. SCHMID: Objection to form.

A. I can see from the first page here it's a continuation in part. And typically that means that -- that it's not a strict continuation.

So I would expect there to be some amendments.

Q. And it's a continuation in part of an earlier application whose serial number is 10027391, if you look around a third of the way down.

MR. SCHMID: Objection. Form. Scope.

A. I don't think you asked me a question again, so I hope you are not waiting on me.

Q. Is that correct? Is it a continuation in part of U.S. application number 10027391?

A. That's my understanding, yes.

Q. Okay.

And -- I'm handing you as Exhibit 8.

(Exhibit 8, Exhibit 1004 from IPR 2025-01516, marked for identification.)

MR. KAPADIA: It's a copy of Exhibit 1004 from IPR 2025-01516.

BY MR. KAPADIA:

Q. Do you see that?

A. Actually, you gave me Exhibit 8.

Q. Yup.

A. And it looks like the 196 application. If that's what you asked me, then

yes, this is what it is.

Q. I didn't ask you anything other than if you saw this is Exhibit 1004?

A. Yes, I can see that on the bottom. It says Sony Exhibit 1004-0001.

Q. Do you see under that, Samsung Exhibit 1004?

A. Yes, Samsung Exhibit 1004, page 1 of 6.

Q. Okay. Great.

And if you look again at Exhibit 7, starting on page 3 and extending until page 11. Do you see enumerated paragraphs and the abstract for the 2003 application; is that correct?

MR. SCHMID: Objection to form.

A. I see background of inventions, summary of invention, brief description of drawings, detailed description, and claims up to page 11 of the 1037 or page 9 of what's shown on the page.

Q. Okay.

A. Did I go far enough?

Q. Yes.

So you have the first 21 paragraphs

and the claims in those pages, is that accurate, those pages being 3 through 11.

Let me clarify the record here because there are two different page numbers on here.

There are page numbers as part of Exhibit 1005 in the bottom right. There is also page numbers for the specification which is above that and centered on this page.

So let me just clarify the record here.

If you look at page 3 of Exhibit 1005, which has been marked as Exhibit 7 here.

And go through page 15 of this excerpt of Exhibit 1005.

Do you see the entirety of the 2003 application as filed?

MR. SCHMID: Objection. Form.

A. You said page 13? I just don't recall.

Q. 15.

MR. SCHMID: Same objection.

A. Okay. So I'm going through, I think they are the same. But it says Sony exhibit

page 3, and then underneath it says Samsung exhibit page 3 of 1037.

And I am going to look between there and I think you said page 15, which also seems to be the same in Sony exhibit and Samsung.

Q. Yes.

A. Okay.

So there I see background of the invention, summary of the invention, brief description of drawings, detailed description, claims, abstract of the disclosure, and two figures.

Q. So would you agree that this is the original specification claims and drawings that were submitted with the 2003 application?

MR. SCHMID: Objection. Form.

A. I'm not sure I provided an opinion on that. I would need to look through what's actually written here. But my understanding is that this is the application that we just discussed that was a continuation in part and has that serial number you mentioned on the front.

Q. All right.

So do you have an understanding as

to whether or not the continuation in part -- strike that.

Are you aware whether this specification, which extends through pages 3 through 15 of Exhibit 1005, are you aware whether that specification was amended after 2003?

MR. SCHMID: Objection. Form. Scope.

A. My recollection is that there's -- from the page of these three patents, that there's a continuation -- one or more continuations, and at least one, maybe more, continuation parts for a lot of patents after 2003. So I -- I didn't analyze -- analyze that. I don't think any of my declaration opinions relate to that.

Q. Okay.

Were you asked to determine whether certain concepts were inherently disclosed in the 2003 application?

A. Yes.

Q. Okay.

Does this include the entirety of the 2003 application that you considered as

part of that analysis?

MR. SCHMID: Objection to form.

A. I don't know, because considered is -- I would have had -- opened this 1005 or comparable version of that exhibit, which apparently has 1,307 -- 37 pages, so it's likely that in that process, I would have looked at what those pages were.

To the extent that I -- I have an opinion with respect to the content of that -- of those 1037 pages, I expect I would have cited that within the sections regarding the written disclosures of 2003 application for at least -- well, for only, actually, those three terms that I was asked to look at.

Q. All of your opinions regarding the 2003 application be cited in your three expert declarations in these IPRs?

MR. SCHMID: Objection. Form.

A. Yes.

Q. Okay.

Are you aware if the specification from the 2003 application is the same as the specification for that patent application that was marked as Exhibit 8, which is the 196

publication?

MR. SCHMID: Objection. Form. Scope.

A. I don't believe I have any -- have offered any opinion with respect to that.

I do recall, because I had to skim through the -- or not even skim, just kind of flip through the patent owner response when I looked at it.

And I should have mentioned I don't know that I looked at the final as filed patent owner response. We had talked about that earlier in the day, but now that you asked this question, I'm not sure actually if I looked at the final. I know I looked at what was going to be filed, to make sure that the citations to my declaration were correct.

That's a little bit of an aside, but I want to make sure that that's clear in my earlier answer. You had asked me to do that if something came up.

Q. Yup.

A. Now I'm ready to answer this question, but I need your help remembering what it was. This latest question.

Q. Okay.
Well, is the 2003 -- strike that.
Is the 2003 application a continuation in part of what was marked as Exhibit 8 here?
MR. SCHMID: Objection. Form. Legal conclusion.
A. That's my understanding, that it is a continuation in part. I can maybe verify that, if you want.
Q. And I believe you had stated that that's what you saw on page 1 of Exhibit 7?
A. It's -- yeah, it says it's a continuation in part. I'm not sure I stated of what.
Q. And if you look at about a third of the way down, where it says serial number and then it says: 10, slash, 027, 391?
A. Yes, I see that.
Q. And then if you look at about a third of the way down on Exhibit 8, it says: Application number 10, slash, 027, 391?
A. I see that, yes.
Q. Okay.
So would you agree that this -- that

the 2003 application is a continuation in part of what has been marked as Exhibit 8?

MR. SCHMID: Objection. Form. Legal conclusion.

A. It -- I agree that it's indicated as that. And so that would be my understanding.

Q. Okay.

Is the specification of the 2003 application the same as the specification of Exhibit 8?

MR. SCHMID: Objection. Form. Foundation. Scope.

A. I don't have an opinion on that. That wasn't what part of my declaration.

I would expect there would be at least some difference because it's indicated as a continuation in part. So my understanding is that that means they are not identical.

Q. Are you aware that the petitions in the three IPRs we're discussing today included grounds based on the 196 publication, which has been marked as Exhibit 8?

MR. SCHMID: Object to form.

A. I'm aware of those because I had to skip through those to get to the sections that

I was asked to opine on.

Q. Okay.

So you have no opinions as to whether or not the 196 publication anticipates or renders obvious any of the claims challenged in the three IPRs that we're discussing today?

MR. SCHMID: Objection. Form. Scope. Legal conclusion.

A. My understanding was that those were legal arguments, and I didn't -- I wasn't asked to opine on them. That's the extent of my familiarity, other than flipping through them. When I say flipping, I just mean initially sort of seeing what was in the petition, and then focusing on the things that I understood weren't legal argument. And that's just from -- from counsel. That wasn't -- I didn't read them and decide they were -- I just didn't read them at all.

Q. Okay.

Have you ever designed a wireless headphone?

MR. SCHMID: Objection. Form.

A. Oh. Give me a moment to rewind the tape and go through.

If I ever designed a wireless headphone? I have no recollection here having done that. I've designed a lot of things.

Certainly not -- I didn't rely on -- on any prior experience of designing a wireless headphone. Within my declaration, though, certainly wireless systems that I've been involved in whole or in part in designing could've had, you know, or would've had audio or video or other types of multimedia as part of the application.

Q. How about a wireless speaker, have you ever designed a wireless speaker?

MR. SCHMID: Objection. Form.

A. I'm doing the same process of thinking. Thinking back through.

The answer to that would be yes. The answer to that would be yes, I have.

Q. Do you recall when you designed a wireless speaker?

MR. SCHMID: Same objection.

A. Yes. Not in 2002, but in 2002 I founded a company called Commoca, and somewhere in the 2005-ish time frame, we introduced a wireless, could be wired also, but a wireless

handset that did include a speaker. So technically that's a wireless speaker is part of a wireless handset. That particular device could also have been operated, connected to Ethernet.

Q. What was the name of that company again?

A. Commoca, C-O-M-M-O-C-A, Inc.

Q. Okay.

Can you turn to Exhibit 1, Section 3C.

A. I'm at the top of that on page 9.

Q. Page, I believe, that's on page 12, 3C.

A. Oh. Maybe I'm in the wrong section.

Q. I think you were looking at 2C.

A. Okay.

Is it entitled: Written description requirement?

Q. Yes.

A. Okay. And I'm there.

Q. Okay.

MR. SCHMID: That was me, sorry.

MR. KAPADIA: No problem.

BY MR. KAPADIA:

Q. Do you see -- can you read the last line of paragraph 19 out loud?

A. The last line?

Q. Yeah, I'm sorry, strike that.

Can you read the last sentence of paragraph 19?

A. It says, this -- you want me to read it out loud?

Q. Yes, please.

A. This is an objective inquiry and confined to the four corners of the specification, viewed from the perspective of a person of ordinary skill in the art at the relevant time.

Q. Okay.

Is it your understanding that the written description requirement is confined to the four corners of the specification viewed from the perspective of a person of ordinary skill in the art at the relevant time?

MR. SCHMID: Objection. Form. Legal conclusion.

A. I think -- if you can just say the question again. It was kind of long. I'm not sure if there was two questions in one.

Q. Sure.

Is it your understanding that the written description requirement is an objective inquiry confined to the four corners of the specification viewed from the perspective of a person of ordinary skill in the art at the relevant time?

MR. SCHMID: Same objections.

A. That's my understanding, yes.

Q. And what is the relevant time?

MR. SCHMID: Same objections.

A. Of --

Q. For the written --

A. Can you provide me some context?

Q. Sure. My apologies.

What is the relevant time for the written description requirement for the three patents we are discussing today, the '047, the '627, and the '000 patents?

A. For the actual patents, I understand that would be in the 2001 time frame, as viewed evaluating the specification or the application including a specification for -- for this requirement.

I'm not sure from a -- since I'm not

-- I don't understand the legal differences in terms of whether it's, you know, between filing and publication in terms of the written description, but certainly in an issued patent, it would be expected that written description would meet this requirement.

And then in an application, I would look at that. In terms of what dates matter and where, I would defer to a lawyer, I guess, to figure that out.

It doesn't impact any of my opinions.

Q. It doesn't impact whether or not the date is 2001?

MR. SCHMID: Objection. Form. Compound.

A. It doesn't impact in terms of my opinions, because both Walley and Miyake predate that 2001 date.

Q. But that's for -- strike that.

Do you understand what the written description requirement is?

MR. SCHMID: Objection. Form. Legal conclusion.

A. It's my understanding of it is

reflected there in those two paragraphs.

Q. Do you have an understanding as to whether or not written description has to be established as of 2001 for the three patents we are discussing today, the '047, '627 and '000 patents?

MR. SCHMID: Objection. Form. Compound.

A. I think the way you asked the question, I -- it's -- it wasn't relevant because of how you asked the question.

But I do understand based on what we just reviewed that the -- the December 21, 2001, application 10027391 is the original application that's referenced in the -- what we referred to as the 2003 application excerpt of Exhibit 1005 from the Samsung petition that is a continuation in part.

Q. So is December 21, 2001, the relevant time for the written description requirement test?

MR. SCHMID: Same objections.

A. My understanding it's -- the test is related to the specification. So it would be the specification of whatever is like in the

issued patent, and then I suppose that would be informed -- now I know that would be informed by file history. And then I know that -- or I -- I understand that that's also the case for an application.

The ins and outs of, you know, what changes are allowed, not allowed, I'm not an expert on that. In this context of my declaration, I very specifically only applied that to the three terms that I was asked to opine on with respect to the 2003 application.

I did not, to my recollection, review the 196. If I did, it would be -- I would have explicitly cited that in my declaration.

Q. Okay.

So when you opined on those three terms, what have the relevant time that you used as part of your analysis?

MR. SCHMID: Same objections.

A. I just reviewed the 2003 application and the disclosures within the 2003 application.

There would not have been a distinction in terms of time frame, unless

there was a difference, I suppose, in the definition of a person of ordinary skill in the art in those two time frames, which I don't believe there was.

And unless I was asked to opine on priority dates, but that's not an analysis that I was asked to do, and I did not do that.

So my opinions would be the same throughout my declaration, whether it was a 2001 or a 2003 for the grounds that I was asked to opine on. Which did not include the 196 application.

Q. I don't know what you mean by your opinions would be the same whether it was a 2001 or a 2003 date?

A. What I mean is that the opinions within my declaration rely on the knowledge of a person of ordinary skill in the art in a time frame of 2001, which would be the same in the time frame of 2003. Primarily because the art that I was asked to opine on predates 2001, the understanding of what would qualify as a person of ordinary skill in the art in my view, that definition would not change if it -- if the time frame were changed, the way we've designed

or proposed it, both in the petition and my declaration.

And because the written description requirement I was asked to opine on was specifically with respect to the 2003 application, and that's the document that I -- that I looked at.

So I'm not aware of any other portions of my declaration that would otherwise be sensitive to that, to the date differences.

Q. What I'm asking is what date did you apply?

MR. SCHMID: Same objections.

A. What date did I apply to what?

Q. To your analysis in Section 7 of your declaration.

And to be clear, I'm not asking as to what your opinion is today, I'm asking what date did you apply for your analysis in Section 7?

MR. SCHMID: Objection. Form. Legal conclusion.

A. I'm not sure what you mean by apply. Let me answer the -- what I did.

I looked at the 2003 application as

filed. And its contents, which we've reviewed here in the context of a person of ordinary skill of the art and the text of the specification in that application.

I didn't consciously opine, and I don't -- I would be surprised if there's anything in the declaration with respect to that particular section, because my understanding was that it would be person of ordinary skill in the art looking at the text of that application. And that person of ordinary skill in the art definition would not change between 2003 and 2001.

And I very specifically only looked at that application in the context of establishing whether or not certain specific things were disclosed.

Hopefully I answered your question.

Q. So you didn't consider whether or not your analysis was based on 2001 or 2003?

MR. SCHMID: Objection. Form.

A. I don't understand your question.

Q. Now your opinions in Section 7 an accurate representation of your analysis?

MR. SCHMID: Object to form.

A. Absent any errors that are unknown to me, my opinions have not -- my opinions in my declaration have not changed. And so I expect they accurately represent my -- what would be my current opinions. Obviously, I made a mistake earlier with citation in the patent number I used.

So there could be other errors, but right now as we speak, I'm unaware of any -- any additional errors.

Q. Okay.

Can you turn to the start of Section 7.

A. Yes, I can, and I'm actually already there for some reason.

Q. Do you see approximately five sentences down in paragraph 31, the sentence that starts: Consequently?

A. I don't think there are five sentences in paragraph 31.

Q. I'm sorry, five lines down. Five lines down.

A. Yes, I see the sentence that starts with consequently.

Q. Consequently, a disclosure directed

to a low-cost, spread spectrum communication system inherently contemplates these elements.

Do you see that?

A. Yes, I see that.

Q. And in the sentence above that, it says: A POSA would have recognized direct conversion architectures, intersymbol interference, ISI, mitigation strategies, and differential phase shift keying, DPSK, as foundational elements of the general knowledge in the art of the '047 patent.

A. Yes, I see that.

Q. Are those the elements that are inherently contemplated by a low-cost spread spectrum communication system?

MR. SCHMID: Objection. Form.

A. I would add to that, battery operated, which I think I have done within here, maybe in the next paragraph.

Q. I'm asking about what you said in paragraph 31.

A. Well, specifically, only paragraph 31, not including 32. That's what I say: Low-cost, spread spectrum communication system as contemplates these elements as they

1 represented the contemporary standard for
2 minimizing hardware complexity and optimizing
3 power efficiency in the context of the claimed
4 inventions.
5 So that actually does relate to
6 battery operated. So it's different phrasing,
7 but, yes, that's correct. It's just
8 differently --
9 Q. I'm sorry.
10 A. I was just going to say it's written
11 as optimizing power efficiency.
12 Q. Gotcha.
13 What do you mean when you say in--
14 strike that.
15 What do you mean when it says
16 inherently contemplates?
17 MR. SCHMID: Objection to form.
18 A. Well, I mean, that if you -- at
19 that -- POSA would understand reading that,
20 that if you are creating a low-cost power
21 efficient, which to me means battery operated,
22 but low-cost, power efficient spread spectrum
23 communication system in that time frame, that
24 it would necessarily include ISI. And that's
25 really more specific to the CDMA, that's

inherent in CDMA, DPSK, and direct conversion.

Q. So any low-cost, spread spectrum communication system that optimizes power efficiency would inherently disclose direct conversion architectures, ISI mitigations strategies and DPSK?

MR. SCHMID: Objection to form.

A. I can't comment on any, especially not in the context of time frames. Because in the 1980s, obviously, you wouldn't have -- you wouldn't have these things. Well, you would have some sort of ISI or CDMA or you wouldn't really have CDMA.

But -- but certainly in the time frames contemplated here, that was well known. You wouldn't design a low-cost power efficient system that didn't have ISI mitigation that didn't have coding, obviously, that didn't have DPSK and that didn't have direct conversion.

Q. Okay.

So any such system in 2001 wouldn't necessarily have those elements?

MR. SCHMID: Objection. Form.

A. Well, if the subsystem existed and was designed substantively earlier, then

certainly could exist. But if you are going to design something in that time frame, which I think is what you are trying to ask, then that's what it would have.

Obviously, if you take out battery operated, that low cost and other things, then there might be some cases where you would use something else. But if you are trying to accomplish what the goals are and what's claimed in the -- in this '047 patent, then that's what would be understood by that disclosure.

I should qualify that by saying that the claims that include some limitation related to these three elements.

Q. So a low-cost spread spectrum communication system which optimizes power efficiency that was designed around 2001 time frame would necessarily have the three elements that we discussed, direct conversion architectures, ISI mitigation strategies and DPSK?

MR. SCHMID: Objection. Form. Compound.

A. I think that question is too

general. But with respect to CDMA spread spectrum systems that used codes, which is what all of the claims relate to and the specification also relates to, the answer to that is yes.

Your question, as I understood it, and I should have asked you to probably restate it, but I was trying to be helpful, but it's more general than that.

And that's, when I write: In light of the established technical landscape as of the '047 patent, my opinions here are related to what's relevant to the patent, not some other sort of system designed that has nothing to do with what the aims of the patent are and its claims. These three patents.

Q. Paragraph 31 doesn't refer to codes, correct?

MR. SCHMID: Objection. Form.

A. I think it could have been more clear to change strategies to code. No one is claiming a strategy, and I apologize for that. I would change the word strategies to code.

But none of the claims -- claims strategies, so I think it's -- it would be

pretty clear to someone that -- that's the intent there.

And that is specific also to CDMA, because that's the whole purpose of having codes, is for intersymbol interference and CDMA. You can't -- a CDMA system without somehow mitigating intersymbol interference doesn't seem to be a -- could be a CDMA system.

And this, because the inherent reflections that you get, even just from a single user.

Q. What is your understanding by what is required to demonstrate inherency?

MR. SCHMID: Objection. Form. Legal conclusion.

A. I think I wrote that down. And if I didn't, it relates to -- can you repeat the question?

I'm trying to understand it. I'm trying to remember the question so I can understand how to answer a little bit better. You can repeat it just like you said or clarify. It's up to you.

Q. You used the term inherent throughout Section 7.

What was the definition of inherent that you used in this section?

A. Okay. The way --

MR. SCHMID: Object to form.

A. -- I interpreted -- sorry, I answered too quickly.

The way I interpreted it is looking at it from a written description standpoint and understanding of a POSITA at the time, would I have understood that the patentee had disclosed the use of interference -- intersymbol interference coding, differential phase shift keying and direct conversion within the disclosures that that were made, even in cases where those were not explicitly called out. But that's what -- that's what was inherently disclosed, not just a possibility to achieve their stated goals regarding spread spectrum communications in a low-cost battery operated environment systems.

Q. So when you say inherently disclose, you mean that it is necessarily -- necessarily disclosed?

MR. SCHMID: Objection to form.

A. I'm not sure what you mean by those

two differences, but when -- I'm sorry, by the distinction in that -- in that language.

But what I can say is when I read that it's a CDMA system that's low cost, battery operated, and I see that the purpose, then I understand that someone in 2001 would necessarily have to use intersymbol interference coding because it's CDMA. And would necessarily use DPSK and direct conversion because using anything else would just consume significant power. It would be unnecessary.

And again, this is in 2001, obviously, being different, you know, 10, 20 years earlier for receivers, generally. And that's, you know, technology limitation in terms of what could be done in silicone versus nonsilicone.

You know, if you don't go direct conversion, you have to use discreet filters, soft filters, nonsilicone filters. There's no way to do that cheap. And the -- if you use heterodyne, then you have additional oscillators.

Sometimes when I'm thinking out, I

don't look at the camera, and I know you want to get a video, so I'm just thinking so I sometimes close my eyes. I apologize for that.

Q. Do you see in paragraph 34 where you -- well, strike that.

In paragraph 34, do you see where you say: Would be the natural choice of architecture. It's is the second to last line of paragraph 34.

A. Paragraph 34 goes all the way to -- from page 18 to 19.

Can you tell me what the sentence starts with, and then I can --

Q. The sentence starts at the top page 19.

A. I see that sentence. Can you repeat your question?

Q. Is -- strike that.

Is the natural choice of architecture the only choice of architecture?

MR. SCHMID: Objection. Form.

A. For the stated goals of the patent and its claims, natural choice in this context means the choice. It's nature. There's -- I can't -- there's not an alternative. Maybe a

better word for natural -- well, actually, I think natural is a pretty good word. It's nature. It's nature. That's how it would be understood to be done. At -- in the 2001 time frame.

So I think I answered your question.

Q. I'm not sure yet.

Is that the only choice of architecture?

MR. SCHMID: Objection. Form.

A. I thought I answered that before. But let me be more explicit.

In implementing CDMA spread spectrum, you know, with codes, which is what the patent is claiming, that is for the types of applications disclosed, and as the overall aim to be low cost, battery operated, at that time, that was the only choice.

Q. Is low cost a requirement in the 2003 application?

MR. SCHMID: Objection. Form.

A. I don't know what you mean by that question in terms of a requirement of an application. My understanding is that issued claims in a patent set out the requirements.

The specification certainly informs those claims. And the objective, I think, consistently in the three patents and in the 2003 application all relate to -- to low cost, battery-operated systems.

Q. Can you look through Exhibit 7 and tell me where it talks about low cost?

A. That's going to take me some time, if you don't mind me taking it.

Q. Take your time on this.

Let me ask you a -- maybe let me ask you a slightly different question.

Do you recall any instance of the 2003 application expressly discussing low cost or cost overall?

A. I would be surprised if it didn't. It may not use the keyword cost.

A little while ago we got into, for example, a paragraph that didn't use the word battery operated. But did talk about power efficiency. And so those -- those are essentially the same goal and mind of that application.

Q. If cost were not a consideration, would there be other options?

MR. SCHMID: Objection. Form.

A. I don't see any other option for the applications. You know, for example, low -- for example, complexity, I think it would be unreasonable for a POSA reading the 2003 application and the specifications of the three patents that are subject of the petitions, to have an understanding that the claims relate to systems that where cost is not a primary consideration, low complexity is not a primary consideration, and -- and low or high power efficiency or low power efficiency is a primary consideration. And understanding that primary consideration here means the only choice.

And I think it can be confusing when I say the only choice because that suggests that there's another choice. So maybe I'm not sure only option actually helps. But when you read the specification, when you know the technologies that are being discussed, when you understand it's a CDMA system using codes, and all the claims require that, and you see, you know, an embodiment where there's a headset and, you know, a portable device, there would be no reason to try to read into the 2003

specification that it's going to use anything other than direct conversion, DPSK, and intersymbol interference coding.

And furthermore, as I mentioned, intersymbol interference coding goes hand in hand with using CDMA.

Q. So you are telling me that if costs were not a consideration, there would be no other option?

MR. SCHMID: Objection. Form. Scope.

MR. KAPADIA: Strike that.

BY MR. KAPADIA:

Q. Let me ask you -- let me ask a better question.

Would there be any other way of providing a battery powered transmitter if costs were no option?

MR. SCHMID: Objection. Form. Scope.

A. Your question is -- I'm sorry, it's just not well defined.

Q. Okay.

A. What time frame? What application?

Q. 2001 time frame.

If costs were not a consideration, would a battery powered transmitter require direct conversion?

MR. SCHMID: Objection. Form. Scope.

A. In all of my experience in designing all sorts of type of systems, I've never ever come across a case where someone says cost is not a consideration.

So it's not an analysis that I did. I think a person of ordinary skill in the art, given the four corners of the specification, would clearly understand that cost is a consideration.

And the analysis you are asking me to do, I did not do. And I don't think a person of ordinary skill in the art would do that. And I certainly can't comment on anything -- you know, I guess, if an employee was mad at their boss, they might design a system that was like extremely high cost before they quit.

But I think that's outside the scope of my analysis.

Q. Is there anything in the 2003

application that includes -- strike that.

Other than your -- other than your personal experience, do you have any other basis for cost being -- strike that.

Do you have any basis in the 2003 application for your low-cost requirement?

MR. SCHMID: Objection. Form. Scope.

A. I actually already answered that question, so I may -- must not have answered it clearly.

Q. Well, can you point to something specifically that you cite in paragraph 34 through 35?

A. I would like to answer that there's two questions pending, unless you cancelled one. The first one, just off the top of my head, I was going to say in the application, there's figure one, but just as an example. To cite other specifically to your question, I would go through that.

And now, I think you want me to pull -- put that aside and pull up Exhibit 1; is that correct?

Q. No, I'm saying looking at

paragraph 34 and 35.

A. That's in Exhibit 1?

Q. Yeah, in Exhibit 1, sorry.

A. Okay.

Q. Do you cite any evidence --

A. Sorry, I'm not quite there.

Q. Sorry, that's pages 18 and 19.

A. Thank you. The page numbers are really helpful. 18 and 19, I'm there.

And the question is?

Q. Do you cite any evidence in those paragraphs which would support your requirement that the design must be low cost?

MR. SCHMID: Objection. Form.

A. So I think the paragraphs you are asking for 34 and 35?

Q. Mh-hm.

A. Okay. Let me review those.

(Document review.)

Q. And to be clear, is there anything that you're pointing to in the 2003 application for this?

A. Okay. I'm going to need you now to restate both -- I think now there's one question pending, which was your original

1 question, which I was going to --
2 Q. Yeah, let me ask you just one simple
3 question -- one question.
4 A. All right. So I'll set aside --
5 Q. Set aside.
6 A. And listen to you. Thank you.
7 Q. Do you cite anything in the 2003
8 application, in paragraphs 34 and 35, for your
9 basis as to why the architecture must be low
10 cost?
11 MR. SCHMID: Objection. Form.
12 A. This is the Section A, specifically,
13 the direct conversion module section. Those
14 two paragraphs, correct?
15 Q. Mh-hm, yeah.
16 A. Let me read them now, and then I'll
17 answer that question.
18 (Document review.)
19 A. I think the whole -- oh, wait. I
20 didn't read 35, sorry.
21 (Document review.)
22 A. Seems like the entirety of that
23 relates to low power consumption and low cost
24 designs. So --
25 Q. Where does it say low cost design?

MR. SCHMID: Objection to form.

MR. KAPADIA: Sorry, strike that.

BY MR. KAPADIA:

Q. Please continue.

A. In section -- in paragraph 34, the second sentence says: See petition at 60. A POSA would have understood that a receiver, such as wireless headphones would benefit from a component suitable for low power consumption and low cost designs.

This comes from the Samsung petition. So I think it's not disputed.

Q. Is this --

A. And then --

Q. But my question -- I want to make sure that you understood my question.

My question was: What were you pointing to in the 2003 application?

The question was: Do you cite anything in the 2003 application in paragraphs 34 and 35 for your basis for why the architecture must be low cost?

A. Right.

MR. SCHMID: Objection to form.

A. I understood the question. You just

interrupted me before when I was getting to that part. Because there are two quotations after that in order to provide the context of as part of my answer. I have to start with the last sentence between -- before the two quotations.

The two quotations come from Exhibit 1005, which we have established is the 2003 application. So that's where the citations are. And the context for that, those two, come from -- because that's -- those two citations -- those two quotes and the citation to the application are part of paragraph 34.

So in order to understand how to interpret those quotations, it's important to start by reading the first -- the sentence right before the quotations. That's standard practice.

So the quotations themselves, after understanding that it relates to components suitable for low power consumption and low cost designs, which I say is only undisputed because that came from the petition.

The battery operated transmitter may have a transmitting antenna that may be



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omni-directional for transmitting a coded digital modulated signal to a receiving antenna of a battery powered receiver that may be a headphone receiver.

And the digital modulated signal from transmit antenna may be received by receiving antenna and then demodulated.

So the way that would be done is by direct conversion. Because if you used any other approach in 2001 for what the petition agrees is wireless headphone for components suitable for low power consumption and low costs designs, it just wouldn't make any engineering sense.

Q. Okay.

So a wireless headphone in 2001 would necessarily be -- strike that.

So wireless headphones in 2001 would necessarily have direct conversion modules; is that your testimony?

MR. SCHMID: Objection. Form.

A. No, I didn't say that --

Q. Okay.

A. -- at all. And you've done this before. I think it's unintentional.

Specifically these would be designed in 2001. There certainly could exist headphones that were wireless before 2001, and they could have used any number of other technologies, and I've clarified that before.

But in the 2001 time frame, you wouldn't design one reading, you know, if you were following the disclosures of the 2003 application and you were a person of ordinary skill in the art, you would use direct -- direct conversion.

There's so many design choices when you are designing something. You are not going to -- not use what you know is what you should use. And I gave you the extreme example of a disgruntled employee, but, you know, that's just not within the scope of a person of ordinary skill in the art. You know, reading the disclosures, there would be no reason not to use direct conversion.

Q. Are there benefits to superheterodyne intermediate frequency receivers?

MR. SCHMID: Objection. Form. Scope.

A. Do you mean today or do you mean in --

Q. 2001?

A. 2001. I think I need a more specific question. Either can you restate the question or just repeat it if you think it was sufficiently specific?

Q. Are there any benefits to superheterodyne intermediate frequency receivers?

MR. SCHMID: Objection. Form.

A. I think in a general aspect, unrelated to the patent claims and the patent specification, the answer would be yes.

Q. What are some of the advantages?

MR. SCHMID: Objection. Form. Scope.

A. So I think if you're -- and this is less of an issue today, but if you were designing 3G base station in 2000 time frame that's handling hundreds of incoming signals on a single receiver, you would have loved to have done direct conversion.

But A to D converters did not have the bit resolution or time frame to be to

handle that reception, so you needed to use intermediate frequency signal chains.

And that's part of what my team worked on and designed at Texas Instruments when I was part of the wireless infrastructure -- well, when I ran the wireless infrastructure business there.

At that point, it was base station applications, obviously, were as expensive as they needed to be, but they were handling receive and transmit chains for hundreds, if not thousands, of users.

And that was just the technical limitation that you would know at the time because of the limitations of DACs, digital analog converters, and ADCs, analog digital converters.

But, you know, at that time frame, the flip side of that being the handsets, didn't -- designed at that time wouldn't require intermediate oscillators.

I don't think I provided an opinion on any of that in here.

Q. Okay.

A. But, you know, if you -- if you take

out, you know, battery operated device and take out, you know, some like a base station is -- technology doesn't necessarily allow you.

But that's not -- that's unrelated to what's being claimed in -- in these patents that are subject of these three IPRs.

Q. So if your goals are to make a device that's less expensive and requires less components and complexity, those would be reasons to select direct conversion?

MR. SCHMID: Objection. Form.

A. In the time frame of 2001, that's what you would select.

And again, that's in the context of CDMA using in coding in the types of applications contemplated and disclosed in these patents.

Q. Are intermediate frequency down conversion components often used in 2001?

MR. SCHMID: Objection. Form. Scope.

A. I think I already actually answered that question.

I gave you an example of where they would be used. Which were non battery operated

1 base stations. My analysis and my declaration
2 and opinions related to direct conversion
3 written description within the 2003 application
4 are fully and limited to the context of the
5 2003 applications disclosures, and disclosed
6 preferred embodiment.
7 And in that case, direct conversion
8 was the only -- only way that would be
9 understood by a person of ordinary skill in the
10 art in that time frame.
11 MR. KAPADIA: Actually, let's break
12 for lunch right now.
13 THE VIDEOGRAPHER: The time is
14 12:35. We are off the record.
15 (Recess is taken.)
16 THE VIDEOGRAPHER: We're back on the
17 record. The time is 1:48 p.m.
18 BY MR. KAPADIA:
19 Q. Welcome back.
20 A. Thank you.
21 Q. Let's get started. Can you open up
22 Exhibit 1 again.
23 A. I have it in front of me.
24 Q. Great.
25 Can you turn to page 20 and



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specifically look at paragraph 38.

A. I'm there.

Q. Do you see where it says: A POSA would understand intersymbol interference?

A. Yes.

Q. Is intersymbol interference interference that's caused by the signal itself?

MR. SCHMID: Objection. Form.

A. It can be.

Q. So just to clarify, does intersymbol interference relate to interference caused by the signal itself?

MR. SCHMID: Same objection.

A. It can. In CMI you have echos basically, and those are going to be the same coded signal copies, but they are displaced. And so they can interfere with each other. The copies.

Q. Okay.

So intersymbol interference relates to echos, they interfere with each other?

A. I didn't say that.

Q. All right.

Maybe you could reexplain that then?

MR. SCHMID: Objection. Form.
A. If you repeat the question, that would be helpful.
Q. Sure.
Does intersymbol interference relate to interference caused by the signal itself?
MR. SCHMID: Same objection.
A. Yes, it can. And in the case where it would, it can come from -- one example would be copies of the same signal that arrive at a receiver at different times.
Q. Okay.
You said it can be caused by the signal itself; is that correct?
A. I'm not sure what you mean caused by the symbol -- signal itself.
Q. Well, I asked does intersymbol interference relate to interference caused by the signal itself, and your answer was yes, it can.
A. Yes, that's correct.
Q. Okay.
Does intersymbol interference -- strike that.
When isn't intersymbol interference

caused by the signal itself?

MR. SCHMID: Objection. Form.

A. That's not something I've considered.

Q. I'm asking because you said can instead of is. So if you are saying that you can't think of anything else at this point, that's fine. I'm just trying to understand what you mean by it can?

MR. SCHMID: Objection. Form.

A. So intersymbol interference generally means interference of different -- in between different symbols. And the source of those symbols isn't necessarily constrained to echos. So that's why I said can.

Q. Okay.

So are there any sources of those symbols that are not based on the original signal itself?

MR. SCHMID: Objection. Form.

Scope.

A. I'm not sure of your context. So if you want to provide me some context, I can answer that question.

Q. I'm just trying to understand your

testimony.

You told me that intersymbol interference can relate to interference caused by the signal itself, and you gave me one example.

I'm trying to understand what you mean by can, because that would suggest there's times when it can't, or when it isn't related to interference caused by the signal itself?

MR. SCHMID: Object to form.

A. So I think you just asked me two questions.

Q. Okay.

So let's take apart -- let's take them one at a time.

A. Sure.

Q. Let me ask a different question.

Sitting here right now, can you think of any example of intersymbol interference that isn't caused by the signal itself?

MR. SCHMID: Objection. Form. Scope. Foundation.

A. I would say yes. I would say that intercircuit cross paths could also lead to it.

Q. Okay.

Any other examples?

A. It's not something that I looked at, the declaration, but it's the best I can do off the top of my head. I can certainly spend more time, if you would like, to see if I can come up with anything. It's not something I looked at.

Q. What did you mean by intercircuit cross paths?

MR. SCHMID: Object. Form.

A. That's called cross talk. Basically where a circuit is designed in such a way that -- and normally it's a parasitic, it's not something that's desired. But you are going to have the ability for something that you do in one part of the circuit to influence what you are doing, what's happening in the other part of the circuit.

And so that's strictly speaking not an echo because it's on chip as opposed to having already left the transmitter and then combining at the receiver.

Again, this just off the top of my head because you asked me, and that's the first

thing that came up.

Q. Okay.

That was helpful.

Can you think of any other examples of intersymbol interference, but in this case examples of intersymbol interference that occurs after the signal has left the transmitter?

MR. SCHMID: Objection. Form. Scope.

A. Which transmitter?

Q. Well, I'm just continuing off of what you said.

You said: It's not strictly speaking an echo because it's on chip as opposed to already left the transmitter. So I'm just referring to the same transmitter that you referred to in your own answer.

A. Right.

But I think now the new question requires more information. So maybe you can repeat the question again.

Q. Okay.

Does intersymbol interference, which occurs after the signal has been transmitted,

relate to interference caused by the signal itself?

MR. SCHMID: Objection. Form. Scope.

A. I think I answered that several times. In the context of the 2003, which is what this section is and in the patents, which is CDMA and coding, the encoding, which we're talking about in this Section C, relates to not secondary design issues on a chip but rather on air and coding. And decoding at the receiver and in principle, could be caused by other things, other than the signal itself. So that's why I said can.

Q. Okay.

So when would it not be caused by the signal itself?

MR. SCHMID: Same objections.

A. So that's not -- I gave you an example of an on chip, and that was not in the context of -- of these patents necessarily, nor the 2003 application. And I apologize if that was confusing.

In the context of here, it's not something that I looked at. And it's just not

1 particularly relevant to my conclusions.
2 But I do believe there could be
3 cases where the intersymbol interference is
4 caused by other transmitters or receivers. But
5 in the context of what we're talking about
6 here, it is within the CDMA system itself.
7 And because of that, it's required
8 to build in code and redundancies that are
9 transformed in order to manage that,
10 independent of echos or not, but echos
11 definitely one case where the -- even if you
12 have a single transmitter where you have to
13 count for that, and that's why you do the
14 combinational in coding and air leaving.
15 And that just means that instead of
16 just sending things out, straight line as it's
17 encoded, you transform the matrix and send the
18 transformed matrix you might write in rows but
19 then, you know, read in columns.
20 That's what that means.
21 Q. So in the context of this patent,
22 does intersymbol interference relate to
23 interference caused by the signal itself?
24 MR. SCHMID: Object to form.
25 A. I think you've asked that question

four times, so now it makes me think I didn't understand any of the three previous questions.

Q. I mean, you are saying that it can caused by other transmissions.

Is your opinion that intersymbol interference can be caused by something -- strike that.

Is it your opinion that intersymbol interference includes interference caused by another signal sent from a different transmitter?

MR. SCHMID: Objection. Form.

A. As I mentioned, that's not something that I looked at. But it can be. Because I haven't looked at it, I don't want to create an opinion on the fly.

I gave you one example of a bad chip design where you could have some cross talk. But in the absence of that, now talking specifically about the 2003 application and the patents that came from this, what I can say definitively is without -- if you don't intersymboling code, you can't practically use CDMA.

It's -- it's fundamental. They go

hand and hand.

Q. So sitting here today, the only example you have of intersymbol interference that is caused by something other than the signal itself, is the on chip, bad chip design example; is that correct?

MR. SCHMID: Objection. Form. Scope. Foundation.

A. Yeah -- I didn't say that. That's partially because your question kind of is broader than what I've said.

So maybe you want to restate the question.

Q. Other than the bad chip design example that you provided earlier, do you have any specific examples of intersymbol interference that is not related to interference caused by the signal itself?

MR. SCHMID: Same objections.

A. I think my answer is the same basically. Unless I've written in my declaration, it's not -- not something I had to consider since CDMA goes hand in hand with intersymbol interference.

And the example that I used, which

is to make that conclusion, I only need variations of the signal itself. Because in the real world, you send the signal out and it's going to take multiple paths and there's omni-directional antenna that's disclosed in the 2003 application. So you are going to get bounces back. And it's CDMA, so you are using the coding, so they go hand in hand.

I didn't give it any other thought or analysis before, and I don't think my declaration -- certainly my opinions don't depend on that in this case, for this inherent disclosure.

Q. Okay.

Is convolution encoding a form of error correction encoding?

MR. SCHMID: Objection to form.

A. I would say convolutional encoding is convolutional encoding.

You want to change it to a different type of encoding? I'm not sure what that -- what that means.

Q. Well I'm asking is it a form of error correction encoding?

MR. SCHMID: Same objection.

A. I'm not sure where the Venn diagrams would align on those two. So I would hesitate to create an opinion here on the fly.

Q. So you don't know if convolutional coding -- sorry, strike that.

So you don't know if convolutional encoding is a form of error correction encoding?

MR. SCHMID: Same objection.

A. I think I may have not understood your previous question. Since I already answered that exact same question.

So unless you want to highlight what the difference is, I'm going to just say that my answer is the same, my previous -- I stand by my previous answer.

Q. So you don't know?

MR. SCHMID: Same objection.

A. That's a new open-ended question that I cannot answer. But if you would like to actually ask me a question that's more than -- than a statement that says, so you don't know, I would be happy to try to answer a new question.

Q. Does convolutional encoding add



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coding gain redundancy?

MR. SCHMID: Objection. Form.

A. So gain and redundancy aren't necessarily the same concept. So I guess I'm a little unclear what you mean by coding gain redundancy.

Q. You don't know if convolutional encoding adds coding gain redundancy?

MR. SCHMID: Objection. Form. Foundation.

A. I don't understand your question. So maybe you can explain it. I understand what coding gain is and I understand what redundancy is.

In this context of the 2003 patent, I'm unclear what you mean when you say coding gain redundancy.

Q. So if you saw the words adding coding gain redundancy, you wouldn't know what that meant?

MR. SCHMID: Objection. Form.

A. Without context I -- I would hesitate to guess.

If you would like to provide me some context, I would be happy to.

Q. Sure.
Can you look at paragraph 39?
A. Sure. Yes.
Q. Does convolutional encoding add coding gain redundancy?
MR. SCHMID: Objection. Form.
A. So I would say that what I've written there, actually, which is that convolutional encoding and interleaving is for reduced intersymbol interference in the channel by adding coding gain redundancy and improving resistance to fading.
So the convolutional encoding together with the interleaving is what's adding the coding gain redundancy.
Q. I mean, you left off a word in that paragraph. It says: A POSA would understand that the disclosed convolutional encoding and interleaving is for reducing intersymbol interference in the channel by adding coding gain redundancy and improving resistance to fading, respectively.
MR. SCHMID: Objection to form.
A. I think that's fair.
Q. So with that understanding, does

convolutional encoding a form of error correction encoding?

MR. SCHMID: Objection to form.

A. I'm not sure what you mean by error correction. We've covered that before.

Q. Okay.

A. But this paragraph doesn't discuss that.

Q. What is coding gain redundancy used for?

MR. SCHMID: Same objection.

A. In this particular case, it is being used for -- let me read it, and then I'll answer it.

(Document review.)

A. So the coding gain redundancy is what's used for reducing the intersymbol interference.

Q. I'm asking what is -- I'm sorry, strike that.

What does it mean to add coding gain redundancy?

MR. SCHMID: Objection. Form.

A. So basically what it does is the coding in and of itself, can't correct for

what's happening in the realistic channel, which at minimum, as we discussed before, would include echos in the same signal.

So it's inherent in the transmission. And then by convolutional encoding, you structure those bits in a way that if you lose some segment, you have the ability to still reconstruct the original signal. And that's what convolutional encoding means.

So in this context, that gain of redundancy occurs in addition to the regular spreading, you know, chipping, if you will. So replacing a symbol with replacing a bit with the symbol for that bit.

So those are the two separate things. One adds redundancy because you have more bits in the chip. For a given bit of the original digital signal bit. And then the other, the convolutional part, relates to having those bits distributed through a convolution in a different way, so that they are more resistant to the channel interference.

Q. So by adding coding gain redundancy, you're able to correct the received signal to

reconstruct original signal?

MR. SCHMID: Objection. Form.

A. I don't know what you mean by correct.

Q. Well, setting aside correct.

Would you agree that by adding coding gain redundancy, you are able to reconstruct the original signal even if you lose some segment?

MR. SCHMID: Objection. Form.

A. I'm not sure what you mean by segment.

Q. I'm literally just reading words in your answer. I mean, I'll repeat back your answer.

By convolutional encoding, you structure those bits in way that if you lose some segment, you have the ability to still reconstruct original signal.

Do you still agree with that testimony?

MR. SCHMID: Objection to form. Foundation.

A. I agree with what I wrote -- with what I just said.

Q. Okay.

A. It was a lot. You quoted a part of it. If you want to -- I don't think I said anything wrong, but if you want me to review all of it, I'm happy to do that.

Q. Do you agree with what I just said?

By convolutional encoding, you structure those bits in a way that if you lose some segment, you have the ability to reconstruct original signal?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. And that's what convolutional encoding means?

MR. SCHMID: Same objection.

A. Okay.

So I think it's important not to read too much into that response. But I agree with it.

If we want to dissect what is a segment versus -- I could have used the word portion. You know, basically it's -- it's a way of preparing for transmission the signal to count for channel noise.

And it's what's done in CDMA because

fundamentally even if you didn't have other users and things like that, you still have in a practical environment that echos that you have to deal with.

So the coding alone, is insufficient. The convolution encoding and interleaving, both those two things, are what you use in CDMA. But there's not -- I guess I didn't give a whole -- that's so fundamental, I don't think anybody would disagree with that.

Q. Can you look at paragraph 40.

A. I see that.

Q. Okay.

And do you see you quote from Exhibit 1022?

A. Yes.

Q. Okay.

And that sentence is: Interleaving the bits to be transmitted over two time slots is introduced to diminish the effects of short deep fades.

Is that correct?

A. Yes.

Q. Okay.

Does that sentence I just read say

intersymbol interference?

MR. SCHMID: Objection. Form.

A. Yes.

Q. The sentence I read was: Interleaving the bits to be transmitted over two time slots is introduced to diminish the effects of short deep fades.

Did I just say the word intersymbol interference?

MR. SCHMID: Objection. Form.

A. You actually didn't read a sentence.

Q. Well, do you see that the "I" has been corrected to be lower case?

A. Yes.

Q. Is it your understanding that means that it was originally upper case?

A. Yes.

Q. And thus would be the start of a sentence?

MR. SCHMID: Objection. Form.

A. That's not my understanding.

My understanding is that it indicates that the excerpt came from being a sentence, but now is corrected to be included as part of a sentence. Because there's only

one -- there's not a period there.

Q. Okay.

A. I mean, I'm not -- grammar is not my strong suit. I apologize.

Q. Fair enough.

Is it fair to say that the words intersymbol interference are not in between the double quotes in paragraph 40?

A. Yes. That would be very -- not only -- that would be extremely accurate.

Q. Okay.

Is fading the same as intersymbol interference?

MR. SCHMID: Objection. Form. Foundation.

A. I'm not sure why you are saying fading instead of short deep fading.

So maybe I need clarification on that question.

Q. Let's start with my question.

Are all forms of fading forms of intersymbol interference?

MR. SCHMID: Objection. Form.

A. I'm not even sure what that question means.

Q. Well, do you know what fading is?
A. I do know what fading is.
Q. Okay. Great.
So let's -- and do you know what intersymbol interference is?
MR. SCHMID: Objection. Form.
A. Yes.
Q. Okay.
Is it your understanding that fading is the same thing as intersymbol interference?
MR. SCHMID: Same objection.
A. I don't understand the question.
But the way it's -- it's asked, I would say that they can't be actually same thing, because one is talking about interference and one is talking about fading, which are not the same thing.
So I don't -- I don't understand the question.
This paragraph 40 doesn't say that they are the same thing.
Q. I'm just trying to ask a background question to try to understand paragraph 40, and I'm just trying to understand is -- strike that.

I'm just trying to understand are intersymbol interference and fading the same thing?

MR. SCHMID: Same objection.

A. I think you've already asked that question. And they are not synonyms for each other.

Q. Okay. Perfect.

What is a short deep fade?

MR. SCHMID: Objection. Form.

A. That's not something I would want to define right here. And it's not something I constructed.

A fade is a fade, generally. The short and deep qualified in terms of characteristics of the fade, and I -- that's all I can say right here. That's not something I studied for my declaration.

Q. I mean, you said a fade is a fade, generally.

I mean, what is a fade?

MR. SCHMID: Objection. Form.

A. Fading is basically a degradation -- from a high level, it's degradation in signal strength.

Q. A fade would be a drop in signal strength?

MR. SCHMID: Object to form.

A. That would at least be an example in a general context of fading.

Q. Okay.

And a short deep fade would be presumably a more severe drop?

MR. SCHMID: Same objection.

A. I think beyond what I've written there, I don't have any opinion on an exact meaning for that beyond what I've already described.

Q. Do short deep fades always lead to intersymbol interference?

MR. SCHMID: Objection. Form.

A. The use of CDMA will always have intersymbol interference. So that's why coding is inherently part of CDMA. That was sufficient for my opinion. And I did not shortly or longly do a deep analysis into short deep fades.

So I don't have any opinion to offer on any construction related to that term right now.

It wasn't necessary for me to conclude the inherency of reduced intersymbol interference.

Q. So whether or not short deep fades create intersymbol interference is not relevant to your opinion?

MR. SCHMID: Objection. Form.

A. I didn't say that.

But I did say what I wrote there is that interleaving coding to mitigate intersymbol interference, interleaving the bits to be transmitted over two time slots is introduced to diminish the effects of short deep fades, is what that particular reference had indicated. That's all that paragraph says. I wrote the one sentence, and I believe it to be accurate.

But I did not try to construe short deep fades, or do the kind of analysis that you are discussing.

Q. Is the effect of short deep fades always intersymbol interference?

MR. SCHMID: Objection. Form.

A. I would say same answer. I didn't do an analysis to see if it's always that

because intersymbol interference is inherent with the use of CDMA.

Q. Turning to paragraph 41, is convolutional encoding used in techniques other than partial response signaling?

A. Yes.

MR. SCHMID: Object to form.

BY MR. KAPADIA:

Q. Okay.

Turning to paragraph 42.

Does the 2003 application refer to hopping?

MR. SCHMID: Objection. Form.

A. That's -- I don't know. I would have to look through the 2003 application and see if it refers to hopping.

Q. Please do.

A. Okay.

Q. I believe that's Exhibit 7.

(Document review.)

A. So I am now ready to answer your question.

Just to make sure I remembered it correctly, can you restate it?

Q. Sure.

Does the 2003 application refer to hopping?

MR. SCHMID: Objection. Form. Foundation.

A. I would say that it -- this isn't something I looked at, but I just read everything and you gave me the time and thank you because otherwise I couldn't give you an answer.

But in -- on page 3, which is page 5 of Exhibit 1005, 1037. It says: To reduce the effects of channel noise, the battery power transmitter 20 may use convolutional encoding and interleaving -- and then the next sentence is an important one -- for further noise immunity, spread spectrum modulation may be utilized.

So this isn't something I studied for my opinions, but frequency hopping is a form of spreading the signal across affixed spectrum and would be a part of that. So I would say it's not explicitly mentioned, but it's not excluded by the application's description.

Q. Does it refer to time hopping?

MR. SCHMID: Objection. Form.
A. Does what refer to time hopping?
Q. The 2003 application?
MR. SCHMID: Same objection.
A. No, I wasn't looking for time hopping.
Q. I mean, I would assume if you are looking for hopping, and the only instance you can point to for a form of hopping is line 20 of page three of this 2003 application specification, I would assume that there's no other form -- places that refer to hopping.
MR. SCHMID: Objection. Form. Scope.
A. I'm sorry, you didn't ask me a question. You just stated --
Q. Does the 2003 application refer to time hopping?
MR. SCHMID: Same objections.
A. I didn't specifically look at that because generally we're talking about spreading in the frequency domain and in the coding. Time hopping, actually -- obviously, will create all sorts of interesting things, depending on -- I guess, I don't -- I didn't

look for it specifically, because I was -- as I read it, I was looking for frequency because that's how my communication brain works.

Time hopping is not something that I considered when I read it. I don't have any recollection that it -- that it discussed time hopping.

Q. Okay.

Can you take Exhibit 4, which is, I believe, a copy of the '047 patent.

A. I have it in front of me.

Q. Okay.

If you can turn to column four.

And look at line 60.

A. Column four, line what?

Q. Actually, let's look at line 63, which starts: A direct conversion module.

Do you see that?

A. That's in claim one?

Q. Yup. In claim one, that is correct.

A. Yes. I'm there.

Q. Okay.

So this limitation recites a direct conversion module configured to receive wireless modulation transmissions

representative of said audio signal representation and which have been processed to intersymbol interference.

Do you see that?

A. Yes.

Q. Okay.

So these transmissions were processed to reduce intersymbol interference, correct?

MR. SCHMID: Objection to form.

A. That's what it says there.

Q. Okay.

And now it then says: And wherein said portable spread spectrum audio receiver further processes said received wireless modulation transmissions for reduction of intersymbol interference.

Do you see that?

A. I see that, yes.

Q. Is there any mention of a receiver which further processes transmissions to reduce intersymbol interference in the 2003 application?

MR. SCHMID: Objection to form.

(Document review.)

A. It's just the inverse of what I already mentioned in my declaration. I don't have any further opinions outside of what's been the declaration regarding the inherent disclosure of intersymbol interference of coding, which would occur at the transmitter, and would occur in the inverse at the receiver.

Q. So did you point to anything in your declaration that indicates that -- that the 2003 application discloses intersymbol interference that occurs at the receiver -- sorry, strike that.

So is there anything in your declaration that indicates that the 2003 application discloses the reduction of intersymbol interference based on something that occurs at the receiver?

MR. SCHMID: Objection. Form.

A. I would have to look. But the only way they communicate is by doing the inverse. So if you don't -- if you encode at a transmitter, in order for the receiver to receive the signal --

May I look at my declaration?

Q. Sure. Please.

A. Then a person of ordinary skill in the art would understand that you would have to decode at the receiver, whatever you encoded at the transmitter.

I'm looking for that. I'll find it quickly. My declaration is pretty short.

(Document review.)

A. So the end of paragraph 38 says: The digital modulated signal is coded for private reception.

And that would be understood to at least remove multiple copies of signal interference from transmitters is one example of referring to the receiver.

Q. Wouldn't that be something that you've done to the -- to the transmission --

A. Sorry.

Q. Wouldn't that mean that the transmission is coded to remove multiple copies of intersymbol interference?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. That doesn't refer to something that the receiver is doing.

Doesn't that refer to something that

the transmitter does?

A. I'm unclear on your question. It sounds like you kind of jumped around.

If you just want to restate a question, that would be great.

Q. Just to set the context, claim one, as we just read earlier, it refers to wireless modulation transmissions that have been processed to reduce intersymbol interference, and it states that the receiver further processes said received wireless modulation transmissions for reduction of intersymbol interference.

Do you understand that to refer to the same thing, or is this referring to two different reductions of intersymbol interference?

MR. SCHMID: Objection. Form. Scope. Compound.

A. I'm not sure if there's an either or response to that. I think that whenever you encode in the transmitter, if you want to receive it, then you have to decode it.

So the coding -- they are interrelated to each other. You can't decode a

signal unless you know how it was encoded.

Q. So is it your opinion -- sorry, continue.

A. So right here, I don't have an opinion beyond this. I'm just -- what's in my declaration, I'm just trying to understand this scenario. Because it's not something that I considered for my declaration.

Q. So you didn't consider whether the 2003 application inherently disclosed or explicitly disclosed a receiver, which further processes received wireless modulation transmission for reduction of intersymbol interference?

MR. SCHMID: Objection. Form.

A. What I can say is I only focused on whether or not the disclosures in the 2003 application were sufficient to understand that the only option in a CDMA based system for -- for the application and resulting patents, included intersymbol interference coding, which would also -- when people in the art say coding, a lot of times it's a short way of saying encoding and decoding.

Because the -- they go in pairs,

basically. If you encode, your receiver has to be able to decode.

So for my opinion, I focused on whether or not intersymbol interference coding, which that means encoding, decoding in this context is disclosed, and it's inherent because it's CDMA. And CDMA, I'm not aware of how you get around that in the time frame of the 2001 reading -- I mean 2003 application reading -- reading it in the eyes of a person of ordinary skill in the art.

Q. To be clear, in paragraphs 38 through 42 of your declaration, which is the section titled: Disclosure of reduced intersymbol interference in the 2003 application, this section does not say that reduction of intersymbol interference is inherent because it's CDMA, correct?

MR. SCHMID: Objection to form.

A. I'm not sure if it does, but you asked me a question, and I answered it. And that was the answer to your question.

Q. Is -- strike that.

Do you refer to CDMA in paragraphs 38 through 42?

A. Let me take a look.

Q. All right.

(Document review.)

A. Yes, oddly enough, I inherently referred to it because that's what the application is about. It's not talking about some other sort of approach.

All the claims of all the patents include CDMA and the application of CDMA. So I could have been more clear about that, but the application is about CDMA.

So everything is about CDMA. And I didn't put it there in those paragraphs, but it's -- I think that's everything about application and everything about these patents that I reviewed. Any -- and all the claims relate to CDMA. So I didn't really consider this outside of that context.

I think it could have been more clear if I had put that in there. But I don't know what else I would have put in there since that's what everything is about.

Q. Okay.

So it's not there, but you could have put it in there?

A. I said it's inherently --

MR. SCHMID: Object to form.

THE WITNESS: Sorry.

A. It's inherently there because the whole discussion is about CDMA. But I don't see the word CDMA in there. I certainly could've added it.

It's -- but I don't think there's any dispute that all the claims of all of these three patents all require CDMA.

Q. All right.

Can you go back to page 14 of Exhibit 4.

A. I don't have a page 14.

Q. Of exhibit -- oh, I'm sorry. My apologies.

Can you turn to page 14 of Exhibit 1, which is your declaration for the '047 patent.

A. I am there.

Q. Okay.

And do you see the construction for the term independent in the context of independent CDMA communication?

A. Yes.

Q. Okay.

And that construction is performed independent of any central control, correct?

A. Correct.

Q. Okay.

And that's the same construction you applied for all three declarations, correct?

A. Yes, that's correct.

Q. Okay.

Does this construction require the absence of a base station in the system?

MR. SCHMID: Objection. Form.

A. That's a pretty general question. I would need more context. It depends on what the base station is doing.

Q. So the inclusion of a base station doesn't necessarily mean that a system is not independent of any central control. Put it another way -- let me ask a better question.

Is it possible for there to be a base station and have independent CDMA communication?

MR. SCHMID: Objection. Form. Scope.

A. I think I answered the question.

It depends on what the base station is doing. You are introducing a hypothetical without any context.

Q. What does control mean in the context of performed independent of any central control?

MR. SCHMID: Objection. Form. Foundation.

A. I didn't construe that term. But generally my read is that in that construction, that there is a central entity that is at least assigning the CDMA codes and ensuring that the -- or orthoganality amongst though codes is preserved amongst its users.

Q. Is 80211 a system that's independent of any central control?

MR. SCHMID: Objection. Form. Scope. Foundation.

A. That's not something I studied or opined on.

Q. So you don't know if 80211 is independent of any central control?

MR. SCHMID: Same objections.

A. Without studying the standard, understanding is it, you know, what's involved

between 80211 B, 80211 BE, 80211 AC, that's not something that I studied, researched, used, unrelated -- it's completely unrelated to any of my opinions in my declaration.

Q. If a system -- strike that.

If a device in a CDMA system could choose its code, would that be independent of any central control?

MR. SCHMID: Objection. Form. Scope.

A. It's not something I studied, and the hypothetical is too ill defined to provide you with a live response.

Q. Does CDMA require orthogonal codes?

MR. SCHMID: Objection. Form.

A. In the context of these patents, it does require it. When I say these patents, I mean, the Woolfork patents, the patents that are subject of these petitions. Because it's code division, multiple access, it does require orthogonality between the codes.

Q. Outside of these patents, does CDMA require orthogonal codes?

MR. SCHMID: Objection. Form. Foundation.

A. There could be some applications where someone would want to use the same code in a receiver, for example, in military snooping devices. Maybe law enforcement devices where you want to -- are more likely military where you wanted to basically use a plethora of codes and/or receiver in order to receive and decode signals that weren't intentionally intended for that entity as a recipient.

So I can at least conceive of that. That's not a -- I don't see how it's related to my declaration. But I think I've answered your question, hopefully.

Q. Can CDMA be asynchronous?

MR. SCHMID: Objection. Form.

A. That's not something that I studied for my declaration. I would need to review that and also get some context in terms of what's meant by asynchronosity.

Q. Do you know what an N sequence is?

MR. SCHMID: Objection. Form.

A. Off the top of my head, I don't think I can define an N sequence.

Q. What about PM codes?

MR. SCHMID: Same objection.
A. I do know what those are, yes.
Q. Do PM codes have zero cross correlation?
MR. SCHMID: Same objection.
A. They are supposed to.
Q. Do they have to?
MR. SCHMID: Same objection.
A. They have to if you want the system to work as intended. They have to be orthogonal.
MR. KAPADIA: Are we up to Exhibit 9, now?
BY MR. KAPADIA:
Q. I'm handing you a copy of Exhibit 2001 from IPR 2021-00284, which is for U.S. patent number 10468047. And it is the declaration of Joseph C. McAlexander in support of patent owners preliminary response to petition for interparties review of U.S. patent number 10468047.
(Exhibit 9, Exhibit 2001 from IPR 2021-00284, which is for U.S. patent number 10468047, marked for identification.)
BY MR. KAPADIA:

Q. Have you seen this document before?
A. I have no recollection of ever seeing this document before.
Q. Okay.
A. I think I answered that earlier as well. But this confirms it.
Q. Okay.
MR. KAPADIA: That would be fine.
THE VIDEOGRAPHER: The time is 3:15. We are off the record.
(Recess is taken.)
THE VIDEOGRAPHER: We're back on the record. The time is 3:29.
BY MR. KAPADIA:
Q. Okay.
So I believe you have Exhibit 9 in front of you. Which is the declaration of Joseph muck Al; is that correct?
A. Yes.
Q. Okay.
Can you turn to page 8.
A. I am there.
Q. Okay.
And look at the section where it says orthogonality and independent CDMA.



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A. I'm at that section.
Q. Paragraph 14, it starts there with: The hand reference contains the following disclosure.
A. I see that.
Q. Okay.
And then on the next page, after the citation, there's a sentence that starts: With a personal of ordinary skill in the art.
Do you see that?
A. I do.
Q. Okay.
It says: A person of ordinary skill in the art would understand that sharing time synchronous and maintaining orthogonality referred to specific subspecies of CDMA, parenthetical, such as the synchronous orthogonal CDMA used in the mid to late 1990s in IS 95, end parenthetical, and do not refer to attributes common to all CDMA.
Do you see that?
A. I see that.
Q. Okay.
And the next sentence says: For example, CDMA can be asynchronous, and in

parens, transmissions not times synchronized, closed parens, or nonorthogonal, paren, code cross correlations greater than zero.

Do you see that?

A. I do.

Q. Do you disagree with either of those two sentences?

MR. SCHMID: Objection. Form. Foundation. Scope.

A. I have no opinion on them. I would have to read the whole declaration and understand the context for what is being said there. This is the first time I've ever seen this.

Q. Is orthogonality a requirement of centralized control?

MR. SCHMID: Objection. Form. Scope.

A. I think that the claim construction is that for independent CDMA is that independent means -- I would have to see it to answer the question. I want to make sure I'm consistent with the claim construction.

Q. Sure.

A. Can I look that up?

Q. Yeah. Absolutely.
(Document review.)
A. Yeah, the CDMA is performed independent of any central control. Okay.
What's your question?
Q. Is orthogonality a requirement for centralized control?
MR. SCHMID: Same objection.
A. My understanding is in the context of the patents that are subject to the IPR, that independent CDMA is performed independent of any central control.
So maybe ask the question now again that --
Q. Sure.
Does independent CDMA require orthogonality?
MR. SCHMID: Objection. Form. Foundation.
A. My understanding is that in the context of the patent, it -- it does, and that's why the unique user codes are used.
Q. So is it your opinion that if a user code is unique, it's independent of any central control?

MR. SCHMID: Objection. Form. Scope.

A. That's not my opinion. It would depend on how it's assigned.

Q. It's your opinion that if a code is orthogonal, then it may not be -- strike that.

An orthogonal code does not require central control?

MR. SCHMID: Objection. Form.

A. So the -- the codes can be orthogonal. And they could be assigned and the orthogonality can be maintained centrally or not.

Q. So if orthogonality is not maintained centrally, then it would be independent of any central control?

MR. SCHMID: Objection. Form.

A. I think that's fair. I didn't get into all of the intricacies of this because in the petition and in declarant's response, they don't go into any detail in terms of what they understand perform independent of any central control to mean.

In my view as a person of ordinary skill in the art, I interpret that as a central

entity that assigns the codes to ensure and maintains orthogonality.

Q. So if an entity dictates what code a device uses, that would be central control?

MR. SCHMID: Objection to form.

A. That's a vague question, that I can't answer generally.

Q. If a device forces another device -- strike that.

If there's a device in a system that assigns the code that each device must use, that would be central control?

MR. SCHMID: Objection. Form. Foundation.

A. I would need to look at the system more carefully.

So just to give you context, I looked at Miyake disclosed system for many hours before I made a determination, and that included reviewing the petition and Mr. Davies' declaration, which were very silent on central control.

I remember searching Mr. Davies' declaration for central control, and I think it's just mentioned in terms of what the claim

construction for the term was.

So then in my view, I'm adding beyond what the petitioner mentioned to provide that understanding of what I understand the person of ordinary skill in the art would understand CDMA to be when performed independent of any central control.

Q. Okay.

But then you created requirements for what needs to be shown in order for it to be independent of any central control, correct?

MR. SCHMID: Objection to form.

A. That's incorrect. I didn't create requirements.

Q. Oh.

Where did those requirements come from?

MR. SCHMID: Same objection.

A. I'm not aware of any requirements. I don't know what you're referring to by requirements.

Q. Well you said that independent of any central control, requires some central system to assign orthogonal codes to the different devices?

A. So that statement is not outside of context because the claim that's being -- the claim language that's construed is not independent. It's the term independent in the context of independent CDMA communication.

So in addition to something being performed independent of any central control, the context in the claim term in its construction is that it's CDMA communication.

The patent itself and the claims make that clear that that involves use of a unique user code and the spreading. That's in all -- my recollection is that's in every claim limitation independent CDMA.

Q. I just don't know where you are pulling independent assignment of user codes from just construction? Is that the only requirement for independent of any central control?

MR. SCHMID: Objection to form.

A. I do not know what all the requirements are off the top of my head, because I was rebutting basically nonexistent explanations for why the declarant believed that Miyake disclosed independent CDMA as being

performed independent of any central control, when it was clear that the CDMA, the code division multiple access, was being performed by central control via the entity that was assigning the user codes and maintaining orthogonality between the multiple users of the system.

I didn't study arbitrary hypothetical or other systems that weren't proposed by the petition, the petitioner's declarant.

Q. So your basis that -- strike that.

So you believe independent of any central control, in the context of the challenged claims, means assigned independent of any central control?

MR. SCHMID: Objection. Form.

A. No, I believe what I actually already said, which is that the term independent is in the context of independent CDMA communication, so performed independent of any central control is referring to the CDMA communication.

And the CDMA communication, person of ordinary skill in the art, I believe would

interpret that construction to mean assignment of the unique user codes and maintenance of orthogonality. Those being fundamental to CDMA.

Q. So orthogonality is fundamental to CDMA?

MR. SCHMID: Objection to form.

A. If you don't maintain orthogonality, I can give you an example, if you would like.

Would you like me to do that?

Q. Yeah, I would like an example.

A. So in Walley, for example, one of the situations he provides for is using single bit or no bit at all, which doesn't spread the signal at all. So it turns it into not CDMA at all. It wouldn't be orthogonal to anything else.

So that's an example of disclosure that doesn't address what's fundamental about CDMA, which is the code assignments and maintenance of orthogonality between the codes.

You don't get orthogonal code just by saying codes are orthogonal. You have to ensure that they are, in fact, orthogonal. And that the orthogonality of the codes is

maintained.

Q. So, again, is it your opinion that CDMA requires orthogonal codes?

MR. SCHMID: Objection. Form.

A. My opinion is that a person of ordinary skill in the art, would understand that code division multiple access means that codes are used that are orthogonal.

Q. So CDMA requires central control?

MR. SCHMID: Objection. Form.

A. I did not say that.

Independent CDMA is a form of CDMA. For example, which is what this patent makes use of, these three patents that are the subject of the IPRs, makes use of in claims.

That was the innovation in Woolfork that makes it unique when compared to the combinations of Miyake and Walley that were proposed by the petitioner.

Q. I'm going to stamp as Exhibit 10.

(Exhibit 10, Samsung Exhibit 1015 and IPR 2025-01516, marked for identification.)

MR. KAPADIA: A copy of Samsung Exhibit 1015 and IPR 2025-01516. Which is

the Walley reference.

BY MR. KAPADIA:

Q. And that should already be in the exhibit share.

And I will stamp Exhibit 1016 from IPR 2025-01516, which is the Miyake reference. And this is Exhibit 11.

(Exhibit 11, Exhibit 1016 from IPR 2025-01516, marked for identification.)

BY MR. KAPADIA:

Q. Does Miyake recite any of the following terms inside it -- let me give you a list.

A. Do you want me to write them down? How long is your list? I don't have a pencil or anything, but.

Q. I'll give you my pen. Actually, here. You can use -- that's fine. Use that. Okay.

A. Just sounded like the list might be longer than one.

Q. Base station, central control, central controller, centralized, central authority, central database, and central station.

A. So you want to know if these specific words are in there? Or do you want to know if independent CDMA is disclosed?

Q. I want to know if those words are present in this specification of claims?

MR. SCHMID: Objection to the form. Compound.

A. I can search through here manually. I can certainly tell you that without looking, that the functions that we've been describing regarding central control are without a doubt in Miyake.

But I'll start reading this to see if those terms are in there, since this is what you asked me to do.

(Document review.)

A. Can I mark on the exhibit?

Q. Go ahead. Please do.

(Document review.)

BY MR. KAPADIA:

Q. And to be clear, you are looking for the exact terms that you -- correct?

A. I am.

MR. SCHMID: Objection to form.

A. At the same time, I'm anticipating



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you might have a question but I relate it to the equivalence of these things, but I don't have to mark anything unless it's those terms. And if we can go back to them if we need to, I'll do that.

Q. Yeah, why don't you use red if you find those specific terms, and then you can mark what you would like with blue.

A. Mark what with blue?

Q. Whatever you were marking in blue, you can continue doing. But if you see the terms that I specifically asked you about, you can mark them in red.

A. It'll be faster if I look for these terms that you've asked for.

Q. Yes, that is what I'm asking for.

A. I had only started the more general analysis. I'm on the first sentence of the abstract, so I didn't get very far. It won't waste my time.

Q. If it helps, those were terms that were used in your declaration.

A. Yes, they refer to the function of assigning the codes to multiple users.

Q. But those terms themselves were not



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literally in --

A. I don't know.

Q. -- Miyake?

A. I'm going to check that now because you asked me to do that, so.

(Document review.)

BY MR. KAPADIA:

Q. Actually, while you are doing that, let me give you six more terms.

TDMA, time division multiple access, time slot, power control, closed loop.

(Document review.)

A. That's a lot to keep track of, but I will do my best.

(Document review.)

Q. What column are you up to now?

A. I'm in two. Almost at the end of it, 59.

Q. All right.

(Document review.)

BY MR. KAPADIA:

Q. Why don't you finish up that column.

A. I just finished.

Q. All right.

To your knowledge, are any of those



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terms specifically recited in this specification of Miyake?

MR. SCHMID: Objection to form.

A. Yeah, I would say that all of base station, central control, central controller centralized, central authority, central station, I omitted there in your centrals, central database, are disclosed in two, column 2, at least in column 2, 25 to 38 --

Q. Just to be fair, when you say disclosed, do you mean recited?

A. I'm answering the question.

Q. Well, I asked you a question, and I think you are giving me a different answer.

I asked you if they are specifically recited, and then you changed a word to disclosed.

A. What do you mean by specifically recited? Maybe I misunderstand what --

Q. Are those words literally in Miyake?

MR. SCHMID: Object to form.

A. Literally -- everything I just mentioned, with the exception of central database, are within Miyake. The actual words, I did not find in up to the second column. I

did circle something in a figure, but it was temporary, so I'll cross it out. Because I needed to read what the -- it was just the space holders. So I remembered to read Figure 9 description when I got to it, but I didn't get to it because it was after -- so I'll cross this out. Just because I didn't get to verify it.

So all of those things are there. If you mean is the word used there, I didn't find it up through column two.

Q. I will represent that none of those words are literally, as stated on that list, are in Miyake. I will --

A. Okay. That's fine.

Q. Okay.

Can you go to Section 8B of your declaration. This is --

A. Sorry.

Q. -- Exhibit 1.

A. I'm in -- I have Exhibit 1. Can you say again where you want me to go?

Q. Go to page 24 that is start of Section 8B.

A. I am there.

Q. Okay.

Can you go to paragraph 50, that's on the next page?

A. I am there.

Q. Can you read that paragraph?

A. Would you like me to read it out loud?

Q. You can read it to yourself.

A. Okay.

(Document review.)

A. I am there. I've read it, sorry.

Q. Okay.

Do you see, 1, 2 -- six lines down in paragraph 50 there's a sentence that says: This is a clear indication that Miyake's base station, paren, transmission station, based spread spectrum communication system is not independent code division multiple access?

A. Yes.

Q. Okay.

Base station is not a term that's actually used in Miyake, is it?

MR. SCHMID: Objection. Form.

A. Base station, those two words aren't used. But as I was trying to explain earlier,



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the function that's described is that of a base station, in columns 2, 25 through 38. And as far as I had gotten in columns 2, 48 through 58, because they assigned a unique user codes to each of the users of the system.

And that's because a person of ordinary skill in the art reading Miyake would understand that that function is the function of a base station in Miyake.

Q. So you are characterizing the transmission station to be a base station?

A. Only --

MR. SCHMID: Object to form.

A. -- as a base station because it is a base station.

I ran the wireless infrastructure business at Texas Instruments, as I mentioned before, and the emphasis of that group was to provide systems, subsystems and components for base stations, and that's what a base station in a CDMA system does.

Now when it's centrally controlled because the base station is doing it, then it's not independent CDMA.

Q. If the codes were preassigned to

each device, would they be centrally controlled?

MR. SCHMID: Objection. Form. Foundation.

A. That's not something that I relied upon for my declaration. It would depend on if the CDMA was independent, which would mean it's performed in the absence -- or performed without any central control. I flipped, so I don't have the language, but it's performed independent of any central control.

Q. So if a base station had assigned a code to each device before the devices were used for communication, would that be independent of central control if that base station had no further role?

MR. SCHMID: Same objections and scope.

A. That's not something I considered regarding my -- my opinions. So I would have to study that scenario.

My -- really, you know, outside of what's disclosed in Miyake and Walley, my opinions were rebutting what was about a paragraph where the petitioner, who I

1 understand has the burden, didn't go beyond
2 that. Didn't even cite anything in these
3 references, so I didn't have much to go on.
4 But I tried to inform the board more
5 than the petitioner did in terms of my
6 understanding of performed independent of any
7 central control in the context of these two
8 references.
9 Q. Yeah. What I'm trying to understand
10 is what you mean by independent central control
11 still. Because you referred to the assignment
12 of codes, and I'm trying to understand does --
13 how that assignment has to occur for it to be
14 central control.
15 Does the device that assigns the
16 codes have to be a part of the system as it
17 operates, or can that device provide the codes
18 ahead of time?
19 A. That's not something I considered.
20 I can tell you Miyake has a central control
21 because it explicitly discloses assigning of
22 the codes to each of the users.
23 So a person of ordinary skill in the
24 art would understand that those assigned codes
25 would be orthogonal and would remain orthogonal



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since they are not not changing in length, as they are in Walley.

Q. The terms that Miyake uses, transmission station, receiving station, transmitter side and receiver side.

Are those the terms that he uses to refer to the devices in the system?

MR. SCHMID: Objection. Form.

A. I'm unclear as to your question. The base station I've described in Miyake is very clearly articulated in the sections I already highlighted and that's what assigns the unique user codes.

Q. I'm asking about what Miyake specifically states. I'm not asking for your characterization. I'm asking what terms does Miyake literally use?

It literally uses the term transmission station to refer to what you call the base station, correct?

MR. SCHMID: Object to form.

A. You represented that all of these words weren't in there. I guess -- let me clarify.

When I'm looking at these patents,

I'm looking at them from the perspective of a person of ordinary skill in the art. By utilizing my experience, as I mentioned in the early part of the declaration, so that such a person would not reasonably read an entity that's assigning unique user codes to a multitude of devices in a CDMA system as not being centrally controlled.

Q. So, again, I'm asking you a specific question.

I'm not asking you for to interpret what Miyake says at this stage. I'm asking what does it literally say.

And it literally uses the terms: Transmission station, receiving station, transmitter side, and receiver side, correct?

A. I actually don't know because that's not what I was asked to do when I was looking at it.

Can I pull Miyake up, if you want to --

Q. Yeah.

A. I have my declaration because we shifted gears.

(Document review.)

A. Wait, this isn't Miyake. I think I got them mixed up. It's 11. Oh, it's labeled at the bottom. That's why I missed it, sorry. Okay.

Maybe this would be helpful for you. I think I can now answer your question or at least help you get over where I think you might be stuck, which is Miyake appears to have originated from a foreign application, which I'm guessing was written in Japanese. And probably was translated.

I don't know the history of Miyake in terms of that. But as a person of ordinary skill in the art and an expert, I don't need to know that when the -- the structure and the operation that's disclosed within Miyake is that of a base station that assigns the codes used in spreading and would thus in a CDMA system to maintain orthogonality.

Q. Again, you are not answering the question I'm asking.

I understand what you -- how you are interpreting Miyake. I'm asking a simple question. And if the answer is you don't know without going through the specification, that's

fine.

But do you have any reason to believe that the terms that are actually used in Miyake are transmitter -- I'm sorry -- transmitter side, receiving side, transmission station, and receiving station?

MR. SCHMID: Objection. Form.

A. I mean, if you say that they are not used, I don't see how it's relevant. But I'll accept that they are not used.

When I read --

Q. I'm asking --

A. -- a person of ordinary skill in the art --

Q. I'm asking for what words are in your reference. I'm not asking for your interpretation yet.

A. I appreciate that.

Q. One step at a time.

A. I'm looking at physical documents. I cannot search them. If you want to represent that those specific words are not in there, I have no objection to that. It doesn't impact my declaration or my opinions in any way.

Q. Can you turn to column 7, line 12?

A. We're back to Miyake?
Q. Yes.
A. I'm going to kind of put these up otherwise I'm going to get them all confused.
Exhibit 11?
Q. Yes.
A. And remind me column and line? Remind me, please, the column and line?
Q. Column seven, line -- so it's always hard to tell when it's -- we will say 12. At the end of line it should say to properly.
A. Okay, the sentence that starts with to properly or the sentence before that?
Q. No, the sentence that starts with, to properly.
So I'm just asking you a question about what is stated in lines 12 through the end of that paragraph, okay?
(Document review.)
A. I see that. I've read that. I agree with that.
Q. Okay.
So limiting your answer to just what is said in that sentence, is Miyake requiring that the code set up one transmitter must match

the code at one receiver?

MR. SCHMID: Objection. Form.

A. No, I would say that's more general than what's being said there.

Q. Okay.

Well did you see -- in that sentence, is it saying that the code at the transmitter side should match the code at the receiver side?

MR. SCHMID: Same objection.

A. Yes, that's exactly what that says.

Q. Okay.

A. Which is different from what you had asked.

Q. Okay.

A. So.

Q. And starting where it says, in addition, that portion of the sentence states that the spreading code that was set should be different than the code for the other channel users in the system; is that correct?

MR. SCHMID: Objection.

A. I don't see where that in addition -- I just didn't find it fast enough.

But can you direct me to where the

in addition starts?

Q. Sorry. I think I typed something wrong.

It's where it says, and that those, on line --

A. I see that.

Q. And that those spreading codes should differ from those for the other channel user who also use this communication system.

A. It says that.

Q. Okay.

And that's saying that the spreading code should be different than the code that's being used by the other channel users?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. Correct?

A. I think I should clarify what it's saying. Because I think there may be some confusion.

Miyake is not saying that every user has its own transmitter. That's not how Miyake works. It's saying that every user has its own code.

So person of ordinary skill in the

art reading Miyake would understand that the entity that's assigning the codes and communicating with each of the users is not using -- it was just so, I don't mean to laugh, it's just to me, this is so basic.

A base station doesn't have a transmitter for every mobile phone that's out there. CDMA base stations -- and reason we discussed earlier today, that originally they didn't use direct conversion is because their each transmitter is handling many, many, users just like as described in Miyake.

So on the transmit side, there isn't a single transmitter for each user. When that transmitter or transmitters of a base station are used to support multiple users, they just quickly switch between the different codes and each of the users can then isolate that.

That's a very specific example of the type of system that Miyake would apply to back in the time frame of Miyake.

Q. So once again, you answered a different question than I asked.

I asked, whether that portion of the sentence is saying that the spreading code that

was referred to at the beginning of the sentence should be different from the code that's being used by the other channel users?

A. I actually think I answered that exact question.

Q. I mean --

A. Because unless you just want me to read the sentence, and I agree -- actually, I already agreed with what the sentence says.

Q. Do you agree that it says: This spreading code set on the transmitter side should coincide with the spreading code set on the receiver side.

You agree it says that?

A. I thought I just explained how that works.

Q. I understand your interpretation of how things are assigned.

I'm asking as to what does that sentence literally say.

Does that sentence literally say that this spreading code set on the transmitter side should coincide with the spreading code set on the receiver side?

MR. SCHMID: Objection. Form.

A. I disagree with the premise of your question. But I can respond to the second part of your statement, which is that it does say there transmitter side should coincide with the spreading code set on the receiver side.

My explanations were exactly on target explaining --

Q. I'm not asking about your explanation.

A. -- as a person of ordinary skill in the art. So if you want me to read this and answer your questions as a grammar and language student, I'm happy to do that for you. But I want to make sure that my responses are clear. Because my work has always been from the vantage point of a person of ordinary skill in the art, using my background as an expert, not reading words without interpreting those words.

And I've explained why I think that would be a mistake in this particular case. Because it looks -- because of the odd wording, maybe it was translated from Japanese.

But the function that it describes is very clear in how it accomplishes that is very clear to me, as a person of ordinary skill

in the art, with someone of experience. I never claimed to be a grammar or English expert.

Q. Can you go to column nine.

A. I am there.

Q. Okay.

Look at lines 13 through 17. That's the paragraph that starts with, although.

(Document review.)

A. I see that, yeah.

Q. I just want to make sure that I am accurately reading what is said here.

Miyake states: Although it has not been clearly described in the above explanation of specific embodiments, it is needless to say that each of the stations of the transmitter side and receiver side may comprise both of a transmission circuit modulator and a reception circuit demodulator.

Did I accurately read that?

A. Yes, I can explain it, but it sounds like you don't want me to.

Q. And just, this is an embodiment of Miyake, correct?

MR. SCHMID: Objection. Form.

Foundation.

Q. I'm not asking for your characterization. I'm just -- this is something disclosed within Miyake, correct?

MR. SCHMID: Objection. Form.

A. I can only answer that question because you are restricting me not to answer it as a person of ordinary skill in the art or an expert by saying that the words that you read are the words that are written there.

If you want me to answer a question with what they mean, to help you and the board, I am totally happy to do that.

Q. Can you look at lines 20 through 47 of column nine.

A. I am there, and I will read those as directed.

(Document review.)

A. I've read it.

Q. Okay.

Do you agree that this is disclosing a single device?

MR. SCHMID: Objection. Form.

A. I would have to read it again, with that question in mind.

Would you like me to do that?

Q. Please do.

A. I don't -- I don't remember citing this or the petitioner citing it, so if you can refresh --

Q. I'm asking you about this just --

A. I don't know that I formed an opinion on this embodiment.

Q. Do you agree that this embodiment recites a single CPU?

MR. SCHMID: Objection. Form.

Q. 85?

MR. SCHMID: Foundation.

A. I wouldn't agree with that, I would need to analyze it. But the petition maybe would have some interpretation that I could refer to. Generally in patents, there's the concept of a CPU could be one or more CPUs, and so that would require more than just reading this.

When I do my rebuttal declaration, I really focus on what the petitioner is saying is disclosed and the declarant, and then what arguments are made based on that.

Q. Well --

A. And that takes a long time.
Q. I'm just going to ask you what is --
A. If that was then and it's in my declaration, I would be happy to have you refresh my opinion. Otherwise, I'm not prepared to provide opinions on Figure 9 right here on the spot.
Q. I'm just going to ask you--
A. If I have done it already --
Q. -- what's recited.
A. What's recited is what's written there.
Q. Does it recite an embodiment which includes a microphone 89?
You can see it at line 43 of column nine.
(Document review.)
A. It says: Third control for outputting audio signals inputted from a microphone 89.
Q. And then it says starting on line 44: And a fourth control for outputting audio signals received by the reception circuit 82 to a loud speaker 90.
MR. SCHMID: Objection to form.

A. I see that.

MR. SCHMID: Scope.

BY MR. KAPADIA:

Q. And you see at line 29, it says: To control Section 85 is connected to a key input Section 86, display device 87 and a memory 88?

A. I do.

Q. Okay.

So this embodiment includes a memory, a key input section, a display device, a microphone, and a speaker?

A. That's what it says.

Q. Okay.

Sitting here right now, does that describe a user terminal?

MR. SCHMID: Objection. Form. Foundation. Scope.

A. So user terminal, base stations have user terminals. And this to me sounds like a base station because right after that it says: As described above, transmitter side performs a spreading process with the first spreading code assigned to each user.

And the second spreading code assigned in accordance with an attribute and

modulates the signal obtained through the spreading process.

I realize a lot of people don't actually see base stations, but I've actually seen base stations.

And they do have all of those things.

Q. So when this device connects to another embodiment to Figure 9, they would both have microphones, correct?

MR. SCHMID: Objection. Form.

A. That's not something that I've looked at.

Q. And they would both have speakers, correct?

MR. SCHMID: Same objection.

A. I am not aware of any such implementation. I haven't looked at it, and the petitioner didn't propose it. So I have no opinion.

Q. So if you look at claim one of Miyake, you see it recites a transmission station and a receiving station, correct?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. It says transmission station at line 7 and receiving station around line 18.

A. I see that.

Q. Okay.

So the transmission station could be a Figure 9 embodiment, correct?

MR. SCHMID: Objection. Form. Scope.

A. That's not something petitioner mentioned nor Mr. Davies.

What I can say is that there's no dispute that Miyake assigns -- centrally assigns codes, because that's what was used in the petition and in the declaration by Mr. Davies as the source for the unit user code.

Q. So is it your opinion that the transmission station in claim one of Miyake cannot be the Figure 9 embodiment?

MR. SCHMID: Objection to form.

A. I have not analyzed claim one because the petition had no opinion -- the declaration had no opinion with respect to the meaning of claim one with respect to Figure 9 in Miyake.

Q. Okay.

So you have no opinion as to whether or not the Figure 9 embodiment could be the transmission station?

MR. SCHMID: Objection to form and scope.

BY MR. KAPADIA:

Q. You just said you didn't have an opinion. I just want to clarify that's what you said?

MR. SCHMID: Objection. Compound. Form.

A. What I said is that my opinions are within my declaration. And I have no recollection of rebutting anything related to claim one and Figure 9, and I have not done the analysis in order to be able to answer your question.

Q. So you haven't considered whether the Figure 9 embodiment is consistent with your read of Miyake?

MR. SCHMID: Objection. Form. Foundation.

A. I don't know how to answer your question.

Q. Well --

A. I can tell you exactly what I did. And if you want to keep asking the question different ways, maybe you'll ask it in a way that I can answer it. And I'm happy to answer it.

Q. Well, let me ask you maybe a more simple question.

If you do not talk about the transmission station in claim one of Miyake, with respect to the Figure 9 embodiment, is it safe to say that you do not have an opinion in your declaration as to whether or not the Figure 9 embodiment could be the transmission station?

MR. SCHMID: Objection. Form. Scope.

A. To the extent that the declarant didn't site Figure 9 or a relationship between claim one and claim nine, I would be surprised if I had an opinion in my declaration with respect to it because, generally, my understand -- I understand my job is to re -- rebut allegations made by the petitioner and the declarant.

And sitting here today, I really would be surprised if the declarant had said anything about claim one of the 424 Miyake, because the -- the declaration was very, very bare in terms of how the Miyake allegedly disclosed independent CDMA, and that's what I focused on in my declaration.

Q. So same question with respect to the receiving station of claim one.

If you did not talk about the receiving station of claim one in Miyake with respect to the Figure 9 embodiment, is it safe to say that you don't have an opinion in your declaration as to whether or not the Figure 9 embodiment could be the receiving station of claim one?

MR. SCHMID: Objection. Form. Scope. Foundation.

A. I have no recollection of petitioner or the declarant making use of Figure 9 or claim one in any way with respect to alleging obviousness of the combination of Miyake with Walley, and so that's not -- not something I looked at.

Q. So if the petitioner or declarant

did not specifically recite claim one of Miyake or Figure 9 of Miyake, and your declaration does not refer to him, then would it be safe to say that you don't have an opinion as to whether or not the transmission station could be met by the Figure 9 embodiment?

MR. SCHMID: Same objections.

A. I -- it's not in my declaration. And it's not in the petition. And it's not in the declarant's, then it's not something that I would have spent time on.

Q. Okay.

And the same question for the receiving --

A. If it is, then I would have. And I just don't offhand -- I -- I really don't think -- my recollection is petitioner and declarant didn't mention claim one of Miyake at all and certainly didn't go through it limitation by limitation. They -- they really didn't say much.

Q. Can you turn to column eight of Miyake.

A. I'm there.

Q. Okay.

A. Oh, wait. No, I'm not there. It's double sided, sorry. I'm on column eight of Miyake.

Q. All right.

Do you see starting at line 15, at the very end of line 15, this is a start of a new sentence with the word, the.

The sentence goes: The spreading code generator 62 shown in Figure 6.

Do you see that sentence?

A. Yes.

Q. Okay.

Continuing on it says: That it comprises a first spreading code generator 62A for generating spreading codes specific to users.

Do you see that?

A. Yes, I see it.

Q. And then it says second to fourth spreading code generator 62B to 62D for respectively generating different attribute oriented spreading codes.

Do you see that?

A. Yes, I see that.

Q. And then it says: A switching

circuit, 62E, for selecting one of the second to fourth spreading code generators, 62B to 62D.

A. Yes, I see that.

Q. And then it finishes with: In accordance with an operation of an external manual switch 63.

Do you see that?

A. I do.

Q. Going down to line 34.

Do you see the sentence again that starts with the word, the spreading code generator?

Let's continue: The spreading code generator 64 shown in Figure 7.

A. Yes, I see it.

Q. Okay.

And that comprises a first spreading code generator 64 for generating spreading code specific to users, correct?

A. Yes.

Q. And it also includes a second spreading code generator 64B for generating attribute oriented spreading codes, correct?

A. I see that, yes.

Q. And it also includes a first to third spreading code memories, 64C to 64E, for respectively storing different attributes spreading codes, correct?

A. Yeah, I see that, yes.

Q. And then it says: A switching circuit, 64F, for connecting one of the first to third spreading code -- a -- let me just start it again.

It includes a switching circuit 64F for connecting one of the first to third spreading code memory 64C to 64E to the second spreading code generator 64B, according to the operation of an external manual switch 65.

Do you see that?

A. I do.

Q. Okay.

So in these two embodiments, do you agree that there is a switch which lets a user select between different codes?

MR. SCHMID: Objection. Form. Compound.

A. That's not something that I've looked at. So the question, I'm happy to read it again, to see if I can give you an analysis

on the spot.

Can you repeat the question and then I'll read the description, and then I'll flip over to Figure 7 because all those letters.

Q. Let's go back to Figure 6.

A. Figure doesn't mean anything -- oh, Figure 6? Okay.

Q. Yeah.

And this might make things easier. Okay.

Do you see that?

A. I see Figure 6. I'm trying to go see Figure 6 because this is double sided, but.

Q. Okay.

So I'm just going to read -- okay. What -- column eight refers to a switching circuit 62E.

Do you see 62E? It's off on the left.

A. Yes.

Q. Okay.

A. To the mixer.

Q. And then it says: Switching circuit 62E for selecting one of the second to fourth spreading code generators 62B to 62D in

accordance with the operation of an external manual switch 63.

Do you see now on the bottom you'll see 63?

Do you see that, the switch?

A. I do.

Q. Yup.

And then you see the second spread code generator 62B, the third spread code generator 62C, and the fourth code spread generator 62D.

Do you see that?

A. I do.

Q. Okay.

And this external switch 63 it says: Can be used to toggle 62E to select between the second, third, or fourth spread code generators, correct?

A. I think that's what it says.

Q. Okay.

So at least in this embodiment, the user can select a spreading code?

MR. SCHMID: Objection.

BY MR. KAPADIA:

Q. That's ultimately used, correct?

MR. SCHMID: Objection. Form. Foundation. Scope.

A. I don't know where it says that, so maybe you can redirect me again where the user is selecting this.

What user?

Q. Well, it's saying the device has an external manual switch, correct?

MR. SCHMID: Objection. Form.

A. 63 is indicated to be an external manual switch.

Q. Correct?

A. That's what it says there.

Q. Yup.

So the switch could be switched or used to switch between the different spreading code generators, correct?

MR. SCHMID: Objection. Form.

A. My understanding is that the position of that switch 63 -- let me just read that -- the sentence.

(Document review.)

A. It's unclear to me just looking at it here live --

Q. Okay.

A. -- what that means. Again --

Q. I can point to something else and maybe this will help.

A. My analysis was limited to rebutting the petition and the declarant. So to the extent Figure 6 was used with respect to ICMA, there should be something in my declaration associated with it.

Q. If you --

A. If there is not, then it's not something that I would've spent a lot of time.

Q. Can you look at column 8, line 54. The sentence which begins at the end of that line, starts with: When the demodulating circuit is arranged as stated above.

Do you see that?

A. I see that sentence.

Q. Okay.

It continues: Attribute oriented codes to be supplied to the mixer of 48 of Figure 4 can be switched by operating the manual switch 63 or 65.

Do you see that?

A. I do.

Q. And then it says: Therefore, when a

plurality of transmission stations or broadcasting different information programs, it is possible for the user to select and receive any of these programs.

Do you see that?

A. It says that, yes.

Q. Okay.

So you agree this lets -- that switch is something that the user can operate, correct?

MR. SCHMID: Objection. Form.

A. It says there yes, the user to select and receive any of these programs.

Q. Okay.

And in this instance, it's the user who's determining what spreading code will ultimately be used by the user's device?

MR. SCHMID: Objection. Form.

A. I don't have a specific opinion as to that. But I can say that it does say that that switch -- it is possible for the user to select and receive any of these programs and that that is done -- I'm going back to read what it says.

(Document review.)



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A. Well that relates to the attribute codes, not to the user codes. This is the problem that I'm jumping to specific lines and looking at figures that weren't used in the petition and trying to come up with live opinions.

I don't have any opinions on any of this that aren't in my declaration, but I'm trying to be helpful to you. And you can see that the attribute code, not the user code, is what's referenced before the use of that -- of that toggle.

It would be odd if the user could change the unique -- the user code. This is saying that the program -- programming is selectable by the attribute code.

Q. But the spreading code that's ultimately used by the device, is the combination of the two, correct?

MR. SCHMID: Objection. Form.

A. Yeah, what Miyake discloses is that what would be the orthogonal codes are a combination of the attribute code together with the user code. That's the essence of the invention.

Q. So just spreading code that's used is a combination of the two codes?

MR. SCHMID: Objection. Form.

A. I don't have context for that question. What spreading code that's used is the combination of -- generally in Miyake, yes --

Q. But the spreading code -- sorry, strike that.

Let me -- the device will combine the code, the user code, with the attribute code in Figure 6 and Figure 7, correct?

A. Looking at Figure 6 and Figure 7, it's showing that -- this is just live -- but it's not showing -- and this is probably why the petitioner didn't refer to it. But it's not showing that the user is setting -- their user -- the user part of their code, it's showing that they can select the attribute part, which would be like what organization it's a part of or what location it's in.

That would be set at the receiver, which would presumably, I guess, be some sort of IT person. Because if you look in both figures, the first spread code generator is not

what's being changed, which would be the unique user code that would be assigned by the base station in Miyake. That's probably why they didn't refer to that. Why I didn't look at it before.

Q. I mean, if you look at Figure 4, the output of mixer 54 -- well, strike that. Let's move on.

Can you go to column one of Miyake.

THE WITNESS: I don't need a bathroom break now, but within the next 20 minutes or so, I will need a bathroom break. I'm telling you that so you can get to a place that's convenient for you to stop. I don't want to break your train of thought.

MR. KAPADIA: We should be at a good place soon.

BY MR. KAPADIA:

Q. Can you turn to page 27 of your declaration. But also keep column one up.

A. Of Miyake available?

Q. In front of you, yes.

A. And we're still looking at the 1516 declaration?

Q. Correct.
A. Okay.
And I'm supposed to go to where?
Q. Page 27.
A. I am there.
Q. Okay.
And you see here, you refer to lines 13 through 14 of Miyake, correct?
A. Yes.
Q. Okay.
And those lines recite a spread spectrum communication system permits a plurality of users to perform communication while sharing one wide frequency band on a time and spatial basis.
Do you see that?
A. I do.
Q. Okay.
And then you used that description to say that in the context of Miyake's system, Miyake's system would require the involvement of a central controller to perform the requisite allocation of respective time slots, paren, time basis to the different users in what would be understood to be a time division

multiple access TDMA communication method.
Correct?
A. I'm not sure, frankly, I understand my own words there. So let me go back and see what I was thinking there.
So normally I would think of CDMA as a code basis. Perform communication while sharing one --
(Document review.)
A. Sharing a frequency band times.
(Document review.)
A. I was reading to myself. Mumbling, sorry. I'll try to read to myself without saying anything.
(Document review.)
A. Okay. I've read that.
Q. Okay.
A. I'm not sure why I'm saying that because it's somewhat irrelevant to independent CDMA. Because as we talked earlier, it's performed independent of any central control, but it's still CDMA.
So I think it's fair to say what's there. I'm just not sure from that paragraph how it's relevant to independent CDMA.

Q. Okay.

A. But it doesn't contradict that the conclusions, which is that Miyake doesn't disclose independent CDMA.

Q. Okay.

This section, though, that we just looked at, this is in the background of the invention, correct?

A. Yes, yes, yes.

Q. This is not specifically describing Miyake?

MR. SCHMID: Objection. Form.

A. It's relevant. Or it wouldn't have been in the background, but it's not specific to the invention.

Q. In fact, it's --

A. Miyake -- it's not specific to the invention. It's setting the context of the invention.

Q. And, in fact, the section we read is under the sub header description of the related art, correct?

A. Correct, yes. That's what I intended to say in my response.

Q. Okay.

Is CDMA the same as TDMA?

A. No.

Q. No.

Does that paragraph -- strike that.

Does that sentence that I had recited that referred to a time and spatial basis, did that refer to any time slots?

MR. SCHMID: Objection. Form.

A. It's in the background section. I'm not sure why I cited it, as I mentioned.

Q. Okay.

A. But it does not have those words.

Q. And it doesn't talk about how any time slots are assigned, correct?

MR. SCHMID: Same objection.

A. Honestly, like I mentioned, I'm not sure what I wrote in that paragraph, reading it now. It doesn't impact my conclusions, but it's confusing even to me.

Q. Does it --

A. What I was really doing was noting that the time in actual space wasn't specific to coding. But, you know, most of the discussion in my disclosure in Miyake is related to coding because they -- the whole

point of Miyake is to assign a code that consist of two parts, which is the unique -- the user code.

And the attribute code and that code, as we just established looking at those other figures, is one that the second part of that code is one that can be shared amongst multiple users.

Q. Okay.

A. Which is the attribute code. The code together of Miyake remains unique because of -- it has the user part of that.

THE VIDEOGRAPHER: The videographer needs to change media in five minutes.

MR. KAPADIA: What?

THE VIDEOGRAPHER: I need to change the media file in five minutes.

MR. KAPADIA: I should be done in about two. Okay.

BY MR. KAPADIA:

Q. Can you turn to column four?

A. Column four?

Q. Yup.

A. Let's see. I'm there.

Q. Okay.

Can you look at that first paragraph and just read it to yourself.

(Document review.)

A. I've read it. I'm very familiar with that paragraph.

Go ahead.

Q. Okay.

Does this paragraph discuss a lot of time slots?

MR. SCHMID: Objection. Form.

A. I don't believe that it does. I'd have to read it again in that -- in that context. But generally, my familiarity with it when I said I was very familiar with it is that it's what allows the determination of the number of users that can use the spread spectrum system in Miyake.

Q. Okay.

MR. KAPADIA: Let's take a break.

THE WITNESS: Sure.

THE VIDEOGRAPHER: The time is 5:25. We are off the record.

(Recess is taken.)

THE VIDEOGRAPHER: We're back on the record. The time is 5:31.

BY MR. KAPADIA:

Q. All right.

Can you turn to page 28 of Exhibit 1.

A. Yes.

Would you like me to leave Miyake open?

Q. You can set that aside now.

A. Okay.

Q. It's probably worthwhile for you to take out Walley, which is Exhibit 10. Yeah, 10.

Let me know when you're ready.

A. Can I leave this notebook or put it under, unless we need it?

MR. SCHMID: I can take it.

A. I want to use the space here. I've got Exhibit 10 out and Exhibit 1. And you asked me to look somewhere in Exhibit 1.

Q. Page 28 of Exhibit 1.

A. I am there.

Q. Okay.

(Document review.)

BY MR. KAPADIA:

Q. Oh, sorry. One second. Can you

look at paragraph 57.

Do you see that paragraph?

A. Yes, I was starting to read it, sorry. I was jumping ahead, probably. I see it. I'm there.

Q. All right.

Would you agree that Walley does not explain how orthogonality is maintained when spreading code lengths are varied?

A. I definitely agree with that because some of his claims and examples it would be impossible to maintain orthogonality.

Q. Okay.

And Walley doesn't state that central control is required to preserve orthogonality.

You inferred that from your read of Walley, correct?

MR. SCHMID: Objection. Form.

A. Walley is a circuit. And in no circumstance does it describe what a person of ordinary skill in the art or expert would understand to be independent CDMA based on its disclosures, which is what I referred to here in my declaration.

So in order to maintain orthogonality and what Walley describes in varying a code --

Q. I'm asking --

A. You have to --

Q. I think you are answering another question, which I may ask, but my question was: Walley doesn't state that central control is required to preserve orthogonality, correct?

MR. SCHMID: Objection. Form.

BY MR. KAPADIA:

Q. We can get to the next part later.

I'm asking does it specifically refer to central control?

MR. SCHMID: Same objection.

A. I don't recall if it specifically uses the word central control. But if you say it does not, then I accept that it does not use those words.

Q. Does Walley explicitly state that a central controller must assign codes anywhere?

MR. SCHMID: Same objection.

A. I don't think that it would since it's just an interface circuit.

Q. Okay.

Does Walley ever state that it requires central control to operate?

MR. SCHMID: Same objection.

A. I don't think it would, because it's just an interface circuit. And the petitioner relied on Miyake for the assignment of the codes.

Q. Do you recall if Walley even says the word independent?

A. I have no recollection if the word independent is within the Walley specification or claims or abstract.

Q. Can you turn to the claims in Walley, and specifically look at claim 11.

A. I'm looking at it. Did you want me to read it?

Q. Are you at that part?

A. Yeah, I flipped to that page.

Q. Okay.

Do you see the last element of claim 11 is a transmit controller?

A. I see that.

Q. Okay.

A. That's no longer CDMA, but I see it.

Q. Do you see on the next page, claim

17?

Do you see claim 17?

A. Yes.

Q. Okay.

And do you see as the third element in that apparatus of claim 17 where it says: A variable transmit duty cycle controller?

A. Yes.

Q. Okay.

A. Controlling the -- the one that says: A variable transmit duty cycle controller for controlling a time division -- sorry -- time division duplex protocol.

Q. Yeah.

So this variable transmit duty cycle controller of claim 17, that's a component of the claimed apparatus, right?

MR. SCHMID: Objection. Form. Foundation.

A. That's what it looks like, just looking at claim 17.

Q. Okay.

A. Right now, which I don't recall petitioner or declarant referring to.

Q. And then looking at claim 11 again,

you see the beginning of claim 11 recites an apparatus?

A. Yes.

Q. And the transmit controller we talked about earlier is the component of this apparatus, correct?

MR. SCHMID: Objection. Form. Foundation. Scope.

A. Claim 11 is not a CDMA apparatus.

Q. Well, I'm asking you a different question.

A. Okay.

Q. Is the transmit controller a component of the apparatus of claim 11?

MR. SCHMID: Same objections.

A. So I'm going to read it out loud: A transmit controller whereby a pan code generator control is generated, wherein the spreading code generator generates a spreading code of one, thereby eliminating the effect of the spreading code generator.

So that apparatus, which is not a CDMA apparatus, because it no longer has a spreading code has a transmitter -- that is that transmit controller.

Q. Okay.
A. Did I answer your question?
Q. I asked is the apparatus of -- does the apparatus of claim 11 include a transmit controller?
MR. SCHMID: Objection. Form.
A. I think I just said that it does because I read the whole limitation. A transmit controller whereby -- so the apparatus at claim 11, the last limitation is a transmit controller whereby a pan code generator control is generated, wherein the spreading code generator generates a spreading code of one, thereby eliminating the effect of the spreading code generator.
Claim 11 is not one I don't think anybody is referring to because it gets rid of the CDMA. There's no spreading.
Q. Let's look at claim 12.
Is claim 12 directed to an apparatus?
MR. SCHMID: Objection. Form.
A. It is.
Q. Does this apparatus include a transmit controller?

MR. SCHMID: Same objection.

A. One of the limitations begins by a transmit controller whereby a pan code generator control is generated.

Q. In fact, if you look at claims 13, 14, 15, if you look at all of those claims, each of those recites a transmit controller within the claimed apparatus, correct?

MR. SCHMID: Objection to form. Compound.

A. I will look at those now.

(Document review.)

A. I'm looking at these particular claims now for the first time as directed because they hadn't been in the petitioner or the declarant's declaration for petitioner. I can see that each one claims and apparatus and that each one has a limitation of a transmit controller. I think they might be the same limitation.

Well, I didn't mean to say -- suggest the claims are the same, just that the limitation. I can see 13 is a time division duplex. 14 says: Transmit controller whereby pan code generator control signal is generated.

It appears to be the same limitation in each one of those apparatus claims of Walley.

Q. Okay.

So except for claim 11, which you said had a transmit controller that rendered a non-CDMA?

MR. SCHMID: Objection. Form.

A. I don't think you asked me a question.

Q. When you say each of those apparatus claims, you mean claims 12, 13, 14, and 15, correct?

MR. SCHMID: Same objection.

BY MR. KAPADIA:

Q. Those are the ones that have the same limitation.

A. The transmit controller described by each of those claims has the same words, which I understand to mean they have the same limitation. I don't know how it's used in the context of the overall claim by the transmit controller.

So those claims may ascribe other restrictions, limitations to the transmit

controller that are different. But at least with respect to that particular line, that line is identical.

Q. Can you look at Figure 8 of Walley.

A. I see that.

Q. Okay.

And Figure 8 shows a transmit controller 805 in the center of variable length PN code generator 807 at the bottom and a data input controller 801 off to the left, and then data -- sorry -- data transmit Q 803 to the right of that.

Do you see all of that?

MR. SCHMID: Objection. Form.

A. I see all of those numbers, but I'm not looking at the description. Some of those are labeled, others are not.

Q. Okay.

A. I'm looking at the figures --

Q. All right.

Can you turn to column eight of Walley.

A. Yeah.

(Document review.)

A. I'm there.

Q. Actually, if you look at column nine, it identifies 803 as the data transmit Q, correct?

A. Yes, that's correct.

Q. Okay.

And all of those components are all part of a single device for apparatus, right?

MR. SCHMID: Objection to form.

A. They are all a part of a circuit that is intended to be within an apparatus and as such, I guess they are an apparatus. What I mean by that is that Walley is not intended to provide the apparatus, its innovation and what it discloses is a circuit with flexibility that could be used in -- in different types of application.

Q. Okay.

Can you look at Figure 2.

A. I'm there.

Q. Here we see data input 201 going into data Q 203, and below that you see a PN code generator 209?

A. Yes, I see that.

Q. Okay.

And all that ultimately goes to 217,

which is connected to antenna 219, correct?

A. Yes, via two antenna media components, it does.

Q. Okay.

These are all components that would be within an apparatus or device, correct?

MR. SCHMID: Object to form.

A. In Walley, they would be in an interface circuit that's intended to be used in different types of devices.

Q. Correct.

But all of these components will be in a single device together, not separated into two different devices -- well, strike that.

Can you look at column four and specifically look at line 54.

A. I'm at the right place. It's a brief description of the drawings of Figure 1.

Q. 54 starts the description for Figure 2 and states that Figure 2 is a blocked diagram illustrating a spread spectrum transmitter.

A. Yes.

Q. Okay.

A. That's what it says.

Q. Okay.
And a spread spectrum transmitter would be one of the components that would be in a device?
MR. SCHMID: Objection.
BY MR. KAPADIA:
Q. That transmits using spread spectrum.
A. Yes.
Q. Okay.
A. That's fair.
Q. Yeah.
A. I think the question was answered in the question, but that's fine.
Q. So let's go to column nine.
A. I'm at column nine.
Q. Okay.
And look at -- starting at line 57.
A. I'm there.
Q. Okay.
A. Would you like me to read that?
Q. Not yet.
So had you previously considered Figure 9?
MR. SCHMID: Object to form. Scope.

A. I believe I have, but I -- can I look at the figure, that might be easier?

Q. Yeah.

(Document review.)

A. Yes, I looked at that.

Q. Okay.

A. And I considered that.

Q. All right.

A. I don't know if it was particularly relevant to my declaration, but I understand the figure.

Q. Would it be fair to say that this describes a transmit controller which is -- adjusts the code size based on factors such as Q length 827, data receive rate 811, interference level 813, and signal strength 815?

A. I'm sorry, you had me until you started referring to the other figure numbers.

Q. Okay.

A. I can look at them both, actually. Someone decided to print this on two sides, but I can actually see Figure 8 and Figure 9, if you want to read your question and I can look at both of them at the same time.

Q. Actually, you know what, let's set that aside for now.

So all of the controllers that we've discussed thus far, they've been controllers that have been within various devices, correct?

MR. SCHMID: Object to form. Foundation.

A. I don't know what -- all the controllers we discussed thus far today?

Q. With respect to Walley.

All of the controllers we've just gone through in Walley have been controllers that are within a particular device, correct?

Like we just went through --

MR. SCHMID: Same objection.

BY MR. KAPADIA:

Q. -- claims 12 through 15, and you saw a transmit controller within an apparatus, correct?

MR. SCHMID: Same objection.

A. Yes, so you've intermixed -- you used the word a particular device, and then you used the word an apparatus, and to me, those are two totally different things. So I want to make sure -- because the apparatus is what we

went through was claimed.

Q. Yes.

A. And the device would, you know, could be the same apparatus or it could be a device that uses the apparatus of the claim, and those aren't the same thing.

Q. Okay.

A. I just want to make sure I'm understanding the question.

Q. None of the controllers that we've -- no. Set that aside.

Can you go to column ten of Walley.

A. I am there at column ten of Walley.

Q. Okay.

And go look at the embodiment that starts on line 23.

(Document review.)

A. I'm there.

Do you want me to read it?

Q. No, no, not yet.

This is a portable telephone embodiment, correct?

A. That's what it says there.

MR. SCHMID: Objection. Form. Foundation.

A. Sorry.

I think your question is referring to column ten, approximately Row 23.

Q. Yes.

A. And it says: The first preferred embodiment comprises a portable telephone, such as illustrated using Figure 9.

Q. Okay.

If you look down around line 45.

A. I am there.

Q. Actually, you know what, look at line 46. At the end of that line is a sentence that starts with: In the present.

A. I'm there.

Q. And then it continues: The signal being received by the base unit is very strong.

Do you see that?

A. Yes, I see that. In the present, the signal being received by the base unit is very strong.

Q. Okay.

And then it says: The portable telephone unit can then signal the base unit that it will switch to an 8-bit spreading code, correct?

A. The portable telephone unit. The word -- the sentence says what you said. It's part of a process to get to that point, but because other things have to happen first.

But just reading that you've told me to read, it says: The portable telephone unit can signal the base station unit that it will switch to 8-bit spreading code.

Q. Okay.

If you look at line 60, do you see the sentence that says: At that point?

A. What line?

Q. Actually, look at line 57.

A. At .915 that's --

Q. Column -- I'm sorry, column 10, line 57. The very last word of that line is the.

A. The computer can transmit more data so the transmit controller increases the duty cycle until it reaches .917 on the graph of Figure 9. 90 percent transmit duty cycle.

Q. Okay. Yup.

And then after that it says: At that point, more data capacity can still -- can still be used by the computer, which is

transmitting data to the handset.

Do you see that?

A. Yes.

Q. And then it says: The system then queries the base unit and finds out that the signal being received is very strong.

Do you see that?

A. Yes.

Q. And then it says: The portable telephone unit then signals the base unit that it will switch off to a spreading code or equivalently uses a spreading code of one.

Do you see that?

A. Yes, it shuts off CDMA.

Q. Yup.

A. I see that.

Q. Yeah.

So the portable telephone unit is what's making the decision and informing the base unit.

MR. SCHMID: Object to form.

A. That it wants to turn off CDMA is what I gather from the selection of the sentences that you had me read.

Q. Right.

It's what selected, the spreading code length and whether or not to switch off the spreading code, correct?

MR. SCHMID: Same objection.

A. And this embodiment, it's a circuit, and it's not described how it is CDMA. I would have to infer it from here. But I can tell you that it's at least not CDMA, unless there's some method of -- of managing the code so that there are orthogonal because this is just the circuit.

Q. Okay.

Let's look at -- well, actually, I just want to, you know, make sure I close the loop on that.

In both of those instances when the spreading code was set to 8-bit or when it was, quote, switched off, it was the portable telephone unit that made that decision, correct, not the base unit?

MR. SCHMID: Object to form.

A. Now you are using base unit, I think, as if it were a base station that assigned codes that were unique, which isn't disclosed in Walley.

So in Miyake, we spent a lot of time -- I tried to explain that Miyake, even though it didn't use the word base station, the functions I described as assigning codes, which are consistent with what the petitioner said that they were, is what maintain the orthogonality of the system as well as assigning the codes. Now this --

Q. I'm just asking --

A. I'm trying to answer the question, actually, but if you want to stop me, I'll stop.

Q. Yeah, I can ask you a question about Miyake, but I'm asking you a question about Walley.

A. I understand that. I was trying to answer the question about Walley.

Q. Well, you were trying to talk about Miyake, and I'm literally asking you about Walley.

MR. SCHMID: Ask another question, ask another question.

BY MR. KAPADIA:

Q. So Walley discloses a portable telephone unit that will signal to a base unit

that it'll switch to an 8-bit switching code -- sorry, strike that.

Walley discloses a portable telephone unit which can signal the base unit that it will switch to an 8-bit spreading code and additionally discloses that the portable telephone unit can signal the base unit that it will switch off the spreading code, correct?

A. If you are reading from what it says, and that's what it says, then I would not disagree with it. If you want --

Q. Okay.

A. -- the actual answer, then I have to explain what a base unit is. And when you say it discloses, you are going beyond literal citations of text language. You are asking what a person of ordinary skill in the art would understand those words to mean.

If I am wrong, and please tell me it's wrong, but when it says disclosing, you told me earlier in the deposition when I answered a question about reciting and I said it discloses, you said, well, I didn't ask about disclosing. And now, I thought your question was actually asking about disclosing

when you were using words that were related to reciting.

Because of that, I thought it was important to bring in the understanding of a person of ordinary skill in the art to be consistent. Because when we treated the other reference, which I'm not going to mention, it was about reciting the specific text, not about what it disclosed to a person of ordinary skill in the art.

In this case, I'm understanding that you're having me read the words and then asking me what's disclosed. And so those are two different exercises.

And so in order to preserve the record of consistency, I wanted to make sure that -- that it's clear, that when we talk about the other reference, it was about the words. And now when we're talking about this one -- if I misunderstood your question, I apologize -- you are asking what it discloses, not what the words say.

I hope that helps. So I'm not trying to make this last 20 days, I'm just trying to get clear responses on record to

clear questions.

Q. So in the portion of Walley that we were discussing, do you agree that the portable telephone unit is what decides whether to switch to an 8-bit spreading code?

MR. SCHMID: Object to form.

A. I would have to read that to answer your --

Q. That would be on lines --

A. I would have to actually read the entirety of it. Unless you -- because I think you asked disclose or did you ask recite in the question you just asked?

Q. I said do you agree that the portable telephone unit is what decides whether to switch to an 8-bit spreading code?

A. Okay.

I understand that requires interpretation. So I think unless there's a specific line that says that, I'll take a quick look at that and answer your question.

This is Figure 9, correct?

Q. This is column 10, line 48. The sentence starts: The portable telephone unit can then signal the base unit that it will

switch to an 8-bit spreading code.

(Document review.)

A. I see that. And that's at that point after whatever has happened before that, that's a signal it's making to what in Walley is not the base unit that's alleged to assign codes and manage orthogonality.

Q. Okay.

And can you go to column 11.

A. I am there.

Q. Okay.

And do you see the last paragraph that's on the bottom that starts on line 61?

A. Yes, I am there.

Q. And that paragraph ends on column 12, line 14.

A. Yes, I see that.

Q. And this describes a PDA or a programmable digital assistant embodiment.

A. Yes, I see that.

MR. SCHMID: Object to form.

If you are going to ask him about an entire paragraph, I'm sorry, can you let him read the paragraph before you ask him what a paragraph describes?

Go ahead, continue.

A. Would you like me to read the paragraph or just repeat your question.

Q. Does the paragraph that starts on column 11, line 61 describe an embodiment that is a PDA or a programmable digital assistant?

A. Yes, it does.

Q. And do you see that it includes its own base unit 1011?

MR. SCHMID: Object to form.

A. I can see where it says the base unit 1011.

Q. Okay.

And to be clear, when I say include, this paragraph refers to a base unit that communicates with the PDA.

MR. SCHMID: Same objection.

A. Let me read that, that part.

(Document review.)

A. It does say the PDA 1001 would establish communications with a base unit 1011.

Q. Do you see it says at the top of -- of column 12, there's a sentence that starts: The base unit would then reply with a message 1009.

A. Yes, I see that. The base unit would then reply with a message --

Q. Actually --

A. -- 1009.

Q. Let's -- can you read column 11, lines 64 through column 12, line 12?

A. Yes, would you like me to read that to myself or quiet on the record?

Q. Yes, to yourself.

A. Okay.

(Document review.)

A. I see that. I read that.

Q. All right.

Would you agree that the base unit described here is not a base station assigning a code to a device?

MR. SCHMID: Object to form. Foundation.

A. I would -- I sort of agree. It's definitely not a base station that assigns unique PN codes to anything.

I will say as far as this base unit goes, which is, as I mentioned, not the base station that's pointed to by petitioner, the declaring of petitioner, petitioner or myself,

that this particular embodiment requires first that the base unit transmit to the PDA. Because it says the process could then be reversed -- and thank you for letting me read the whole paragraph, because when we jump around from sentence here to sentence there, sometimes it's easy to come to an incorrect conclusion.

So at least in this description, the disclosure says that first the base station must communicate, and then the process could be reversed. Where the non -- what he calls base unit, is talking to, is receiving information from -- from the other side, the PDA.

Q. So this discloses a situation in which the PDA instructs the base unit as to which code to use, correct?

MR. SCHMID: Object to form.

A. It says the PDA 1001 could then -- could then instruct the base unit 1011 as to which PN code was the minimum size needed to accurately receive the messages, correct.

Q. Okay.

Do any of these PN code selection decisions that we've discussed thus far with

respect to Walley disclose a situation in which a central controller selected the specific PN code that was used?

MR. SCHMID: Object to form. Compound.

A. Well, because Walley is a circuit intended to be used as part of a greater system, it provides the handles, if you will, for setting the duty cycle, sending the link of the PN code. Walley is completely silent on how orthogonality is managed, other than a suggesting it's not managed in the sense that the code could be set to one, meaning there would be no orthogonal codes. So there wouldn't be CDMA.

Q. Again, do any of the PN code selection decisions that we've discussed thus far with respect to Walley disclose a situation in which a central controller selected the specific PN code that was used?

MR. SCHMID: Same objections.

A. The specific PN code that was used, according to the petition, came from Miyake.

Q. I'm asking what does Walley disclose?

A. Walley discloses nothing --

MR. SCHMID: Object to form.

A. -- about how orthogonality would be maintained in its PN codes, which is fundamental to code division multiple access.

Q. Again, I'm not asking you about orthogonality.

I'm asking specifically about whether any of the PN code selection decisions that we've discussed thus far, with respect to Walley, discloses a situation in which a central controller selected the specific PN code that was used? And again, I'm asking with respect to Walley.

MR. SCHMID: Object to form.

Compound.

BY MR. KAPADIA:

Q. You can talk about combinations afterwards. I'm asking with respect to Walley.

A. Walley is silent on how PN codes are assigned and how orthogonality would be maintained.

Q. Is -- are you making a distinction between selection in assignment, because I asked you about PN code selection decisions?

MR. SCHMID: Object to form.

A. It would be helpful if you would tell me what your distinction is between selecting and assignment, because I don't understand the question.

Q. I mean, we just discussed an embodiment in which PDA 1001 could instruct the base unit 1011 as to which PN code was the minimum side needed to accurately receive the messages.

MR. SCHMID: Object to form.

A. I see that. And there's insufficient context because there's nothing that explains how orthogonality is maintained in Walley.

Q. Okay.

Could orthogonality be maintained by a manufacturer of the devices?

MR. SCHMID: Object to form.

Foundation. Scope.

A. Manufacturer of what devices?

Q. If the devices in this spread spectrum system were each assigned and manufactured on a unique code, would that maintain orthogonality?

MR. SCHMID: Same objections.
BY MR. KAPADIA:
Q. If the manufacturer assigned a different code to each device?
MR. SCHMID: Same objections.
A. I'm unclear as to the question because the patents we were discussing and the petitions all relate to a unique user code. And it's unclear to me how you can change code lengths and manage orthogonality of encodes, which is a requirement for CDMA, unless whatever system makes use of the circuits in Walley would have some way of doing that, and the only way that's been proposed is Miyake.
Q. Well, you said that Walley was silent. And I'm asking you if this is one possibility?
MR. SCHMID: Object to form.
A. If what is one possibility?
Q. An assignment of a unique code to each device of Walley?
MR. SCHMID: Same objection.
A. I think I've already answered that question in the context of user codes, which is what's relevant to the patents and relevant to

the petition and the declaration. Those assignments didn't come from Walley. They came from Miyake. That's what the petition says. I was asked to rebut the petition.

So I'm not sure why you're constraining me to Walley, but there's no mechanism in Walley to manage orthogonality of PN codes that are disclosed and allows the PN code to go down to one, so it's, you know, it's not something that would be part of the circuit, that would be part of the system. And that's why both myself as well as the petition and Mr. Davies, you know, pulled in Miyake.

The only problem with that is Miyake uses central control to manage the assignment of those codes and maintain modulation -- orthogonality of those codes and its system.

I mean, it's not a problem. It's just the reality. And that's why Miyake and Walley don't combine to make the patents, the Woolfork patents obvious.

Q. I'm only asking you about what Walley discloses, and because you injected that with your own declaration. So you said that it -- that Walley requires central control to

maintain orthogonality, so I'm asking you if there's another way of doing it.

And instead, you are not answering my question, so I'll ask you the question again.

In paragraph 59 of your declaration, you state: Walley does not teach a one-to-one relationship and requires central control to maintain orthogonality.

Do you see that?

A. Yes, I do see that.

Q. What I'm asking you is: Instead of central control, could a manufacturer assign a unique code for each device of Walley?

MR. SCHMID: Object to form. Foundation. Scope.

A. I don't see how that would be relevant to the patent claims or the petition.

But to answer your question as best I can understand it, Walley makes no effort to maintain orthogonality because it's completely silent and goes to the extreme of allowing the code to be so small that you would have no orthogonality. And that's because it's a circuit that's intended to be used in different

apparatuses by a manufacturer.

And it would be that manufacturer, that I think you are referring to, that would incorporate that within an additional -- within a device, that a Miyake is a base station that assigns the codes and maintains the orthogonality.

Q. Again --

A. Everyone is going to a different source because it's not in Walley. And that's what I'm explaining here in my paragraph 59.

Q. I'm not saying that it's in Walley. I'm asking -- you say -- you're the one who is saying that Walley requires something.

And I'm asking you if it could instead, since you said that it's silent as to how it maintains orthogonality, I'm asking you if Walley could maintain orthogonality by a manufacturer's specified code?

MR. SCHMID: Object to form. Scope. Foundation.

A. The only way I can think of that Walley could maintain orthogonality without a central control is if Walley had had the benefit of reading the disclosures and claims

of the Woolfork patent. Because that's where independent CDMA comes through. Walley has no disclosure about independent CDMA.

Someone at the time of Walley, based on the disclosures of Walley alone, would understand that it would be a system with a central controller, to the extent that CDMA was used in a way that assigned orthogonal codes and maintained that orthogonality.

Q. Did the definition of independent CDMA come from the disclosure in the 2003 application?

MR. SCHMID: Object to form.

A. I think I made it very clear that it came from what I was assumed, which I believe came from the court claim construction order. But I -- I -- you probably know better than I do. So that was back in -- in my declaration, but it's in the petition and other declaration and probably in the patent response. I don't remember.

I at least know that unique user code did, and I believe that the independent CDMA also came from a court --

Q. Okay.

A. -- order, but I could be wrong about that. But that's what I've assumed. So that's where the definition came from.

Once you have a claim construed, my understanding is I, as a person of ordinary skill in the art or expert, don't have the freedom to deviate from what that term means.

Q. Okay.

Does the phrase orthogonal variable spreading factor appear in the text of Walley?

A. No.

Q. Okay. All right.

A. I should have said, I really don't think so.

Q. If it did, you probably mentioned it.

A. My belief is, no -- yeah, exactly. Thank you.

Q. And Walley was filed on June 3rd, 1999?

MR. SCHMID: Object to form.

A. If you asked me a question, I will look to see these cover page --

Q. Was Walley filed on June 3rd, 1999?

MR. SCHMID: Object to form.

A. That's what it says on the cover page, filed June 3, 1999, for Walley, Exhibit 10.

Q. Okay.

Can you pull up Miyake and turn to column nine.

Are you there?

A. Sorry, just that that exhibit was at the bottom. Now I'm on Exhibit 11, which is Miyake.

Q. Yup.

Are you there?

A. Yes, I thought I said I was. Yes, I'm there.

Q. So starting from the top, roughly halfway through the top line, do you see where it starts: In modulator 71, modulates a carrier signal having an appropriate frequency by a transmission signal, for example, e.g., digital data or analog signal using e.g., a digital modulation scheme such as PSK.

A. Yes, I see that.

Q. Is DPSK a form of PSK?

MR. SCHMID: Object to form.

A. I actually don't, off the top of my

head, recall what PSK is. But if I said it in my declaration, that'll refresh my memory.

I don't think I referred to that in my declaration.

Q. So you don't know if differential phase shift keying is a form of phase shift keying?

MR. SCHMID: Object to form.

A. Off the top of my head, I don't know what PSK there in that line is intended to refer to. It's not something that I had analyzed previously.

Q. Okay.

So if -- do you know what phase shift keying is?

MR. SCHMID: Object to form.

A. It's not a version that I'm used to seeing, so that's what I was trying to answer already. And I don't know how Miyake is using that term, phase shift keying. I just don't immediately have any recollection either of that -- maybe look that up.

Q. Is differential phase shift keying a digital modulation scheme?

MR. SCHMID: Object to form.

A. Differential phase shift keying is a modulation that uses differences in a string of bits --

(Reporter clarification.)

A. I usually stay up pretty late, so I'm good.

And it uses the -- basically it keys on the differences between prior -- the prior bit, if you will, from the current bit.

But the phase part of it means it's really doing that by altering the phase that would correspond to that difference.

Q. And how is it altering the phase? Is it altering it by 180 degrees?

MR. SCHMID: Object to form.

A. In differential phase shifting or on this PSK thing?

Q. Differential.

A. I don't remember what the actual degrees are, but it is -- it is doing it as a difference. And when there's one bit involved, then it would make the most sense for it to be 180 degrees difference between the phases because that would give you the most separation.

Q. Okay.

So sitting here today, you don't know if when it's -- when Miyake says that modulator 71 modulates a carrier signal using e.g., a digital modulation scheme such as PSK, you don't know if that inherently discloses DPSK?

MR. SCHMID: Object to form.

A. That's not something that I looked at or considered. And I'm unclear on what Miyake means by PSK, because this isn't something that was in the petition or declaration or that I relied upon for my declaration. I have no recollection of that. If it's in there, it would be a big surprise to me.

Q. Okay.

A. I've been surprised before, but I would be really, really surprised.

Q. All right.

Does Walley disclose a code tree?

MR. SCHMID: Object to form. Scope.

A. Walley, in its circuit, that doesn't disclose how codes are assigned or how orthogonality is maintained. And so that would

include the biggest issue in this combination that's proposed, which is that when you shorten codes, you invariably create orthogonality problems.

So even though in the background section it says, PN codes are orthogonal, that's an assumption that doesn't carry through if you start shortening or changing the links of codes.

Q. But it doesn't ever recite the phrase, code tree?

MR. SCHMID: Object to form.

A. Correct. That -- well, I would be surprised if it -- if it did. Because we've already gone through some areas where Walley comprehends that things aren't orthogonal.

We switched back to Walley. I have Miyake in front of me. Did you want me to get --

Q. No, that's fine.

MR. KAPADIA: I think we can take a break right now. I might just be done.

THE WITNESS: How long of a break would you like?

THE VIDEOGRAPHER: The time is 6:46.

We are off the record.

(Recess is taken.)

THE VIDEOGRAPHER: We're back on the record. The time is 6:52.

MR. KAPADIA: All right. No further questions.

MR. SCHMID: I don't have any redirect for the witness either.

THE VIDEOGRAPHER: Time to go off the record. The time is 6:53. We are off the record.

(Time Noted: 6:53 p.m.)

---

DR. JOSE LUIS MELENDEZ

Subscribed and sworn to before me
this day of 2026.

---

C E R T I F I C A T E

STATE OF NEW YORK )
) ss.:
COUNTY OF NEW YORK )

I, LISA M. MURACO, a Notary Public within and for the State of New York, do hereby certify:

That DR. JOSE LUIS MELENDEZ, the witness whose deposition is hereinbefore set forth, was duly sworn by me and that such deposition is a true record of the testimony given by such witness.

I further certify that I am not related to any of the parties to this action by blood or marriage; and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 22nd day of August, 2026.

---Lisa M. Muraco------

LISA M. MURACO

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ERRATA SHEET FOR THE TRANSCRIPT OF:

Case Name: Samsung Electronics CO., LTD. V. One-E-Way, Inc.
Dep. Date: THURSDAY, AUGUST 20, 2026
Deponent: DR. JOSE LUIS MELENDEZ

CORRECTIONS:

| Pg. | Ln. | Now Reads | Should Read | Reason |
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_____
Signature of Deponent

SUBSCRIBED AND SWORN BEFORE ME

THIS____DAY OF_____, 2026.

_____

(Notary Public) MY COMMISSION EXPIRES:_____

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**< Q >**
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**Texas** (*5*)



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**VIMAL** (*2*)
**voice** (*2*)

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**Xiang-Gen** (*1*)

**< Y >**
**Yeah** (*31*)
**years** (*1*)
**York** (*5*)
**Yup** (*14*)

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**zero** (*2*)
**ZOOM** (*1*)



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