UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,	)	
	)	
Petitioner,	)	
	)	
vs.	)	Case No.
	)	IPR2025-01069
WILUS INSTITUTE OF STANDARDS AND	)	
TECHNOLOGY INC.,	)	
	)	
Patent Owner.	)	
_____	)	

VIDEOTAPED DEPOSITION OF ZHI DING, Ph.D.
VIA VIDEOCONFERENCE
FRIDAY, MARCH 13, 2026
9:04 A.M.

Stenographically reported by:
Kayla Lotstein
California CSR No. 13916, CRR, RPR, CRC

MAGNA
LEGAL SERVICES

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
3
4 SAMSUNG ELECTRONICS CO., LTD.,)
)
5 Petitioner,)
)
6 vs.) Case No.
) IPR2025-01069
7 WILUS INSTITUTE OF STANDARDS AND)
TECHNOLOGY INC.,)
8)
Patent Owner.)
9 _____)
10
11
12
13 VIDEOTAPED DEPOSITION OF ZHI DING, PH.D. taken
on behalf of Petitioner, at 9:04 a.m., Friday,
14 March 13, 2026, Via Videoconference,
California, before Kayla Lotstein, Certified
15 Shorthand Reporter No. 13916 of the State of
California, pursuant to Notice.
16
17
18
19
20
21
22
23
24
25

MAGNA LEGAL SERVICES

1 APPEARANCES OF COUNSEL:
2 FOR PETITIONER:
3 RUSS AUGUST & KABAT
BY: JAMES MILKEY, ESQ.
4 Jmilkey@raklaw.com
12424 Wilshire Boulevard
5 12th Floor
Los Angeles, California 90025
6 (310) 826-7474
7
8 FOR PETITIONER:
9 FISH & RICHARDSON
BY: JEREMY J. MONALDO, ESQ.
10 Monaldo@fr.com
1000 Maine Ave SW
11 Washington, DC 20024
(202) 626-7717
12
13 Also Present:
14 Daniel Torres, Videographer
15 Jong Wan Suh
16
17
18
19
20
21
22
23
24
25

MAGNA
LEGAL SERVICES

1 INDEX

2 WITNESS: ZHI DING, Ph.D.

3 EXAMINATIONS

4 Page

5 By Mr. Milkey 7

6

7 EXHIBITS

8 (None)

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

MAGNA LEGAL SERVICES

1 INDEX (CONTINUED)

2

3 INFORMATION TO BE SUPPLIED

4 Page Line

5 (None)

6

7

8 QUESTIONS INSTRUCTED NOT TO ANSWER

9 Page Line

10 (None)

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

MAGNA
LEGAL SERVICES

1 VIA VIDEOCONFERENCE; FRIDAY, MARCH 13, 2026
2 9:04 A.M.
3 * * *
4 THE VIDEOGRAPHER: We are now on the record.
5 This begins Media Number 1 in the deposition
6 of Dr. Zhi Ding in the matter of Samsung Electronics
7 Company versus Wilus Institute of Standards and
8 Technology in the United States Patent and Trademark
9 Office, Case Number IPR2025-01110.
10 Today is Friday, March 13th, 2026, and the
11 time is 9:05 a.m. Pacific Time.
12 This deposition is being taken via Zoom
13 videoconference at the request of Russ August & Kabat
14 LLP.
15 The videographer is Daniel Torres of Magna
16 Legal Services, and the court reporter is Kayla Lotstein
17 of Magna Legal Services.
18 Will counsel and all parties present please
19 state their appearances and whom they represent.
20 MR. MILKEY: This is James Milkey on behalf of
21 Patent Owner Wilus with the law firm of Russ August &
22 Kabat.
23 MR. MONALDO: This is Jeremy Monaldo from Fish &
24 Richardson on behalf of Samsung. I'm joined today by my
25 colleague Jong Wan Suh.

MAGNA
LEGAL SERVICES

1 THE VIDEOGRAPHER: Thank you.
2 MR. SUH: Sorry.
3 THE VIDEOGRAPHER: Sorry. Go ahead.
4 MR. SUH: I'm Jong Wan Suh from Fish & Richardson,
5 on behalf of Samsung Electronics.
6 THE VIDEOGRAPHER: Thank you.
7 Will the court reporter please swear in the
8 witness.
9 THE STENOGRAPHER: Hello. My name is Kayla
10 Lotstein. My CSR number is 13916.
11 ZHI DING, Ph.D.,
12 called as a witness on behalf of the Petitioner, and
13 having been duly sworn, was examined and testified as
14 follows:
15 EXAMINATION
16 BY MR. MILKEY:
17 Q Good morning, Dr. Ding.
18 A Good morning again, Mr. Milkey.
19 Q Good to see you again.
20 You understand that you're here to testify
21 today about two IPR proceedings; correct?
22 A Yes.
23 Q Okay. And so those involve all -- I've
24 uploaded the -- the declarations for both of those.
25 Feel free to refer to those. I don't personally

MAGNA
LEGAL SERVICES

1 remember the -- the proceeding numbers, typically, but
2 just for the record, and you can refer to the documents
3 as you need to, but you understand that the two IPR
4 proceedings that you're testifying about today are
5 IPR2025-01110 and IPR2025-01111; correct?
6 A Yes.
7 Q Okay. It's impressive that Samsung got
8 binaries for both of their IPR proceedings in this case,
9 but -- so for your declarations in this proceeding, how
10 did you prepare those declarations?
11 A In preparation for today's deposition;
12 correct?
13 Q So I'm specifically asking about -- so you
14 submitted a declaration in each IPR proceeding; correct?
15 A Yes, yes.
16 Q And you authored both of those declarations?
17 A Yes.
18 Q Okay. What steps did you take to prepare your
19 opinions as expressed in those declarations that were
20 submitted?
21 A Sure. As I recall, that was about a year ago.
22 And upon engagement by Samsung, counsel for Samsung in
23 this case, both gentlemans [sic] are here. I had
24 conversations with them. I received the two patents,
25 the '171 patent and the '186 patent in question.

MAGNA
LEGAL SERVICES

1 I reviewed the patents, the prosecution
2 history, prior arts that were identified, and eventually
3 selected the few prior arts that are filed as part of
4 the ground for the IPR and -- let me see. What else?
5 Yeah. And review the patent. Review the
6 prior applications of both patents that the inventors
7 claimed priority dates on and had several meetings with
8 counsel and drafted the declaration with the help of
9 counsel.
10 That's it.
11 Q Okay. You mentioned that you reviewed the
12 prior applications that the inventors of the '186 and
13 '171 patents claimed priority to.
14 Did you express your opinions regarding those
15 priority applications in your declarations?
16 A I'll have to refer to my declaration just to
17 be certain. But in discussions with counsel, I
18 expressed my opinions about what -- what -- whether are
19 all the features in the claims had support in the prior
20 applications.
21 Q Okay. And what did you do to prepare for
22 today's deposition?
23 A For today's deposition, I received the entire
24 history of exhibits from both Samsung and also from
25 Wilus. Those were two, big -- just two, big, compressed

MAGNA
LEGAL SERVICES

1 folders. I won't list them all, but I believe they have
2 all the petition, the patent owner's preliminary
3 response, the decision by PTAB and so forth.
4 So I spent most of my time preparing for
5 today's deposition by rereading the patents, the --
6 reviewing my own declaration to refresh my memory,
7 reviewing the petition submitted, the patent owner's
8 preliminary response, and the decisions by PTAB.
9 I also spent time reviewing, again, the prior
10 arts that were relied on in my declaration, had several
11 meetings with counsel for Samsung online, and here we
12 are.
13 Q Okay. In preparing for your deposition today,
14 did you form any new opinions that you believe are --
15 should be fairly considered with the declarations that
16 you submitted?
17 A No.
18 Q So for the record, I've uploaded both
19 Exhibit 1001s in both proceedings.
20 These are the '186 and '171 patents.
21 And, Dr. Ding, throughout the day, I
22 understand you may have copies of materials already.
23 Feel free to refer to any clean copies of any exhibits
24 in this proceeding that you want to.
25 A Thank you.

MAGNA
LEGAL SERVICES

1 Q So if you could please open Exhibit 1001 --
2 sorry. Strike that.
3 If you could open Exhibit 1003, your
4 declaration regarding the '171 patent. This is
5 the -01110 proceeding.
6 Let me know when you have that open.
7 A I have downloaded the two -- the exhibits you
8 referred to, and now I have it open on my -- now I have
9 on my Acrobat.
10 Q Okay. And this is -- what you have open
11 currently is your opinions regarding the '171 patent;
12 correct?
13 A Yes.
14 Q And just before we go any further, I'm also
15 uploading Exhibit 1016 and Exhibit 1017, which are the
16 Chu and Choi references. Feel free to refer to those as
17 you'd like throughout the day.
18 A I think I have them now. Thank you.
19 Q So I'd like to ask you about -- strike that.
20 Okay. Please turn to paragraph 159 of your
21 declaration in the '171 proceeding, and let me know when
22 you're there.
23 A Okay. 151?
24 Q 159.
25 A 159. Okay.

MAGNA
LEGAL SERVICES

1 Q And do you see that the last sentence of
2 paragraph 159 in this declaration states, "Whether the
3 AID field is viewed as the entire byte or the smaller
4 delta AID encoding, Choi teaches the use of a field
5 value logically and structurally tied to the AID field,
6 and that value is used to indicate the presence of
7 padding"?
8 A Yes.
9 Q So the beginning of the sentence begins by
10 stating, "whether the AID field is viewed as the entire
11 byte or the smaller delta AID encoding," and my question
12 is:
13 How do you view the AID field in Choi? Is it
14 the entire byte, or is it the smaller delta AID
15 encoding?
16 A How do I view the Choi's entire AID field?
17 May I refer back to Choi, then.
18 Q Yes.
19 A Thank you.
20 Just for conveniences I'm opening both
21 document. Is it okay if I open my clean copy of Choi
22 here with me?
23 Q Absolutely.
24 A Thank you. Thank you, Counsel.
25 I want to refer to the right figure.

MAGNA
LEGAL SERVICES

1 So in Choi, I would point to figure 19 and 20
2 and few figures below that. They are very much similar.
3 Choi indicated, for example, in figure 19 that the AID
4 fields for individual stations 01367 and 8 were coded by
5 using the delta AID rather than the absolute number of
6 the AID value.
7 So that's how I viewed the AID field that
8 there are multiple entries indicating multiple AID
9 values in this -- in -- either you can view that as a
10 single field because if they are connected or module
11 fields since their individually divided, but each
12 individual entry there is a compressed information
13 representing the entire AID field.
14 Q Okay. So where does the AID field in
15 figure 19 of Choi begin?
16 A Figure 19, Choi, the AID field would begin
17 starting from the encoded bitmap, that arrow pointing to
18 the intersection -- pointing the -- to the -- the cross
19 in between the word "length" and the word AID: 0.
20 Q Okay. And where does the AID field in Choi
21 end in figure 19?
22 A In figure 19, the -- Choi state -- Choi
23 indicated that the paged AID endpoint is at AID
24 Number 8, so that's where the paged AID ended. Beyond
25 that, there's no more additional AID being paged.

MAGNA
LEGAL SERVICES

1 Q Okay. Now I want to ask about figure 22 of
2 Choi.
3 In figure 22 of Choi, where does the AID field
4 begin?
5 A Well, figure 22 of Choi, the AID also begins
6 at the same place as in figure 19. That's where the
7 encoded bitmap starts.
8 Q Okay. And where does the AID field in
9 figure 22 of Choi end?
10 A This -- it's just for me to clarify. The
11 actual paged AID ended at AID:8, but there are
12 additional padded bits in this AID -- in the field --
13 Q Okay.
14 A -- so I would say that they were -- in
15 figure 32 [sic], there are six stations being paged, and
16 there are four additional bits that were indicating by
17 their terminal state whether the -- the terminal state
18 all indicating the point where no new stations are being
19 paged.
20 Q Okay. And are those remaining bits in
21 figure 22 part of the AID field of Choi?
22 A They are part of the AI -- well, the -- at
23 least the 1111, as Choi explained in his disclosure,
24 that those special value 11 was a marking that -- from
25 that point on, there's no more AI -- no more station

MAGNA
LEGAL SERVICES

1 being paged, and yet that is still inside the AI -- you
2 know, the AID field for -- insofar as Choi's considered.
3 Q Okay. So even though in figure 22 it points
4 to the paged AID endpoint is coming immediately after
5 AID:8, the -- the next entry of 11, for example, would
6 still be considered to be within Choi's AID field; is
7 that correct?
8 A Yes. That's a special value of a particular
9 AID built within the entire encoded bitmap.
10 Should there be additional stations, those
11 bits would be -- would have been occupied by additional
12 AID or delta AID values.
13 Q Okay. I suspect that we're going to be
14 talking about AIDs a bit today.
15 Can you provide an explanation of what an AID
16 is.
17 A So allow me to go back to our -- to '171
18 first.
19 I did not see that patent '171 specifically
20 provides a definition, but it's a acronym as claim 1 of
21 patent 171 indicate is AID is acronym for association
22 identifier, and that's what was given in claim 1 of the
23 patent.
24 Q Okay. Is an "association identifier" a known
25 term of art in networking communications?

MAGNA
LEGAL SERVICES

A Insofar as wi-fi is concerned, yes.

Q Okay. Are AID values unique values?

A Sorry. Could you clarify what you mean by "unique values"?

Q Yeah. So, for example, in the context of Choi, Choi discloses in figure 2, for example -- strike that.

In Choi, for example, Choi discloses in figure 22 identifying -- I believe it's six different AID values. There's AID:0, AID:1, AID:3, AID:6, AID:7 --

A Yes.

Q -- and AID:8.

A Yes.

Q And my question is:

I think in Choi's signaling scheme because it uses a delta AID instead of sort of a traditional AID signaling mechanism, you cannot have two of those AIDs being the same AID; is that correct?

A So in the context of the scheduling frame in view of prior art, Chu, the scheduling frame or the trigger frame in the context of '171, each stations that are -- each station that is paged or called upon by the access point to transmit, each of them has its specific AID field.

MAGNA LEGAL SERVICES

1 In the -- in that context, no two stations
2 should be sharing the same AID value.
3 Q Okay. That's helpful.
4 A Just to -- just to add to where you're
5 pointing to, I think you had a follow-up question on
6 figure 21 is that the delta AID, nevertheless, could be
7 in the example, figure 21, may not necessarily be unique
8 via sign because you would use a compression skin, as
9 indicated by Choi, to provide the unique AID information
10 so that the receiving station can identify that the
11 trigger is triggering its transmission.
12 So long as the AID field, as a whole, allows
13 the receiving station to match its own individual AID
14 value that is unique in the context of that particular
15 coveraged area, then it's really not important for the
16 delta to be unique but so long as the indicated AID is
17 uniquely addressed to the station.
18 Q Okay.
19 A I hope that's helpful.
20 Q No. That is, and I just want to clarify that
21 point.
22 So, for example, in figure 22 of Choi, the
23 first two entries in the AID field, I'll call them -- it
24 starts with -- at the -- at the start of the encoded
25 bitmap, there are entries of 00 and then --

MAGNA
LEGAL SERVICES

A Yes.

Q -- 00.

A Yes.

Q So both of those 00 entries have the same value of 00, but they actually signify two different AIDs -- AID:0 and AID:1; correct?

A Correct. Yeah. And Choi did explain how this -- as one embodiment, how this kind of a differential encoding of the AID field would have worked; that the first -- first station is -- he started with 00, but then from that point on, the additional AID value is indicated by a differential encoding scheme.

So a -- the second 00 is indicating an increment of one. So that's why increment from AID:0 to AID:1. And the third station, because a value indicated is 01, not 00, Choi indicated in his teaching that that would correspond to a increment of 2, so 1 plus 2 becomes 3, and that's how you get AID:3, and so on, so forth.

Q Okay. That's helpful. I think we're on the same page there.

So looking at claim 1 of the '171 patent --

A Yes.

Q -- I'm going to skip over some of the beginning aspects of the claim, but the claim recites,

MAGNA LEGAL SERVICES

1 in part, "Wherein the processor is configured to receive
2 a frame for allocating resource for uplink multiuser
3 transmission to one or more terminals."
4 Do you see that?
5 A Exhibit '171?
6 Q Yeah. And this is claim -- claim 1 of the
7 '171 patent.
8 A Yes.
9 Q Okay. So my understanding is that it's your
10 allegation that Chu discloses receiving a frame for
11 allocating resource for uplink multiuser transmission.
12 And my question is:
13 What frame in Chu are you pointing to as the
14 claimed frame?
15 A Right. Sure.
16 I'm trying to find my declaration, '171. I
17 think it's near paragraph 122, 123.
18 Yeah, 122 and 123.
19 So in 123, I stated in my declaration that Chu
20 describes a process where a client station received an
21 uplink scheduling frame from the access point. That's
22 in Samsung Exhibit 1016, paragraph 0090. That's citing
23 directly from Chu.
24 And this frame is identified as frame 902,
25 which includes OFDMA multiuser uplink scheduling

MAGNA
LEGAL SERVICES

1 information for transmitting --
2 (Reporter clarification.)
3 THE WITNESS: -- includes OFDMA multiuser uplink
4 scheduling information for transmitting an uplink OFDMA
5 data unit.
6 BY MR. MILKEY:
7 Q Okay.
8 A So that -- that is the -- most specifically,
9 my declaration pointed to the uplink scheduling frame
10 from the access point and then specifically frame 902 of
11 figure 9A in Chu.
12 Q Okay. And just for the record, you referenced
13 OFDMA.
14 What does OFDMA stand for?
15 A It stands for orthogonal frequency division
16 multiple access.
17 Q Is Chu's uplink scheduling frame a trigger
18 frame?
19 A Yes. Effectively, this is the frame that
20 assigns, as we -- as I mentioned in -- as we discussed,
21 as I mentioned in paragraph 123, Chu stated that the
22 scheduling frame indicates respective subchannels
23 allocated for uplink OFDMA transmission by three client
24 stations, station 1, station 2, and station 3.
25 And this reflects a system where distinctive

MAGNA
LEGAL SERVICES

1 channels are assigned to different stations for
2 coordinated uplink transmission.
3 Upon receiving the uplink scheduling frame,
4 each station -- in paragraph 124, I continue -- "Each
5 station then transmits is OFDMA -- OFDM data unit at a
6 scheduled time t2 using its assigned subchannel, as
7 indicated in the scheduling frame. These simultaneous,
8 access point-coordinated uplink access transmissions
9 over separate subchannels for multiusers collectively
10 constitute an uplink multiuser transmission."
11 So we are -- in claim 1, it requires the
12 allocation for uplink multiuser (MU) transmission to
13 allow more terminals, and here, as we just discussed,
14 that this particular scheduling frame serving as a
15 trigger frame has allocated distinct subchannels, that
16 is frequency domain resources, so that's a resource, two
17 different stations for a coordinated, simultaneous
18 uplink transmission.
19 So that covers the particular claim element in
20 patent '171.
21 Q Okay. So, in your opinion, is -- is it Chu's
22 trigger frame that is the claimed, quote, "frame" for
23 allocating resource for uplink multiuser transmission of
24 claim 1 of the '171 patent?
25 A I apologize. Mr. Milkey, I didn't -- I did

MAGNA
LEGAL SERVICES

1 not point to the use of word "trigger frame" from Chu,
2 nor did I -- I know that you point that out in the claim
3 of '171 patent, so I'm a little perplexed by what you
4 mean in your last question that you talk about trigger
5 frame in Chu; and I do not believe I mentioned that in
6 my declaration that there's a word -- there's a specific
7 word "trigger frame" was used in Chu.
8 Q I -- I don't think I pointed to Chu's using
9 the word "trigger frame." I think you -- I thought that
10 your previous answer said that Chu's scheduling frame
11 was a trigger frame.
12 Did I -- did I misunderstand that?
13 A Well, my -- my answer -- in my last answer, I
14 pointed specifically to the claim element, and I believe
15 we discussed what's required with that particular frame;
16 and then I concluded my answer by stating that this
17 particular frame 902 -- that's the -- that is the
18 multiuser uplink scheduling frame -- does exactly what
19 the frame in the claimed element of claim 1, patent '171
20 requires; receive a frame for allocating resources for
21 uplink multiuser transmission to one or more terminals.
22 So that was my answer.
23 Q Okay. Let's look at the '186 patent. This is
24 the Exhibit 1001 in the second IPR proceeding.
25 A I'm sorry.

MAGNA
LEGAL SERVICES

1 Q Let's look at the '186 patent.
2 A The '186 patent. Sorry.
3 Q Yeah.
4 A I got it. May -- may I just go to the file
5 you provided.
6 Q Yeah. Absolutely.
7 A Okay.
8 Q And when you have that open, if you could go
9 to claim 1 and let me know when you're there.
10 A Yes.
11 Just for the record, I have clean copies of my
12 declaration but did not print out these patents since I
13 figured you're going to give them to me anyway.
14 Q No. Absolutely. And so feel free to refer to
15 whatever you have --
16 A Okay. Which -- which -- okay. Sorry. Now I
17 have that open now.
18 Please -- let me -- where do we go again?
19 Q To claim 1 -- it's PDF page 34.
20 A Yes, yes. Claim 1.
21 Q Okay. And do you see --
22 A Thirty-four.
23 Q -- claim --
24 A Sorry.
25 Q -- 1 --

MAGNA
LEGAL SERVICES

1 A I got it. Thank you.
2 Q Okay. Thanks.
3 Sorry about that.
4 Do you see that claim 1 of the '186 patent
5 states in part, "Wherein the processor is configured to
6 receive through the transceiver, a trigger frame
7 indicating uplink transmission of one or more
8 terminals"?
9 A Yes, I do. Yes.
10 Q Okay. And what is it in Chu that you are
11 alleging constitutes the trigger frame as recited in
12 claim 1?
13 A Right. Right. No. That -- this make more
14 sense because we actually have the word "trigger frame."
15 My -- I need to go to my declaration for this particular
16 patent.
17 Okay. Thank you.
18 I'll return to my declarations for IPR
19 proceeding of US Patent '186, and in my declaration on
20 page 59, starting with line 131, first I've reproduced
21 figure 9A again from the Chu prior art, and I stated in
22 my declaration that Chu describes a process in which a
23 client station receives from AP an uplink scheduling
24 frame 902 containing OFDMA uplink scheduling
25 information, and this scheduling information coordinates

MAGNA
LEGAL SERVICES

1 the transmission of a multiuser uplink data unit 904.
2 So this particular claim element requires the
3 uplink transmission by multi -- by one or more
4 terminals, and this is the -- and then prior art, Chu,
5 in my declaration I stated this scheduling frame
6 coordinated transmission of a multiuser uplink data unit
7 902 by instructing multiple client stations when and how
8 to transmit.
9 If I could move on. According to Chu, each
10 client station begins its uplink transmission at a
11 designated time, t2, which follows a predetermined
12 interval such as a short inter-frame space or longer
13 delay after receiving the scheduling frame.
14 This teaches the other operation described in
15 the '186 patent where stations initiate upping
16 transmission after a defined interval upon receiving a
17 trigger frame.
18 Accordingly, a person of ordinary skilled in
19 the art would have recognized that Chu scheduling frame
20 operates in the same manner at the plain trigger frame
21 insofar as the client station is concerned.
22 Q Okay. So I'm a little confused by the
23 statement that Chu's scheduling frame operates in the
24 same manner as the trigger frame to the client stations
25 contemplated by the '186 patent.

MAGNA
LEGAL SERVICES

1 My -- so my specific question is:
2 Is it your allegation that Chu's scheduling
3 frame is a trigger frame?
4 A It is my opinion through analysis indicated in
5 my declaration that Chu's scheduling frame serves the
6 same function as required by the claimed trigger frame.
7 Q Okay. But you don't have the opinion that
8 Chu's scheduling frame actually is a trigger frame;
9 correct?
10 A That's not what I'm saying. Because in
11 claim 1 of the '186 patent, they are -- there is
12 described a trigger frame. And for this -- for -- in
13 accordance with this particular claim, a trigger frame
14 needs to, Number 1, indicating upping transmission of
15 one or more terminals; and we have earlier discussed and
16 established that.
17 And secondarily, claim requires wherein the
18 trigger frame includes an association identifier or AID
19 field; and in my declaration, I also pointed out that
20 the said scheduling frame of Chu includes association
21 identifier field.
22 And furthermore, the other requirement is that
23 the -- the AID field needs to have padding for which
24 I've also -- sorry. This trigger frame would include
25 padding for which I've also stated and explained in my

MAGNA
LEGAL SERVICES

1 declaration -- I can go to more specifics -- where each
2 one of these specific requirements have been fulfilled
3 by Chu.
4 Q Okay. So I understand --
5 A That is a trigger frame.
6 Q Okay. So I understand that claim 1 of the
7 '186 patent has certain requirements for what the
8 trigger frame must do.
9 My question is:
10 Does trigger frame have a meaning in the art
11 outside of the context of claim 1 of the '186 patent?
12 A Whether or not that has a defined meaning, I
13 don't recall. I -- express an opinion on that. It's
14 quite possible there are other literatures or standards
15 that use the word "trigger frame," but as right now I
16 don't recall whether that is -- there's some specific
17 definition as to what a -- what can be a trigger frame,
18 what cannot be a trigger frame.
19 So in the context of patent -- the '186
20 patent, the specification and the claim, you know,
21 clearly explain what the trigger frame as envisioned by
22 '186 needs to have in these to be able to indicate
23 upping transmission resources. It needs to be able to
24 invoke the transmission of one or more terminals.
25 And other features include that it has AID so

MAGNA
LEGAL SERVICES

1 that the stations in receipt of the frame knows that
2 they are being called upon to transmit and their
3 padding, if necessary.
4 Q Okay.
5 A So in today -- insofar as our discussion's
6 concerned, that Chu's scheduling frame is effectively
7 serving as a trigger frame.
8 Q Okay. That's helpful.
9 So Chu also discloses that the scheduling
10 frame includes an FCS field; correct?
11 A Yes.
12 Q And just for the record, what is an FCS field?
13 A Let's see. Let me find -- let me recall what
14 the acronym stands for. I think it's a frame
15 checking -- something. Framed -- yeah. Sorry.
16 It's a frame checking sequence. So FCS is a
17 frame checking sequence. It provides a short -- short
18 spring of bits for the receiver to check the integrity
19 of the received data frame. Hence, it's called a frame
20 check sequence bit, FCS.
21 Q Okay. And is the FCS field in Chu located at
22 the end of Chu's scheduling frame 902?
23 A Time to go to Chu -- if you could ask your
24 question again. You're asking whether Chu's FCS field
25 is at the end of the frame?

MAGNA
LEGAL SERVICES

1 Q Yeah. At the end of the scheduling frame.
2 A Thank you for waiting.
3 I just went to Chu, and Chu does indicate in
4 figure 13B that end of a control frame is the FCS field.
5 Now -- so Chu's figure 13B indicated that it is a
6 control frame, or in this particular figure, it -- the
7 discussion, I think, is in paragraph 180 -- sorry, 118,
8 0118 of Chu. Paragraph 0118 start -- starts with,
9 "Figure 13B is a diagram of an example control field
10 1350, included in -- included in a control frame
11 transmitted by a client station 25."
12 And so what this particular reference indicate
13 is a well-known -- it's -- this is a well-known
14 knowledge for a person of skill in the art regarding
15 wi-fi that a control frame has a typical structure of
16 figure 13B, even though figure 13B specifically
17 mentioned that a control frame of such structure may be
18 transmitted by a client station, but Chu also discussed
19 the transmission of a control frame by AP station.
20 And Chu specifically mention in paragraph 74
21 that, in some embodiment, that NEP14 transmit a control
22 frame such as a scheduling frame to the client station
23 25 prior to transmission of an OFDMA data unit to the
24 client stations.
25 So in that -- in the context of Chu, of 11

MAGNA
LEGAL SERVICES

1 data frame and the context of the control frame that we
2 have just discussed, the scheduling frame is a control
3 frame. It follows the same structure as the frame
4 indicated in figure 13B with the FCS field at the end of
5 that particular frame.
6 Thank you.
7 Q Okay. So it's your opinion that Chu either
8 discloses or at least renders obvious that the FCS field
9 would be at the end of Chu's scheduling frame?
10 A Yeah. Chu discloses that to a person of skill
11 in the art, it would have been obvious that the FCS --
12 FCS field shown in figure 13B at the end of a particular
13 frame -- data frame is to be followed by -- by Chu's
14 scheduling frame. That -- that is my opinion.
15 MR. MONALDO: Hey, Jim, we've been going a little
16 over an hour. I don't know if now would be a good time
17 for a break.
18 MR. MILKEY: Yeah. We'll take a break in just a
19 couple questions.
20 BY MR. MILKEY:
21 Q I just have a real quick with clarification on
22 the last answer, Dr. Ding.
23 You stated that it would have been obvious to
24 a POSITA that the FCS field shown in figure 13B is to be
25 followed by Chu's scheduling frame.

MAGNA
LEGAL SERVICES

1 I want to clarify.
2 Did you mean that the FCS field would come
3 before Chu's scheduling frame or that the FCS field
4 would be at the end of Chu's scheduling frame?
5 A Thank you. I beg your pardon.
6 What I meant was that that's very -- the same
7 kind of structure is shown in figure 13B whereby the FCS
8 field is at the end of a controlled frame would also
9 be -- that this particular structure would also be what
10 Chu's scheduling frame conforms to. That is has a
11 FTC -- FCS field at the end of the scheduling frame.
12 Q Okay. Thank you.
13 MR. MILKEY: Let's go off the record.
14 THE VIDEOGRAPHER: Off the record at 10:08 a.m.
15 (Recess was taken at 10:08 AM until 10:23 AM.)
16 THE VIDEOGRAPHER: This is the beginning of
17 Media Number 2 in the continuing deposition of Dr. Zhi
18 Ding. Back on the record at 10:23 a.m.
19 BY MR. MILKEY:
20 Q Okay. Welcome back, Dr. Ding.
21 Did you have any discussions with counsel over
22 the break?
23 A No.
24 Q Okay. So we've been talking a little bit
25 about your declaration regarding the '186 patent. I

MAGNA
LEGAL SERVICES

1 want to switch gears a little bit and go back to your
2 declaration regarding the '171 patent, which is in the
3 IPR2025-0110 proceeding.
4 Okay?
5 A Yes.
6 Q Okay. And if you could go to page 68 of that
7 document, it has the heading "Combination of Chu and
8 Choi" on that page. If you could let me know when
9 you're at page 68.
10 A Yes. I'm there.
11 Q Okay. And in paragraph 145 towards the bottom
12 of page 68, you state that -- and this is -- this is
13 starting partway through the paragraph. I don't mean to
14 be taking anything out of context, so feel free to
15 clarify if you need to.
16 But I -- I just want to point your attention
17 to the statement towards the bottom of page 68 that
18 says, "Chu does not describe how such padding is
19 identified within the scheduling frame."
20 And then in the next sentence you go on to
21 say, "In particular, it lacks any explanation of whether
22 specific values, markers, or reserved field entries are
23 used to allow a receiving station to delineate the
24 padding region from other parts of the frame."
25 Do you see that?

MAGNA
LEGAL SERVICES

1 A I do.
2 Q Okay. So, in your opinion, does Chu give
3 enough information for a person of ordinary skill in the
4 art to understand any disclosure of how a receiving
5 station would delineate the padding region from the
6 other parts of Chu's scheduling frame?
7 A So my answer, going back to the same
8 paragraph, 145, "Chu describes that the scheduling frame
9 may include one or more padding bits at the end" before
10 the FCS, so the purpose of these bits is to give client
11 station sufficient time to process the received
12 scheduling information and prepare their uplink
13 transmission.
14 So I did indicate that, "While this addresses
15 the need for padding to accommodate processing delay,
16 Chu does not describe how such padding is identified
17 within the scheduling frame" to the receiver.
18 So to the extent that padding is available,
19 the AID field is also available in the scheduling frame,
20 Chu leaves open possibilities for different ways --
21 different ways of identifying the presence of padding to
22 a receiver.
23 And so for that reason, a skilled -- a person
24 skilled in the art would have attempted to look for
25 other information on how -- how and where to indicate

MAGNA
LEGAL SERVICES

1 the presence of padding in such a scheduling frame, and
2 Choi provides such a solution.
3 Q Okay. So is it your opinion that Choi does
4 not disclose any specific means of indicating where the
5 padding begins within its scheduling frame?
6 A Did you mean Chu?
7 Q Yes. Sorry. Thank you.
8 A That's okay.
9 Q Is it your opinion that Chu does not disclose
10 any specific means of indicating where the padding
11 begins within its scheduling frame?
12 A Well, as in my declaration, it's stated that
13 Chu does not describe how such padding is identified
14 within the scheduling frame.
15 Q So what is -- strike that.
16 Why does the receiver need to know where the
17 padding begins within the scheduling frame?
18 A The reason is explained in my paragraph 146.
19 So the -- Choi provides a solution that teaches using a
20 reserve value in the AID field such as value 11 to
21 signal the beginning of a padding region; and the reason
22 and the benefit for doing that explained -- is explained
23 in the next sentence that, "This mechanism allows the
24 receiving terminals to distinguish between valid data
25 and padding" -- so paraphrasing, padding is just -- does

MAGNA
LEGAL SERVICES

1 not contain any original data; it is -- it is not part
2 of the payload, thereby it's called padding -- "ensuring
3 that variable-length fields in the frames are
4 interpreted correctly."
5 And so Choi explained that this technique
6 supports reliable frame parsing and enables consistent
7 decoding and alignment, even in the presence of optional
8 or repeating information fields.
9 So that is a benefit. It ensures that
10 variable-length fields in the frame can be interpreted
11 correctly. It allows the terminal to distinguish
12 between valid data and padding bits. That is a benefit.
13 Q Okay. So if -- if a solution like Choi's
14 reserved value for an AID field were not used, does Chu
15 disclose any way for the receiver to distinguish between
16 payload data and padding data?
17 A I think the -- the answer requesting,
18 Mr. Milkey, is Chu does suggest in paragraph 93 at
19 the -- toward the end, that Chu stated that, for
20 example, that sent- -- sentence start with "For example,
21 a MAC header included in the scheduling frame 902
22 indicates a length of a valid payload, wherein the one
23 or more padding bits follow the valid payload in an
24 embodiment."
25 So that the -- Chu also considered, basically,

MAGNA
LEGAL SERVICES

1 presented that the -- that the -- to a person of skill
2 in the art that whether or not padding can be identified
3 could be dealt with by adding another length indicator,
4 but that's not what -- that's not necessarily the only
5 way, and because in doing so, you would have to -- you
6 would have to provide a length of the valid payload
7 consuming -- requiring the protocol to define yet
8 another field in the control frame.
9 So to the extent that a person of skill in the
10 art had the option of investigating other solutions,
11 Choi provides such a solution whereby the specific value
12 is reserved for the AID field to indicate the beginning
13 of a padding.
14 Q Okay. So -- so you agree that Chu discloses a
15 way of allowing a receiving station to delineate the
16 padding ranging from other parts of the frame; correct?
17 A I acknowledge that Chu suggests an example,
18 but it does not really limit -- Chu -- his invention to
19 this one particular suggested solution. And to the
20 extent that Chu's invention is quite broad, includes
21 many other aspects, and this particular padding is only
22 one of many inventive aspect of Chu.
23 So for -- and the person of skill in the art
24 looking at this thing in totality would have to evaluate
25 whether this particular suggestion requiring a new

MAGNA
LEGAL SERVICES

1 definition of a control frame to provide a variable -- a
2 valid payload length, whether that is a compatible --
3 idea compatible with their current protocol or not and
4 whether other solutions should be considered.
5 And that will be -- other solutions would be
6 weighed in consideration of the -- whether the cost of
7 defining new field is too much or whether there is --
8 it's going to cause compatibility issues --
9 Q Okay.
10 A -- and Choi does not require this extra length
11 definition.
12 Q Okay. So it's your opinion that Choi doesn't
13 require the extra length definition in the MAC header?
14 A With Chu -- no, that's not the -- Choi's
15 solution to indicate padding is different from what the
16 suggested example in paragraph 93 of Chu.
17 Q Okay. If someone were to use Choi's reserved
18 AID value in combination with Chu, they would still need
19 to provide a length value in the MAC header; correct?
20 A So yes. And, in fact, Chu has specifically
21 stated that -- in the sentence after that, it says,
22 Further, a signal field of a PHY preamble of the
23 scheduling frame 902 includes an indication of the
24 entire length of the scheduling frame 902, which
25 includes the one or more padding fields at the end of

MAGNA
LEGAL SERVICES

1 the scheduling frame 902 in an embodiment.
2 So they are described here two different
3 length indicators. One is a valid payload; one is
4 entirety of the scheduling field.
5 Q Okay. Are you aware of any instances of a MAC
6 header not including an indication of the length of the
7 MAC frame?
8 A Yeah, I -- I did not believe I explained
9 within the context of wi-fi or beta to dye 11. The
10 length field is not indicated, but I think we are
11 talking about two different items. There are two
12 length. One could be suggested by Choi to include --
13 indicate a valid payload length, but then the signal
14 field in the PHY preamble always indicate the entire
15 length of the scheduling frame, so one would look at
16 that as being separate indication of the frame length.
17 Q Okay. Is a -- is a length indicated by a PHY
18 preamble different than a length indicated by a MAC
19 header?
20 A So I would like to know whether, Counsel,
21 you're referring to a specific diagram of the MAC header
22 in Chu or in the patent 7 -- '171.
23 Q So let me take a step back.
24 A Yeah.
25 Q What -- what is -- so we've been talking about

MAGNA
LEGAL SERVICES

1 a PHY preamble.
2 What -- "PHY" is P-H-Y; correct?
3 A Yes. That's P-H-Y.
4 Q Okay. What is -- or what does PHY refer to in
5 the context of wi-fi?
6 A This PHY is referring to the physical layer.
7 Q Okay. And what does MAC refer to in the
8 context of wi-fi?
9 A It's a medium access control layer. So MAC
10 layer is one layer of -- I believe it's one layer, one
11 above the PHY layer.
12 Q Okay. Is a MAC frame the same thing as a PHY
13 frame?
14 A MAC frame will be conveyed by a PHY frame like
15 a vessel.
16 Q So is a PHY frame longer than the MAC frame
17 that it conveys?
18 A The PHY frame is a -- a frame that would carry
19 the MAC frame.
20 Q Okay. So the PHY frame and the MAC frame can
21 be different lengths; right?
22 A The PHY frame contain additional information.
23 That's correct.
24 Q Okay. And so you would agree that Chu teaches
25 that by providing the length of a valid payload of the

MAGNA
LEGAL SERVICES

1 MAC frame and the entire length of scheduling frame 902
2 using the PHY preamble, that would allow a receiving
3 station to delineate the padding region of the
4 scheduling frame from other parts of the scheduling
5 frame; correct?
6 A Yeah, that -- that would be possible at -- it
7 is a possibility for the receiving stations to use the
8 valid payload length, as I suggested in example -- in an
9 example by Chu, in an attempt to compute where the --
10 where padding may be starting.
11 But that is not -- that's not -- as we
12 explained -- I explained earlier, that's not always the
13 best solution; in particular one would really have to
14 incorporate a valid payload length in the MAC header.
15 Q Would a -- would a -- strike that.
16 Would a person of ordinary skill in the art
17 understand the difference between a MAC frame and a PHY
18 frame?
19 A Yes. Yes, it would.
20 Q And would a person of ordinary skill in the
21 art be familiar with the contents of a MAC frame?
22 A Yes.
23 Q And would a person of skill in the art be
24 familiar with the contents of a PHY frame?
25 A Yes. A person of skill would have knowledge

MAGNA
LEGAL SERVICES

1 of that.
2 Now, I would want to mention in the -- the --
3 it's important to understand that the length indicator
4 in PHY -- all right -- in the -- in the -- in the PHY
5 frame to a person of skill in the art and also in the
6 context wi-fi, they're indicated in octets, o-c-t-e-t,
7 or in eight bits in traditionally known as a byte, not
8 in bits.
9 So that meant that when -- even with that
10 length field from the PHY preamble, even with the MAC
11 header payload -- I'm sorry, MAC header providing a
12 valid payload length, you are dealing with two different
13 units. One is in units of octets for the preamble, and
14 one will be in the units of valid payload bits as
15 indicated -- as suggested by Chu.
16 So that internally would make it difficult to
17 find out where did padding bits begin. You would only
18 be able to find in -- with -- with some effort
19 potentially where the padding octet, whether there's a
20 padding octet or not; but you would not be able to
21 discern where the padding bits start.
22 MR. MILKEY: Okay. I'll object to that portion.
23 The answer is outside of the scope of my question.
24 THE WITNESS: I think so. You asked that question
25 of whether a POSITA would have done that to compute

MAGNA
LEGAL SERVICES

1 that. Just -- I'm just providing that answer in the
2 entire context.
3 MR. MILKEY: I'll respectfully disagree regarding
4 what I asked.
5 BY MR. MILKEY:
6 Q But I will ask, where in your declaration do
7 you discuss the need within Chu's system to identify the
8 specific bit at which the padding begins as opposed to
9 the octet in which the padding begins?
10 A As we talked about earlier, in -- in the -- in
11 paragraph 145, page 69 at the end, I start --
12 paragraph 145, page 69, I begin by saying that it
13 lacks -- Chu, that is -- lacks any explanation of
14 whether a specific value, marker, or reservation field
15 entries are used to allow a receiving station to
16 delineate the padding region from other parts of the
17 frame.
18 Now, to a person of ordinary skill in the art,
19 padding start -- padding starts at the bit level, not at
20 the byte level. So I -- that's where I -- in my
21 declaration, I've explained that, the padding region.
22 And, in fact, throughout the entirety of the
23 '171 patent, it continued to mention padding; for
24 example, you know, with -- it's a concept of padding is
25 introduced in bits and not in bytes. That's what -- so

MAGNA
LEGAL SERVICES

1 that's the context.
2 And so I think when we discuss -- when I
3 discussed padding region, I am referring to, you know,
4 the -- the padding at the bit level, not at the byte
5 level.
6 BY MR. MILKEY:
7 Q Okay. Does Chu teach that the padding begins
8 at the bit level and not at the byte level?
9 A I'll need to take a look at that, but as I was
10 saying, that patent '171 repeatedly mentioning padding
11 in terms of bits. In fact, in their dependent claim 2,
12 it talks about padding consists of at least one bit. I
13 saw that as definitely at the bit levels.
14 But let me look at Chu.
15 Yes. Is -- I think we just talked about it
16 earlier, but it's either the same paragraph or we can,
17 like, look at paragraph 144 of -- yeah, 144 of Chu,
18 starting on page 18, the second column. Again, "For
19 example, a MAC header included in a scheduling frame
20 indicates a length of a valid payload wherein the one or
21 more padding bits following the valid payload in an
22 embodiment."
23 So the answer is yes, Chu talks about padding
24 in terms of bits, all along is -- at the very end of the
25 paragraph it states that -- "which includes the one or

MAGNA
LEGAL SERVICES

1 more padding bits at the end of the scheduling frame in
2 an embodiment."
3 I'm sorry. Also figure -- sorry. I think
4 there's a figure, but I can also go on and talk to -- we
5 can talk about paragraph 0071, paragraph 71, in the
6 middle, he explained that, for example, the AP adds
7 padding bits to data bits in one or more of the data
8 units to the equalize length of data unit 604 in the
9 embodiment.
10 So there are numerous places where Chu talks
11 about padding in bits, not in bytes.
12 Q Okay. You agree that an octet is one or more
13 data bits; correct?
14 A No. It's not one or more.
15 An octet is eight bits. There's no ambiguity.
16 Q Okay. Is -- so you disagree that an octet is
17 one or more?
18 A No. I just explained that an octet is eight
19 bits. It's more. It's not one.
20 Q Okay. So, in your opinion, does -- does an
21 octet meet the definition of one or more?
22 A That -- that's -- in a semantics as -- octet,
23 when you say one or more, you would be a larger set that
24 would cover an octet; however, what we have clearly seen
25 from the disclosure by Chu is that the -- the padding

MAGNA
LEGAL SERVICES

1 can be in one or more bits. It never says padding can
2 only be in units of bytes.
3 So that provides the flexibility of padding,
4 and to a person of skill in the art, as you know, that
5 padding would take place at the bit level, not at the
6 byte level.
7 Q If a person of ordinary skill in the art knew
8 the octet in which a valid payload ended, would it be
9 possible for them, depending on how the frame was
10 structured, to determine which specific bit the padding
11 begun -- began at?
12 A I -- I -- I can -- I do not know whether -- in
13 what context one would be able to find within eight bits
14 where the padding bits starts without additional
15 information, and that additional information may even
16 have to be somehow signal that would provide
17 additional -- I would say additional technical hurdle
18 for a product or to provide such information, but I have
19 not -- I don't think I provide that opinion in my
20 declaration.
21 Q Okay.
22 MR. MILKEY: Okay. I'll pass the witness.
23 MR. MONALDO: Can we take a break, maybe five
24 minutes.
25 MR. MILKEY: Yep.

MAGNA
LEGAL SERVICES

1 THE VIDEOGRAPHER: Off the record at 11:01 a.m.
2 (Recess was taken at 11:01 AM until 11:05 AM.)
3 THE VIDEOGRAPHER: This is the beginning of
4 Media Number 3 in the continuing deposition of Dr. Zhi
5 Ding.
6 Back on the record at 11:05 a.m.
7 MR. MONALDO: We have no questions and just want to
8 thank Dr. Ding and everyone for their time during
9 today's deposition.
10 MR. MILKEY: Great. Thank you everyone.
11 THE WITNESS: Thank you very much. Thank you,
12 Mr. Milkey. Thank you, Kayla. Thank you, Daniel.
13 THE VIDEOGRAPHER: And, Counsel, who wanted a copy
14 of the video?
15 MR. MILKEY: I don't think we need a copy of the
16 video at this time.
17 THE VIDEOGRAPHER: Okay. This concludes the
18 deposition of Dr. Zhi Ding on March 13th, 2026.
19 Off the record at 11:06 a.m. Pacific Time.
20 (A discussion was held off the record.)
21 MR. MILKEY: A rough draft would be great, and if
22 we could get a copy of the transcript by next Friday,
23 that would be amazing.
24 THE STENOGRAPHER: And, Mr. Monaldo, anything for
25 you?

MAGNA
LEGAL SERVICES

1 MR. MONALDO: No. We don't need anything. Thank
2 you.
3 (Proceedings concluded at 11:07 a.m.)
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MAGNA
LEGAL SERVICES

1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF ORANGE)
4
5
6
7 I, the undersigned, say that I have read the
8 foregoing deposition, and I declare, under penalty of
9 perjury, that the foregoing is a true and correct
10 transcript of my testimony contained therein.
11 EXECUTED this _____ day of _____,
12 2026, at _____, California's.
13
14
15
16 _____
ZHI DING, Ph.D.
17
18
19
20
21
22
23
24
25

MAGNA
LEGAL SERVICES

BE IT KNOWN that the foregoing proceedings were taken before me; that the witness before testifying was duly sworn to testify to the whole truth; that the foregoing pages are a full, true and accurate record of the proceedings, all done to the best of my skill and ability; that the proceedings were taken down by me in stenographic shorthand and thereafter reduced to print under my direction.

I CERTIFY that I am in no way related to any of the parties hereto, nor am I in any way interested in the outcome thereof.

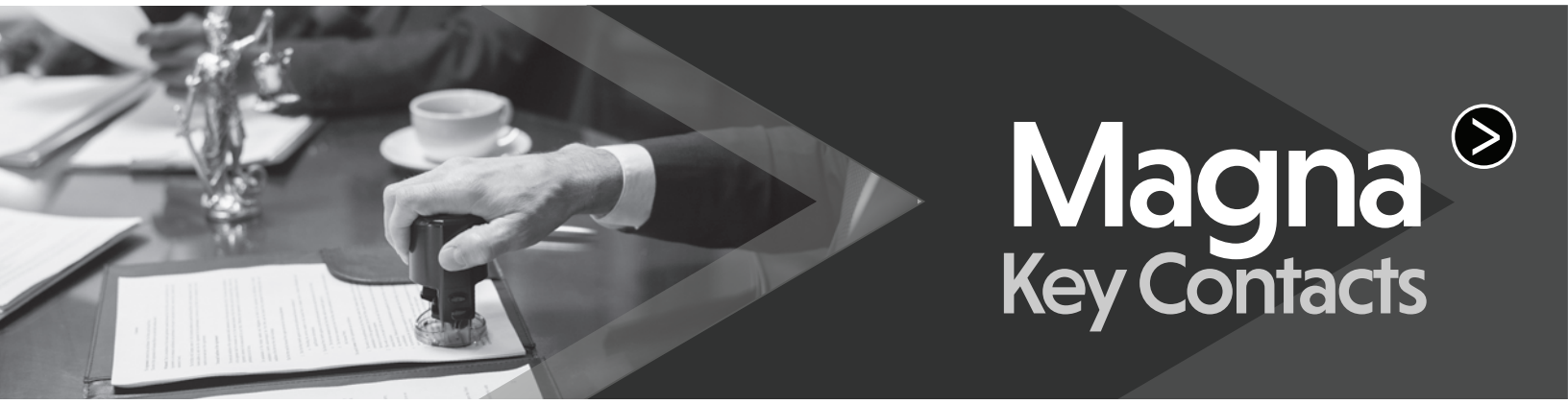
( ) Review and signature requested.
( ) Review and signature waived.
(x) Review and signature neither requested nor waived.

IN WITNESS WHEREOF, I have subscribed my name this 19th day of March, 2026.

Kayla Lotstein

Kayla Lotstein, California CSR No. 13916

MAGNA
LEGAL SERVICES



Schedule a Deposition:
Scheduling@MagnaLS.com | 866-624-6221

Order a Transcript:
CustomerService@MagnaLS.com | 866-624-6221

General Billing Inquiries:
ARTeam@MagnaLS.com | 866-624-6221

Scheduling Operations Manager:
Patricia Gondor (E: PGondor@MagnaLS.com | C: 215-221-9566)

Customer Care:
Cari Hartley (E: CHartley@MagnaLS.com | C: 843-814-0841)

Director of Production Services:
Ron Hickman (E:RHickman@MagnaLS.com | C: 215-982-0810)

National Director of Discovery Support Services:
Carmella Mazza (E: CMazza@MagnaLS.com | C: 856-495-1920)

Billing Manager:
Maria Capetola (E: MCapetola@MagnaLS.com | C: 215-292-9603)

Director of Sales Operations:
Kristina Moukina (E: KMoukina@MagnaLS.com | C: 215-796-5028)

MAGNA LEGAL SERVICES

A

ability 49:6
able 27:22,23 41:18,20 45:13
about 7:21 8:4,13,21 9:18 11:19 14:1 15:14 22:4 24:3 31:25 38:11,25 42:10 43:12,15,23 44:5,11
above 39:11
absolute 13:5
Absolutely 12:23 23:6,14
access 16:24 19:21 20:10,16 21:8,8 39:9
accommodate 33:15
accordance 26:13
According 25:9
Accordingly 25:18
accurate 49:4
acknowledge 36:17
Acrobat 11:9
acronym 15:20,21 28:14
actual 14:11
actually 18:5 24:14 26:8
add 17:4
adding 36:3
additional 13:25 14:12,16 15:10 15:11 18:11 39:22 45:14,15,17,17
addressed 17:17
addresses 33:14
adds 44:6
after 15:4 25:13,16 37:21
again 7:18,19 10:9 23:18 24:21 28:24 43:18
ago 8:21
agree 36:14 39:24 44:12
ahead 7:3
AI 14:22,25 15:1
AID 12:3,4,5,10,11,13,14 12:16 13:3,5,6,7,8 13:13,14,16,19,20 13:23,23,24,25 14:3 14:5,8,11,12,21 15:2,4,6,9,12,12,15 15:21 16:2,10,17,17 16:19,25 17:2,6,9 17:12,13,16,23 18:9 18:11 26:18,23 27:25 33:19 34:20 35:14 36:12 37:18
AIDs 15:14 16:18 18:6
AID:0 16:10 18:6,14
AID:1 16:10 18:6,15
AID:3 16:10 18:18
AID:6 16:10
AID:7 16:11
AID:8 14:11 15:5 16:13
alignment 35:7
all 6:18 7:23 9:19 10:1,2 14:18 41:4 43:24 49:5
allegation 19:10 26:2
alleging 24:11
allocated 20:23 21:15
allocating 19:2,11 21:23 22:20
allocation 21:12
allow 15:17 21:13 32:23 40:2 42:15
allowing 36:15
allows 17:12 34:23 35:11
along 43:24
already 10:22
also 3:13 9:24 10:9 11:14 14:5 26:19,24,25 28:9 29:18 31:8,9 33:19 35:25 41:5 44:3,4
always 38:14 40:12
am 31:15,15 43:3 46:2,2 49:10,11
amazing 46:23
ambiguity 44:15
an 15:15,15,24 18:13 19:20 20:4 21:10 24:23 26:18 27:13 28:10,12 29:9,23 30:16 35:14,23 36:17 37:23 38:1,6 40:8,9 43:21 44:2 44:12,15,16,18,20 44:24
analysis 26:4
Angeles 3:5
another 36:3,8
answer 5:8 22:10,13,13,16 22:22 30:22 33:7 35:17 41:23 42:1 43:23
any 10:14,23,23 11:14 31:21 32:21 33:4 34:4,10 35:1,15 38:5 42:13 49:10,11
anything 32:14 46:24 47:1
anyway 23:13
AP 24:23 29:19 44:6
apologize 21:25
APPEAL 1:2 2:2
appearances 3:1 6:19
applications 9:6,12,15,20
are 6:4 8:4,23 9:3,18 10:12,14,20 11:15 13:2,8,10 14:11,15 14:16,18,20,22 16:2 16:23 17:25 19:13

MAGNA LEGAL SERVICES

21:1,11 24:10 26:11 27:14 28:2 32:22 35:3 38:2,5,10,11 41:12 42:15 44:10 49:4
area
17:15
arrow
13:17
art
15:25 16:21 24:21 25:4,19 27:10 29:14 30:11 33:4,24 36:2 36:10,23 40:16,21 40:23 41:5 42:18 45:4,7
arts
9:2,3 10:10
as
7:12,13 8:3,19,21 9:3 11:16 12:3,10 13:9 14:6,23 15:2,20 16:1 17:8,12,12,16 18:8 19:13,24 20:20 20:20,20,21 21:6,13 21:14 24:11 25:12 25:21,24 26:6 27:15 27:17,21 28:5,7 29:22 30:3 34:12,20 38:16 39:12 40:8,11 41:7,14,15 42:8,10 43:9,13 44:22 45:4
ask
11:19 14:1 28:23 42:6
asked
41:24 42:4
asking
8:13 28:24
aspect
36:22
aspects
18:25 36:21
assigned
21:1,6
assigns
20:20
association
15:21,24 26:18,20
at
2:13 6:13 13:23 14:6 14:11,22 17:24,24 18:22 21:5 22:23 23:1 25:10,20 28:21 28:25 29:1 30:4,8,9 30:12 31:4,8,11,14 31:15,18 32:9 33:9 35:18 36:24 37:25 38:15 40:6 42:8,11 42:19,19 43:4,4,8,8 43:9,12,13,14,17,24 44:1 45:5,5,11 46:1 46:2,6,16,19 47:3 48:12
attempt
40:9
attempted
33:24
attention
32:16
August
3:3 6:13,21
authored
8:16
available
33:18,19
Ave
3:10
aware
38:5
a.m
1:15 2:13 6:2,11 31:14,18 46:1,6,19 47:3

B

back
12:17 15:17 31:18,20 32:1 33:7 38:23 46:6
basically
35:25
be
5:3 9:17 10:15 15:6,6 15:10,11,13 17:2,6 17:7,16 27:17,18,22 27:23 29:17 30:9,13 30:16,24 31:4,9,9 32:14 35:10 36:2,3 37:4,5,5 38:12 39:14,21 40:6,10,21 40:23 41:14,18,20 44:23 45:1,2,8,13 45:16 46:21,23 49:1
because
13:10 16:16 17:8 18:15 24:14 26:10 36:5
becomes
18:18
been
7:13 15:11 27:2 30:11,15,23 31:24 38:25
before
1:2 2:2,14 11:14 31:3 33:9 49:2,2
beg
31:5
began
45:11
begin
13:15,16 14:4 41:17 42:12
beginning
12:9 18:25 31:16 34:21 36:12 46:3
begins
6:5 12:9 14:5 25:10 34:5,11,17 42:8,9 43:7
begun
45:11
behalf
2:13 6:20,24 7:5,12
being
6:12 13:25 14:15,18 15:1 16:19 28:2 38:16
believe
10:1,14 16:9 22:5,14 38:8 39:10
below
13:2
benefit
34:22 35:9,12
best
40:13 49:5
beta
38:9
between
13:19 34:24 35:12,15 40:17
Beyond
13:24
big
9:25,25
binaries
8:8
bit
15:14 28:20 31:24 32:1 42:8,19 43:4,8 43:12,13 45:5,10
bitmap
13:17 14:7 15:9 17:25
bits
14:12,16,20 15:11 28:18 33:9,10 35:12 35:23 41:7,8,14,17 41:21 42:25 43:11 43:21,24 44:1,7,7 44:11,13,15,19 45:1 45:13,14
BOARD
1:2 2:2
both
7:24 8:8,16,23 9:6,24 10:18,19 12:20 18:4
bottom
32:11,17
Boulevard
3:4
break

MAGNA
LEGAL SERVICES

30:17,18 31:22 45:23
broad 36:20
built 15:9
but 8:1,3,9 9:17 10:1 13:11 14:11 15:20 17:16 18:5,11,25 23:12 26:7 27:15 29:18 32:16 36:4,18 38:10,13 40:11 41:20 42:6 43:9,14 43:16 44:4 45:18
by 1:19 3:3,9 4:5 6:24 7:16 8:22 10:3,5,8 12:9 13:4 14:16 15:11 16:3,23 17:9 18:12 20:6,23 22:3 22:16 25:3,3,7,22 25:25 26:6 27:3,21 29:11,18,19 30:13 30:13,20,25 31:19 36:3 38:12,17,18 39:14,25 40:9 41:15 42:5,12 43:6 44:25 46:22 49:6
byte 12:3,11,14 41:7 42:20 43:4,8 45:6
bytes 42:25 44:11 45:2

C

California 1:20 2:14,15 3:5 48:1 49:24
California's 48:12
call 17:23
called 7:12 16:23 28:2,19 35:2
can 8:2 13:9 15:15 17:10 27:1,17 35:10 36:2 39:20 43:16 44:4,5 45:1,1,12,23
cannot 16:18 27:18
carry 39:18
case 1:6 2:6 6:9 8:8,23
cause 37:8
certain 9:17 27:7
Certified 2:14
CERTIFY 49:10
channels 21:1
check 28:18,20
checking 28:15,16,17
Choi 11:16 12:4,13,17,21 13:1,3,15,16,20,22 13:22 14:2,3,5,9,21 14:23 16:6,6,8,8 17:9,22 18:7,16 32:8 34:2,3,19 35:5 36:11 37:10,12 38:12
Choi's 12:16 15:2,6 16:16 35:13 37:14,17
Chu 11:16 16:21 19:10,13 19:19,23 20:11,21 22:1,5,7 24:10,21 24:22 25:4,9,19 26:20 27:3 28:9,21 28:23 29:3,3,8,18 29:20,25 30:7,10 32:7,18 33:2,8,16 33:20 34:6,9,13 35:14,18,19,25 36:14,17,18,22 37:14,16,18,20 38:22 39:24 40:9 41:15 42:13 43:7,14 43:17,23 44:10,25
Chu's 20:17 21:21 22:8,10 25:23 26:2,5,8 28:6 28:22,24 29:5 30:9 30:13,25 31:3,4,10 33:6 36:20 42:7
citing 19:22
claim 15:20,22 18:22,25,25 19:6,6 21:11,19,24 22:2,14,19 23:9,19 23:20,23 24:4,12 25:2 26:11,13,17 27:6,11,20 43:11
claimed 9:7,13 19:14 21:22 22:19 26:6
claims 9:19
clarification 20:2 30:21
clarify 14:10 16:3 17:20 31:1 32:15
clean 10:23 12:21 23:11
clearly 27:21 44:24
client 19:20 20:23 24:23 25:7,10,21,24 29:11 29:18,22,24 33:10
CO 1:4 2:4
coded 13:4
colleague 6:25
collectively 21:9
column 43:18
combination 32:7 37:18
come 31:2
coming 15:4
communications 15:25
Company 6:7
compatibility 37:8
compatible 37:2,3
compressed 9:25 13:12
compression 17:8
compute 40:9 41:25
concept 42:24
concerned 16:1 25:21 28:6
concluded 22:16 47:3
concludes 46:17
configured 19:1 24:5
conforms 31:10
confused 25:22
connected 13:10
consideration 37:6
considered 10:15 15:2,6 35:25 37:4
consistent

MAGNA
LEGAL SERVICES

consists
43:12
constitute
21:10
constitutes
24:11
consuming
36:7
contain
35:1 39:22
contained
48:10
containing
24:24
contemplated
25:25
contents
40:21,24
context
16:5,20,22 17:1,14 27:11,19 29:25 30:1 32:14 38:9 39:5,8 41:6 42:2 43:1 45:13
continue
21:4
continued
5:1 42:23
continuing
31:17 46:4
control
29:4,6,9,10,15,17,19 29:21 30:1,2 36:8 37:1 39:9
controlled
31:8
conveniences
12:20
conversations
8:24
conveyed
39:14
conveys
39:17
coordinated
21:2,17 25:6
coordinates
24:25
copies
10:22,23 23:11
copy
12:21 46:13,15,22
correct
7:21 8:5,12,14 11:12 15:7 16:19 18:6,7 26:9 28:10 36:16 37:19 39:2,23 40:5 44:13 48:9
correctly
35:4,11
correspond
18:17
cost
37:6
could
11:1,3 16:3 17:6 23:8 25:9 28:23 32:6,8 36:3 38:12 46:22
counsel
3:1 6:18 8:22 9:8,9 9:17 10:11 12:24 31:21 38:20 46:13
COUNTY
48:3
couple
30:19
court
6:16 7:7
cover
44:24
coveraged
17:15
covers
21:19
CRC
1:20
cross
13:18
CRR
1:20
CSR
1:20 7:10 49:24
current
37:3
currently
11:11

D

Daniel
3:14 6:15 46:12
data
20:5 21:5 25:1,6 28:19 29:23 30:1,13 34:24 35:1,12,16,16 44:7,7,8,13
dates
9:7
day
10:21 11:17 48:11 49:20
DC
3:11
dealing
41:12
dealt
36:3
decision
10:3
decisions
10:8
declaration
8:14 9:8,16 10:6,10 11:4,21 12:2 19:16 19:19 20:9 22:6 23:12 24:15,19,22 25:5 26:5,19 27:1 31:25 32:2 34:12 42:6,21 45:20
declarations
7:24 8:9,10,16,19 9:15 10:15 24:18
declare
48:8
decoding
35:7
define
36:7
defined
25:16 27:12
defining
37:7
definitely
43:13
definition
15:20 27:17 37:1,11 37:13 44:21
delay
25:13 33:15
delineate
32:23 33:5 36:15 40:3 42:16
delta
12:4,11,14 13:5 15:12 16:17 17:6,16
dependent
43:11
depending
45:9
deposition
1:12 2:13 6:5,12 8:11 9:22,23 10:5,13 31:17 46:4,9,18 48:8
describe
32:18 33:16 34:13
described
25:14 26:12 38:2
describes
19:20 24:22 33:8
designated
25:11
determine
45:10
diagram
29:9 38:21
did
8:10,18 9:14,21 10:14 15:19 18:7 21:25 22:2,12,12 23:12 31:2,21 33:14 34:6 38:8 41:17
didn't
21:25
difference

MAGNA
LEGAL SERVICES

40:17
different
16:9 18:5 21:1,17 33:20,21 37:15 38:2 38:11,18 39:21 41:12
differential
18:9,12
difficult
41:16
Ding
1:12 2:13 4:2 6:6 7:11,17 10:21 30:22 31:18,20 46:5,8,18 48:16
direction
49:8
directly
19:23
disagree
42:3 44:16
discern
41:21
disclose
34:4,9 35:15
discloses
16:6,8 19:10 28:9 30:8,10 36:14
disclosure
14:23 33:4 44:25
discuss
42:7 43:2
discussed
20:20 21:13 22:15 26:15 29:18 30:2 43:3
discussion
29:7 46:20
discussions
9:17 31:21
discussion's
28:5
distinct
21:15
distinctive
20:25
distinguish
34:24 35:11,15
divided
13:11
division
20:15
do
9:21 12:1,13,16 19:4 22:5 23:18,21 24:4 24:9 27:8 32:25 33:1 42:6 45:12
document
12:21 32:7
documents
8:2
does
13:14,20 14:3,8 20:14 22:18 27:10 29:3 32:18 33:2,16 34:3,9,13,16,25 35:14,18 36:18 37:10 39:4,7 43:7 44:20,20
doesn't
37:12
doing
34:22 36:5
domain
21:16
done
41:25 49:5
don't
7:25 22:8 26:7 27:13 27:16 30:16 32:13 45:19 46:15 47:1
down
49:6
downloaded
11:7
Dr
6:6 7:17 10:21 30:22 31:17,20 46:4,8,18
draft
46:21
drafted
9:8
duly
7:13 49:2
during
46:8
dye
38:9

E

each
8:14 13:11 16:22,23 16:24 21:4,4 25:9 27:1
earlier
26:15 40:12 42:10 43:16
effectively
20:19 28:6
effort
41:18
eight
41:7 44:15,18 45:13
either
13:9 30:7 43:16
Electronics
1:4 2:4 6:6 7:5
element
21:19 22:14,19 25:2
else
9:4
embodiment
18:8 29:21 35:24 38:1 43:22 44:2,9
enables
35:6
encoded
13:17 14:7 15:9 17:24
encoding
12:4,11,15 18:9,12
end
13:21 14:9 28:22,25 29:1,4 30:4,9,12 31:4,8,11 33:9 35:19 37:25 42:11 43:24 44:1
ended
13:24 14:11 45:8
endpoint
13:23 15:4
engagement
8:22
enough
33:3
ensures
35:9
ensuring
35:2
entire
9:23 12:3,10,14,16 13:13 15:9 37:24 38:14 40:1 42:2
entirety
38:4 42:22
entries
13:8 17:23,25 18:4 32:22 42:15
entry
13:12 15:5
envisioned
27:21
equalize
44:8
ESQ
3:3,9
established
26:16
evaluate
36:24
even
15:3 29:16 35:7 41:9 41:10 45:15
eventually
9:2
everyone
46:8,10
exactly
22:18
EXAMINATION
7:15
EXAMINATIONS
4:3
examined

MAGNA
LEGAL SERVICES

7:13
example
13:3 15:5 16:5,6,8 17:7,22 29:9 35:20 35:20 36:17 37:16 40:8,9 42:24 43:19 44:6
EXECUTED
48:11
Exhibit
10:19 11:1,3,15,15 19:5,22 22:24
exhibits
4:7 9:24 10:23 11:7
explain
18:7 27:21
explained
14:23 26:25 34:18,22 34:22 35:5 38:8 40:12,12 42:21 44:6 44:18
explanation
15:15 32:21 42:13
express
9:14 27:13
expressed
8:19 9:18
extent
33:18 36:9,20
extra
37:10,13

F

fact
37:20 42:22 43:11
fairly
10:15
familiar
40:21,24
FCS
28:10,12,16,20,21,24 29:4 30:4,8,11,12 30:24 31:2,3,7,11 33:10
features
9:19 27:25
feel
7:25 10:23 11:16 23:14 32:14
few
9:3 13:2
field
12:3,4,5,10,13,16 13:7,10,13,14,16,20 14:3,8,12,21 15:2,6 16:25 17:12,23 18:9 26:19,21,23 28:10 28:12,21,24 29:4,9 30:4,8,12,24 31:2,3 31:8,11 32:22 33:19 34:20 35:14 36:8,12 37:7,22 38:4,10,14 41:10 42:14
fields
13:4,11 35:3,8,10 37:25
figure
12:25 13:1,3,15,16 13:21,22 14:1,3,5,6 14:9,15,21 15:3 16:6,9 17:6,7,22 20:11 24:21 29:4,5 29:6,9,16,16 30:4 30:12,24 31:7 44:3 44:4
figured
23:13
figures
13:2
file
23:4
filed
9:3
find
19:16 28:13 41:17,18 45:13
firm
6:21
first
15:18 17:23 18:10,10 24:20
Fish
3:9 6:23 7:4
five
45:23
flexibility
45:3
Floor
3:5
folders
10:1
follow
35:23
followed
30:13,25
following
43:21
follows
7:14 25:11 30:3
follow-up
17:5
for
3:2,8 7:24 8:2,8,9,11 8:22 9:4,21,23 10:4 10:11,13,18 12:20 13:3,4 14:10 15:2,5 15:21 16:5,6,8 17:15,22 19:2,2,10 19:11 20:1,4,12,14 20:15,23 21:1,9,12 21:17,22,23 22:20 22:20 23:11 24:15 24:18 26:12,12,23 26:25 27:7 28:12,14 28:18 29:2,14 30:17 33:3,15,20,23,24 34:22 35:14,15,19 35:20 36:12,23 40:7 41:13 42:23 43:18 44:6 45:9,18 46:8 46:24
foregoing
48:8,9 49:1,3
form
10:14
forth
10:3 18:19
four
14:16
Framed
28:15
frames
35:3
free
7:25 10:23 11:16 23:14 32:14
frequency
20:15 21:16
Friday
1:14 2:13 6:1,10 46:22
from
6:23 7:4 9:24,24 13:17 14:24 18:11 18:14 19:21,23 20:10 22:1 24:21,23 32:24 33:5 36:16 37:15 40:4 41:10 42:16 44:25
FTC
31:11
fulfilled
27:2
full
49:4
function
26:6
further
11:14 37:22
furthermore
26:22

G

gears
32:1
gentlemans
8:23
get
18:18 46:22
give
23:13 33:2,10
given
15:22
go

MAGNA
LEGAL SERVICES

7:3 11:14 15:17 23:4,8,18 24:15 27:1 28:23 31:13 32:1,6,20 44:4
going 15:13 18:24 23:13 30:15 33:7 37:8
good 7:17,18,19 30:16
got 8:7 23:4 24:1
great 46:10,21
ground 9:4

H

had 8:23 9:7,19 10:10 17:5 36:10
has 16:24 21:15 27:7,12 27:25 29:15 31:10 32:7 37:20
have 9:16 10:1,22 11:6,7,8 11:8,10,18 15:11 16:18 18:4,9 23:8 23:11,15,17 24:14 25:19 26:7,15,23 27:2,10,22 30:2,11 30:21,23 31:21 33:24 36:5,6,24 40:13,25 41:25 44:24 45:16,18 46:7 48:7 49:19
having 7:13
he 18:10 44:6
header 35:21 37:13,19 38:6 38:19,21 40:14 41:11,11 43:19
heading 32:7
held 46:20
Hello 7:9
help 9:8
helpful 17:3,19 18:20 28:8
Hence 28:19
here 7:20 8:23 10:11 12:22 21:13 38:2
hereto 49:11
Hey 30:15
his 14:23 18:16 36:18
history 9:2,24
hope 17:19
hour 30:16
how 8:9 12:13,16 13:7 18:7,8,18 25:7 32:18 33:4,16,25,25 34:13 45:9
however 44:24
hurdle 45:17

I

idea 37:3
identified 9:2 19:24 32:19 33:16 34:13 36:2
identifier 15:22,24 26:18,21
identify 17:10 42:7
identifying 16:9 33:21
if 11:1,3 12:21 13:10 23:8 25:9 28:3,23 30:16 32:6,8,15 35:13,13 37:17 45:7 46:21
immediately 15:4
important 17:15 41:3
impressive 8:7
INC 1:7 2:7
include 26:24 27:25 33:9 38:12
included 29:10,10 35:21 43:19
includes 19:25 20:3 26:18,20 28:10 36:20 37:23 37:25 43:25
including 38:6
incorporate 40:14
increment 18:14,14,17
INDEX 4:1 5:1
indicate 12:6 15:21 27:22 29:3,12 33:14,25 36:12 37:15 38:13 38:14
indicated 13:3,23 17:9,16 18:12,15,16 21:7 26:4 29:5 30:4 38:10,17,18 41:6,15
indicates 20:22 35:22 43:20
indicating 13:8 14:16,18 18:13 24:7 26:14 34:4,10
indication 37:23 38:6,16
indicator 36:3 41:3
indicators 38:3
individual 13:4,12 17:13
individually 13:11
information 5:3 13:12 17:9 20:1,4 24:25,25 33:3,12,25 35:8 39:22 45:15,15 45:18
initiate 25:15
inside 15:1
insofar 15:2 16:1 25:21 28:5
instances 38:5
instead 16:17
Institute 1:7 2:7 6:7
INSTRUCTED 5:8
instructing 25:7
integrity 28:18
interested 49:12
internally 41:16
interpreted 35:4,10
intersection 13:18
interval 25:12,16
inter-frame 25:12

MAGNA
LEGAL SERVICES

introduced
42:25
invention
36:18,20
inventive
36:22
inventors
9:6,12
investigating
36:10
invoke
27:24
involve
7:23
IPR
7:21 8:3,8,14 9:4 22:24 24:18
IPR2025-01069
1:6 2:6
IPR2025-0110
32:3
IPR2025-01110
6:9 8:5
IPR2025-01111
8:5
issues
37:8
it
9:10 11:8 12:13,14 12:21 15:3 16:16 17:23 20:15 21:11 21:21 23:4 24:1,10 26:2,4 27:23,25 28:17 29:5,6 30:3 30:11,23 32:7,21 34:3,9 35:1,1,9,11 36:18 37:21 39:17 40:6,19 41:16 42:12 42:23 43:12,15,25 45:1,8 49:1
items
38:11
its
16:24 17:11,13 21:6 25:10 34:5,11
it's
8:7 14:10 15:20 16:9 17:15 19:9,17 23:19 27:13 28:14,16,19 29:13 30:7 34:12 35:2 37:8,12 39:9 39:10 41:3 42:24 43:16 44:14,19,19
I'd
11:19
I'll
9:16 17:23 24:18 41:22 42:3 43:9 45:22
I'm
6:24 7:4 8:13 11:14 12:20 18:24 19:16 22:3,25 25:22 26:10 32:10 41:11 42:1 44:3
I've
7:23 10:18 24:20 26:24,25 42:21

J

J
3:9
James
3:3 6:20
Jeremy
3:9 6:23
Jim
30:15
Jmilkey@raklaw.c...
3:4
joined
6:24
Jong
3:15 6:25 7:4
just
8:2 9:16,25 11:14 12:20 14:10 17:4,4 17:20 20:12 21:13 23:4,11 28:12 29:3 30:2,18,21 32:16 34:25 42:1,1 43:15 44:18 46:7

K

Kabat
3:3 6:13,22
Kayla
1:20 2:14 6:16 7:9 46:12 49:24
kind
18:8 31:7
knew
45:7
know
11:6,21 15:2 22:2 23:9 27:20 30:16 32:8 34:16 38:20 42:24 43:3 45:4,12
knowledge
29:14 40:25
known
15:24 41:7 49:1
knows
28:1

L

lacks
32:21 42:13,13
larger
44:23
last
12:1 22:4,13 30:22
law
6:21
layer
39:6,9,10,10,10,11
least
14:23 30:8 43:12
leaves
33:20
Legal
6:16,17
length
13:19 35:22 36:3,6 37:2,10,13,19,24 38:3,6,10,12,13,15 38:16,17,18 39:25 40:1,8,14 41:3,10 41:12 43:20 44:8
lengths
39:21
let
9:4 11:6,21 23:9,18 28:13,13 32:8 38:23 43:14
Let's
22:23 23:1 28:13 31:13
level
42:19,20 43:4,5,8,8 45:5,6
levels
43:13
like
11:17,19 35:13 38:20 39:14 43:17
limit
36:18
line
5:4,9 24:20
list
10:1
literatures
27:14
little
22:3 25:22 30:15 31:24 32:1
LLP
6:14
located
28:21
logically
12:5
long
17:12,16
longer
25:12 39:16
look
22:23 23:1 33:24 38:15 43:9,14,17
looking
18:22 36:24
Los
3:5

MAGNA
LEGAL SERVICES

Lotstein
1:20 2:14 6:16 7:10 49:24
LTD
1:4 2:4

M

MAC
35:21 37:13,19 38:5 38:7,18,21 39:7,9 39:12,14,16,19,20 40:1,14,17,21 41:10 41:11 43:19
Magna
6:15,17
Maine
3:10
make
24:13 41:16
manner
25:20,24
many
36:21,22
March
1:14 2:14 6:1,10 46:18 49:20
marker
42:14
markers
32:22
marking
14:24
match
17:13
materials
10:22
matter
6:6
may
10:22 12:17 17:7 23:4,4 29:17 33:9 40:10 45:15
maybe
45:23
me
9:4 11:6,21 12:22 14:10 15:17 23:9,13 23:18 28:13,13 32:8 38:23 43:14 49:2,6
mean
16:3 22:4 31:2 32:13 34:6
meaning
27:10,12
means
34:4,10
meant
31:6 41:9
mechanism
16:18 34:23
Media
6:5 31:17 46:4
medium
39:9
meet
44:21
meetings
9:7 10:11
memory
10:6
mention
29:20 41:2 42:23
mentioned
9:11 20:20,21 22:5 29:17
mentioning
43:10
middle
44:6
Milkey
3:3 4:5 6:20,20 7:16 7:18 20:6 21:25 30:18,20 31:13,19 35:18 41:22 42:3,5 43:6 45:22,25 46:10 46:12,15,21
minutes
45:24
misunderstand
22:12
module
13:10
Monaldo
3:9 6:23,23 30:15 45:23 46:7,24 47:1
Monaldo@fr.com
3:10
more
13:25 14:25,25 19:3 21:13 22:21 24:7,13 25:3 26:15 27:1,24 33:9 35:23 37:25 43:21 44:1,7,12,14 44:17,19,21,23 45:1
morning
7:17,18
most
10:4 20:8
move
25:9
Mr
4:5 6:20,23 7:2,4,16 7:18 20:6 21:25 30:15,18,20 31:13 31:19 35:18 41:22 42:3,5 43:6 45:22 45:23,25 46:7,10,12 46:15,21,24 47:1
MU
21:12
much
13:2 37:7 46:11
multi
25:3
multiple
13:8,8 20:16 25:7
multiuser
19:2,11,25 20:3 21:10,12,23 22:18 22:21 25:1,6
multiusers
21:9
must
27:8
my
6:24 7:9,10 9:16,18 10:4,6,6,10 11:8,9 12:11,21 16:15 19:9 19:12,16,19 20:9 22:6,13,13,13,16,22 23:11 24:15,15,18 24:19,22 25:5 26:1 26:1,4,5,19,25 27:9 30:14 33:7 34:12,18 41:23 42:20 45:19 48:10 49:5,8,19

N

name
7:9 49:19
near
19:17
necessarily
17:7 36:4
necessary
28:3
need
8:3 24:15 32:15 33:15 34:16 37:18 42:7 43:9 46:15 47:1
needs
26:14,23 27:22,23
neither
49:16
NEP14
29:21
networking
15:25
never
45:1
nevertheless
17:6
new
10:14 14:18 36:25 37:7
next
15:5 32:20 34:23 46:22
no
1:6,20 2:6,15 10:17 13:25 14:18,25,25 17:1,20 23:14 24:13 31:23 37:14 44:14

MAGNA
LEGAL SERVICES

44:15,18 46:7 47:1 49:10,24
None
4:8 5:5,10
nor
22:2 49:11,17
not
5:8 15:19 17:7,15 18:16 22:1,5 23:12 26:10 27:12 32:18 33:16 34:4,9,13 35:1,1,14 36:2,4,4 36:18 37:3,10,14 38:6,8,10 40:11,11 40:12 41:7,20,20 42:19,25 43:4,8 44:11,14,19 45:5,12 45:19
Notice
2:15
now
6:4 11:8,8,18 14:1 23:16,17 27:15 29:5 30:16 41:2 42:18
number
6:5,9 7:10 13:5,24 26:14 31:17 46:4
numbers
8:1
numerous
44:10

O

object
41:22
obvious
30:8,11,23
occupied
15:11
octet
41:19,20 42:9 44:12 44:15,16,18,21,22 44:24 45:8
octets
41:6,13
OFDM
21:5
OFDMA
19:25 20:3,4,13,14 20:23 21:5 24:24 29:23
off
31:13,14 46:1,19,20
Office
1:1 2:1 6:9
okay
7:23 8:7,18 9:11,21 10:13 11:10,20,23 11:25 12:21 13:14 13:20 14:1,8,13,20 15:3,13,24 16:2 17:3,18 18:20 19:9 20:7,12 21:21 22:23 23:7,16,16,21 24:2 24:10,17 25:22 26:7 27:4,6 28:4,8,21 30:7 31:12,20,24 32:4,6,11 33:2 34:3 34:8 35:13 36:14 37:9,12,17 38:5,17 39:4,7,12,20,24 41:22 43:7 44:12,16 44:20 45:21,22 46:17
on
2:13 6:4,20,24 7:5,12 9:7 10:10 11:8,9 14:25 17:5 18:11,18 18:20 24:19 25:9 27:13 30:21 31:18 32:8,20 33:25 43:18 44:4 45:9 46:6,18
one
18:8,14 19:3 22:21 24:7 25:3 26:15 27:2,24 33:9 35:22 36:19,22 37:25 38:3 38:3,12,15 39:10,10 39:10 40:13 41:13 41:14 43:12,20,25 44:7,12,14,17,19,21 44:23 45:1,13
online
10:11
only
36:4,21 41:17 45:2
open
11:1,3,6,8,10 12:21 23:8,17 33:20
opening
12:20
operates
25:20,23
operation
25:14
opinion
21:21 26:4,7 27:13 30:7,14 33:2 34:3,9 37:12 44:20 45:19
opinions
8:19 9:14,18 10:14 11:11
opposed
42:8
option
36:10
optional
35:7
or
12:3,11,14 13:10 15:12 16:21,23 19:3 22:21 24:7 25:3,12 26:15,18 27:12,14 27:24 29:6 30:8 31:3 32:22 33:9 35:8,23 36:2 37:3,7 37:25 38:9,22 39:4 41:7,20 42:14 43:16 43:20,25 44:7,12,14 44:17,21,23 45:1,18
ORANGE
48:3
ordinary
25:18 33:3 40:16,20 42:18 45:7
original
35:1
orthogonal
20:15
other
25:14 26:22 27:14,25 32:24 33:6,25 36:10 36:16,21 37:4,5 40:4 42:16
our
15:17 28:5
out
22:2 23:12 26:19 32:14 41:17
outcome
49:12
outside
27:11 41:23
over
18:24 21:9 30:16 31:21
own
10:6 17:13
Owner
1:8 2:8 6:21
owner's
10:2,7
o-c-t-e-t
41:6

P

Pacific
6:11 46:19
padded
14:12
padding
12:7 26:23,25 28:3 32:18,24 33:5,9,15 33:16,18,21 34:1,5 34:10,13,17,21,25 34:25 35:2,12,16,23 36:2,13,16,21 37:15 37:25 40:3,10 41:17 41:19,20,21 42:8,9 42:16,19,19,21,23 42:24 43:3,4,7,10 43:12,21,23 44:1,7 44:11,25 45:1,3,5 45:10,14

MAGNA
LEGAL SERVICES

page
4:4 5:4,9 18:21 23:19 24:20 32:6,8,9,12 32:17 42:11,12 43:18
paged
13:23,24,25 14:11,15 14:19 15:1,4 16:23
pages
49:4
paragraph
11:20 12:2 19:17,22 20:21 21:4 29:7,8 29:20 32:11,13 33:8 34:18 35:18 37:16 42:11,12 43:16,17 43:25 44:5,5
paraphrasing
34:25
pardon
31:5
parsing
35:6
part
9:3 14:21,22 19:1 24:5 35:1
particular
15:8 17:14 21:14,19 22:15,17 24:15 25:2 26:13 29:6,12 30:5 30:12 31:9 32:21 36:19,21,25 40:13
parties
6:18 49:11
parts
32:24 33:6 36:16 40:4 42:16
partway
32:13
pass
45:22
patent
1:1,2,8 2:1,2,8 6:8,21 8:25,25 9:5 10:2,7 11:4,11 15:19,21,23 18:22 19:7 21:20,24 22:3,19,23 23:1,2 24:4,16,19 25:15,25 26:11 27:7,11,19,20 31:25 32:2 38:22 42:23 43:10
patents
8:24 9:1,6,13 10:5,20 23:12
payload
35:2,16,22,23 36:6 37:2 38:3,13 39:25 40:8,14 41:11,12,14 43:20,21 45:8
PDF
23:19
penalty
48:8
perjury
48:9
perplexed
22:3
person
25:18 29:14 30:10 33:3,23 36:1,9,23 40:16,20,23,25 41:5 42:18 45:4,7
personally
7:25
petition
10:2,7
Petitioner
1:5 2:5,13 3:2,8 7:12
PHY
37:22 38:14,17 39:1 39:2,4,6,11,12,14 39:16,18,20,22 40:2 40:17,24 41:4,4,10
physical
39:6
Ph.D
1:12 2:13 4:2 7:11 48:16
place
14:6 45:5
places
44:10
plain
25:20
please
6:18 7:7 11:1,20 23:18
plus
18:17
point
13:1 14:18,25 16:24 17:21 18:11 19:21 20:10 22:1,2 32:16
pointed
20:9 22:8,14 26:19
pointing
13:17,18 17:5 19:13
points
15:3
point-coordinated
21:8
portion
41:22
POSITA
30:24 41:25
possibilities
33:20
possibility
40:7
possible
27:14 40:6 45:9
potentially
41:19
preamble
37:22 38:14,18 39:1 40:2 41:10,13
predetermined
25:11
preliminary
10:2,8
preparation
8:11
prepare
8:10,18 9:21 33:12
preparing
10:4,13
presence
12:6 33:21 34:1 35:7
present
3:13 6:18
presented
36:1
previous
22:10
print
23:12 49:7
prior
9:2,3,6,12,19 10:9 16:21 24:21 25:4 29:23
priority
9:7,13,15
proceeding
8:1,9,14 10:24 11:5 11:21 22:24 24:19 32:3
proceedings
7:21 8:4,8 10:19 47:3 49:1,5,6
process
19:20 24:22 33:11
processing
33:15
processor
19:1 24:5
product
45:18
prosecution
9:1
protocol
36:7 37:3
provide
15:15 17:9 36:6 37:1 37:19 45:16,18,19
provided
23:5
provides
15:20 28:17 34:2,19 36:11 45:3
providing
39:25 41:11 42:1
PTAB
10:3,8
purpose

MAGNA
LEGAL SERVICES

33:10
pursuant
2:15
P-H-Y
39:2,3

Q

question
8:25 12:11 16:15 17:5 19:12 22:4 26:1 27:9 28:24 41:23,24
questions
5:8 30:19 46:7
quick
30:21
quite
27:14 36:20
quote
21:22

R

ranging
36:16
rather
13:5
read
48:7
real
30:21
really
17:15 36:18 40:13
reason
33:23 34:18,21
recall
8:21 27:13,16 28:13
receipt
28:1
receive
19:1 22:20 24:6
received
8:24 9:23 19:20 28:19 33:11
receiver
28:18 33:17,22 34:16 35:15
receives
24:23
receiving
17:10,13 19:10 21:3 25:13,16 32:23 33:4 34:24 36:15 40:2,7 42:15
Recess
31:15 46:2
recited
24:11
recites
18:25
recognized
25:19
record
6:4 8:2 10:18 20:12 23:11 28:12 31:13 31:14,18 46:1,6,19 46:20 49:4
reduced
49:7
refer
7:25 8:2 9:16 10:23 11:16 12:17,25 23:14 39:4,7
reference
29:12
referenced
20:12
references
11:16
referred
11:8
referring
38:21 39:6 43:3
reflects
20:25
refresh
10:6
regarding
9:14 11:4,11 29:14 31:25 32:2 42:3
region
32:24 33:5 34:21 40:3 42:16,21 43:3
related
49:10
reliable
35:6
relied
10:10
remaining
14:20
remember
8:1
renders
30:8
repeatedly
43:10
repeating
35:8
reported
1:19
reporter
2:15 6:16 7:7 20:2
represent
6:19
representing
13:13
reproduced
24:20
request
6:13
requested
49:14,16
requesting
35:17
require
37:10,13
required
22:15 26:6
requirement
26:22
requirements
27:2,7
requires
21:11 22:20 25:2 26:17
requiring
36:7,25
rereading
10:5
reservation
42:14
reserve
34:20
reserved
32:22 35:14 36:12 37:17
resource
19:2,11 21:16,23
resources
21:16 22:20 27:23
respectfully
42:3
respective
20:22
response
10:3,8
return
24:18
review
9:5,5 49:14,15,16
reviewed
9:1,11
reviewing
10:6,7,9
Richardson
3:9 6:24 7:4
right
12:25 19:15 24:13,13 27:15 39:21 41:4
rough
46:21
RPR
1:20
Russ
3:3 6:13,21

S

said
22:10 26:20
same
14:6 16:19 17:2 18:4 18:21 25:20,24 26:6 30:3 31:6 33:7 39:12 43:16

MAGNA
LEGAL SERVICES

Samsung
1:4 2:4 6:6,24 7:5 8:7 8:22,22 9:24 10:11 19:22
saw
43:13
say
14:14 32:21 44:23 45:17 48:7
saying
26:10 42:12 43:10
says
32:18 37:21 45:1
scheduled
21:6
scheduling
16:20,21 19:21,25 20:4,9,17,22 21:3,7 21:14 22:10,18 24:23,24,25 25:5,13 25:19,23 26:2,5,8 26:20 28:6,9,22 29:1,22 30:2,9,14 30:25 31:3,4,10,11 32:19 33:6,8,12,17 33:19 34:1,5,11,14 34:17 35:21 37:23 37:24 38:1,4,15 40:1,4,4 43:19 44:1
scheme
16:16 18:12
scope
41:23
second
18:13 22:24 43:18
secondarily
26:17
see
7:19 9:4 12:1 15:19 19:4 23:21 24:4 28:13 32:25
seen
44:24
selected
9:3
semantics
44:22
sense
24:14
sent
35:20
sentence
12:1,9 32:20 34:23 35:20 37:21
separate
21:9 38:16
sequence
28:16,17,20
serves
26:5
Services
6:16,17
serving
21:14 28:7
set
44:23
several
9:7 10:10
sharing
17:2
short
25:12 28:17,17
shorthand
2:15 49:7
should
10:15 15:10 17:2 37:4
shown
30:12,24 31:7
sic
8:23 14:15
sign
17:8
signal
34:21 37:22 38:13 45:16
signaling
16:16,18
signature
49:14,15,16
signify
18:5
similar
13:2
simultaneous
21:7,17
since
13:11 23:12
single
13:10
six
14:15 16:9
skill
29:14 30:10 33:3 36:1,9,23 40:16,20 40:23,25 41:5 42:18 45:4,7 49:5
skilled
25:18 33:23,24
skin
17:8
skip
18:24
smaller
12:3,11,14
so
7:23 8:9,13,13 10:3,4 10:18 11:1,19 12:9 13:1,7,14,24 14:14 15:3,17 16:5,20 17:10,12,16,22 18:4 18:13,14,17,18,18 18:22 19:9,19 20:8 21:11,16,19,21 22:3 22:22 23:14 25:2,22 26:1 27:4,6,19,25 28:5,9,16 29:5,12 29:25 30:7 31:24 32:14 33:2,7,10,14 33:18,23 34:3,15,19 34:25 35:5,9,13,25 36:5,9,14,14,23 37:12,20 38:2,15,20 38:23,25 39:9,16,20 39:24 41:9,16,24 42:20,25 43:2,23 44:10,16,20 45:3
solution
34:2,19 35:13 36:11 36:19 37:15 40:13
solutions
36:10 37:4,5
some
18:24 27:16 29:21 41:18
somehow
45:16
someone
37:17
something
28:15
sorry
7:2,3 11:2 16:3 22:25 23:2,16,24 24:3 26:24 28:15 29:7 34:7 41:11 44:3,3
sort
16:17
space
25:12
special
14:24 15:8
specific
16:24 22:6 26:1 27:2 27:16 32:22 34:4,10 36:11 38:21 42:8,14 45:10
specifically
8:13 15:19 20:8,10 22:14 29:16,20 37:20
specification
27:20
specifics
27:1
spent
10:4,9
spring
28:18
ss
48:2
stand
20:14
standards

MAGNA
LEGAL SERVICES

1:7 2:7 6:7 27:14
stands
20:15 28:14
start
17:24 29:8 35:20 41:21 42:11,19
started
18:10
starting
13:17 24:20 32:13 40:10 43:18
starts
14:7 17:24 29:8 42:19 45:14
state
2:15 6:19 13:22 14:17,17 32:12 48:1
stated
19:19 20:21 24:21 25:5 26:25 30:23 34:12 35:19 37:21
statement
25:23 32:17
states
1:1 2:1 6:8 12:2 24:5 43:25
stating
12:10 22:16
station
14:25 16:23 17:10,13 17:17 18:10,15 19:20 20:24,24,24 21:4,5 24:23 25:10 25:21 29:11,18,19 29:22 32:23 33:5,11 36:15 40:3 42:15
stations
13:4 14:15,18 15:10 16:22 17:1 20:24 21:1,17 25:7,15,24 28:1 29:24 40:7
STENOGRAPHER
7:9 46:24
stenographic
49:7
Stenographically
1:19
step
38:23
steps
8:18
still
15:1,6 37:18
strike
11:2,19 16:6 34:15 40:15
structurally
12:5
structure
29:15,17 30:3 31:7,9
structured
45:10
subchannel
21:6
subchannels
20:22 21:9,15
submitted
8:14,20 10:7,16
subscribed
49:19
such
25:12 29:17,22 32:18 33:16 34:1,2,13,20 36:11 45:18
sufficient
33:11
suggest
35:18
suggested
36:19 37:16 38:12 40:8 41:15
suggestion
36:25
suggests
36:17
Suh
3:15 6:25 7:2,4,4
SUPPLIED
5:3
support
9:19
supports
35:6
Sure
8:21 19:15
suspect
15:13
SW
3:10
swear
7:7
switch
32:1
sworn
7:13 49:3
system
20:25 42:7

T

take
8:18 30:18 38:23 43:9 45:5,23
taken
2:13 6:12 31:15 46:2 49:1,6
taking
32:14
talk
22:4 44:4,5
talked
42:10 43:15
talking
15:14 31:24 38:11,25
talks
43:12,23 44:10
teach
43:7
teaches
12:4 25:14 34:19 39:24
teaching
18:16
technical
45:17
technique
35:5
Technology
1:7 2:7 6:8
term
15:25
terminal
14:17,17 35:11
terminals
19:3 21:13 22:21 24:8 25:4 26:15 27:24 34:24
terms
43:11,24
testified
7:13
testify
7:20 49:3
testifying
8:4 49:2
testimony
48:10
than
13:5 38:18 39:16
thank
7:1,6 10:25 11:18 12:19,24,24 24:1,17 29:2 30:6 31:5,12 34:7 46:8,10,11,11 46:12,12 47:1
Thanks
24:2
that's
9:10 13:7,24 14:6 15:8,22 17:3,19 18:14,18,20 19:21 19:22 21:16 22:17 26:10 28:8 31:6 34:8 36:4,4 37:14 39:3,23 40:11,12 42:20,25 43:1 44:22
their
6:19 8:8 13:11 14:17 28:2 33:12 37:3 43:11 46:8
them
8:24 10:1 11:18 16:24 17:23 23:13 45:9
then

MAGNA
LEGAL SERVICES

12:17 17:15,25 18:11 20:10 21:5 22:16 25:4 32:20 38:13
there 11:22 13:8,12 14:11 14:15,16 15:10 17:25 18:21 23:9 26:11 27:14 32:10 37:7 38:11 44:10
thereafter 49:7
thereby 35:2
therein 48:10
thereof 49:12
there's 13:25 14:25 16:10 22:6,6 27:16 41:19 44:4,15
these 10:20 21:7 23:12 27:2,22 33:10
they 6:19 10:1 13:2,10 14:14,22 18:5 26:11 28:2 37:18 38:2
they're 41:6
thing 36:24 39:12
think 11:18 16:16 17:5 18:20 19:17 22:8,9 28:14 29:7 35:17 38:10 41:24 43:2,15 44:3 45:19 46:15
third 18:15
Thirty-four 23:22
this 6:5,12,20,23 8:8,9,23 10:24 11:4,10 12:2 13:9 14:10,12 18:8 18:8 19:6,24 20:19 20:25 21:14 22:16 22:23 24:13,15,25 25:2,4,5,14 26:12 26:13,24 29:6,12,13 31:9,16 32:12,12 33:14 34:23 35:5 36:19,21,24,25 37:10 39:6 46:3,16 46:17 48:11 49:20
those 7:23,24,25 8:10,16 8:19 9:14,25 11:16 14:20,24 15:10 16:18 18:4
though 15:3 29:16
thought 22:9
three 20:23
through 24:6 26:4 32:13
throughout 10:21 11:17 42:22
tied 12:5
time 6:11,11 10:4,9 21:6 25:11 28:23 30:16 33:11 46:8,16,19
today 6:10,24 7:21 8:4 10:13 15:14 28:5
today's 8:11 9:22,23 10:5 46:9
too 37:7
Torres 3:14 6:15
totality 36:24
toward 35:19
towards 32:11,17
Trademark 1:1 2:1 6:8
traditional 16:17
traditionally 41:7
transceiver 24:6
transcript 46:22 48:10
transmission 17:11 19:3,11 20:23 21:2,10,12,18,23 22:21 24:7 25:1,3,6 25:10,16 26:14 27:23,24 29:19,23 33:13
transmissions 21:8
transmit 16:24 25:8 28:2 29:21
transmits 21:5
transmitted 29:11,18
transmitting 20:1,4
TRIAL 1:2 2:2
trigger 16:22 17:11 20:17 21:15,22 22:1,4,7,9 22:11 24:6,11,14 25:17,20,24 26:3,6 26:8,12,13,18,24 27:5,8,10,15,17,18 27:21 28:7
triggering 17:11
true 48:9 49:4
truth 49:3
trying 19:16
turn 11:20
two 7:21 8:3,24 9:25,25 11:7 16:18 17:1,23 18:5 21:16 38:2,11 38:11 41:12
typical 29:15
typically 8:1
t2 21:6 25:11

U

under 48:8 49:8
undersigned 48:7
understand 7:20 8:3 10:22 27:4,6 33:4 40:17 41:3
understanding 19:9
unique 16:2,4 17:7,9,14,16
uniquely 17:17
unit 20:5 21:5 25:1,6 29:23 44:8
United 1:1 2:1 6:8
units 41:13,13,14 44:8 45:2
until 31:15 46:2
uplink 19:2,11,21,25 20:3,4 20:9,17,23 21:2,3,8 21:10,12,18,23 22:18,21 24:7,23,24 25:1,3,6,10 33:12

MAGNA LEGAL SERVICES

7:24 10:18
uploading
11:15
upon
8:22 16:23 21:3 25:16 28:2
upping
25:15 26:14 27:23
US
24:19
use
12:4 17:8 22:1 27:15 37:17 40:7
used
12:6 22:7 32:23 35:14 42:15
uses
16:17
using
13:5 21:6 22:8 34:19 40:2

V

valid
34:24 35:12,22,23 36:6 37:2 38:3,13 39:25 40:8,14 41:12 41:14 43:20,21 45:8
value
12:5,6 13:6 14:24 15:8 17:2,14 18:5 18:12,15 34:20,20 35:14 36:11 37:18 37:19 42:14
values
13:9 15:12 16:2,2,4 16:10 32:22
variable
37:1
variable-length
35:3,10
versus
6:7
very
13:2 31:6 43:24 46:11
vessel
39:15
via
1:13 2:14 6:1,12 17:8
video
46:14,16
videoconference
1:13 2:14 6:1,13
videographer
3:14 6:4,15 7:1,3,6 31:14,16 46:1,3,13 46:17
VIDEOTAPED
1:12 2:13
view
12:13,16 13:9 16:21
viewed
12:3,10 13:7
vs
1:6 2:6

W

waiting
29:2
waived
49:15,17
Wan
3:15 6:25 7:4
want
10:24 12:25 14:1 17:20 31:1 32:1,16 41:2 46:7
wanted
46:13
was
7:13 8:21 14:24 15:22 22:7,11,22 31:6,15 43:9 45:9 46:2,20 49:2
Washington
3:11
way
35:15 36:5,15 49:10 49:11
ways
33:20,21
we
6:4 10:11 11:14 20:20,20 21:11,13 22:15 23:18 24:14 26:15 30:1 38:10 40:11 42:10 43:2,15 43:16 44:4,24 45:23 46:7,15,22 47:1
weighed
37:6
Welcome
31:20
well
14:5,22 22:13 34:12
well-known
29:13,13
went
29:3
were
8:19 9:2,25 10:10 13:4 14:14,16 35:14 37:17 49:1,6
We'll
30:18
we're
15:13 18:20
we've
30:15 31:24 38:25
what
8:18 9:4,18,18,21 11:10 15:15,22 16:3 19:13 20:14 22:3,18 24:10 26:10 27:7,17 27:17,18,21 28:12 28:13 29:12 31:6,9 34:15 36:4 37:15 38:25,25 39:2,4,4,7 42:4,25 44:24 45:13
whatever
23:15
what's
22:15
when
11:6,21 23:8,9 25:7 32:8 41:9 43:2,2 44:23
where
13:14,20,24 14:3,6,8 14:18 17:4 19:20 20:25 23:18 25:15 27:1 33:25 34:4,10 34:16 40:9,10 41:17 41:19,21 42:6,20 44:10 45:14
whereby
31:7 36:11
wherein
19:1 24:5 26:17 35:22 43:20
WHEREOF
49:19
whether
9:18 12:2,10 14:17 27:12,16 28:24 32:21 36:2,25 37:2 37:4,6,7 38:20 41:19,25 42:14 45:12
which
11:15 19:25 23:16,16 24:22 25:11 26:23 26:25 32:2 37:24 42:8,9 43:25 45:8 45:10
While
33:14
who
46:13
whole
17:12 49:3
whom
6:19
why
18:14 34:16
will
6:18 7:7 37:5 39:14 41:14 42:6
Wilshire
3:4
Wilus
1:7 2:7 6:7,21 9:25
with

MAGNA
LEGAL SERVICES

6:21 8:24 9:7,8,17 10:11,15 12:22 17:24 18:11 22:15 24:20 26:13 29:8 30:4,21 31:21 35:20 36:3 37:3,14,18 40:21,24 41:9,10,12 41:18,18 42:24
within
15:6,9 32:19 33:17 34:5,11,14,17 38:9 42:7 45:13
without
45:14
witness
4:2 7:8,12 20:3 41:24 45:22 46:11 49:2,19
wi-fi
16:1 29:15 38:9 39:5 39:8 41:6
won't
10:1
word
13:19,19 22:1,6,7,9 24:14 27:15
worked
18:10
would
13:1,16 14:14 15:5 15:11,11 17:8 18:9 18:17 25:19 26:24 30:9,11,16,23 31:2 31:4,8,9 33:5,24 36:5,6,24 37:5,18 38:15,20 39:18,24 40:2,6,13,15,15,16 40:19,20,23,25 41:2 41:16,17,20,25 44:23,24 45:5,8,13 45:16,17 46:21,23

X

x
49:16

Y

yeah
9:5 16:5 18:7 19:6,18 23:3,6 28:15 29:1 30:10,18 38:8,24 40:6 43:17
year
8:21
Yep
45:25
yes
7:22 8:6,15,15,17 11:13 12:8,18 15:8 16:1,12,14 18:1,3 18:23 19:8 20:19 23:10,20,20 24:9,9 28:11 32:5,10 34:7 37:20 39:3 40:19,19 40:22,25 43:15,23
yet
15:1 36:7
you
7:1,6,19,20 8:2,3,3 8:10,13,16,18 9:11 9:11,14,21 10:14,14 10:16,22,24,25 11:1 11:3,6,7,10,18,19 12:1,13,19,24,24 13:9 15:1,15 16:3,3 16:18 17:5,8 18:18 19:4,13 20:12 22:2 22:3,4,9 23:5,8,8,15 23:21 24:1,4,10,17 26:7 27:20 28:23 29:2 30:6,23 31:2,5 31:12,21 32:6,8,12 32:15,20,25 34:6,7 36:5,5,14 38:5 39:24 41:12,17,20 41:24 42:7,24 43:3 44:12,16,23,23 45:4 46:10,11,11,12,12 46:25 47:2
your
8:9,18 9:14,15 10:13 11:3,11,20 19:9 21:21 22:4,10 26:2 28:23 30:7 31:5,25 32:1,16 33:2 34:3,9 37:12 42:6 44:20
you'd
11:17
you're
7:20 8:4 11:22 17:4 23:9,13 28:24 32:9 38:21

Z

Zhi
1:12 2:13 4:2 6:6 7:11 31:17 46:4,18 48:16
Zoom
6:12

0

0
13:19
00
17:25 18:2,4,5,11,13 18:16
0071
44:5
0090
19:22
01
18:16
01110
11:5
0118
29:8,8
01367
13:4

1

1
6:5 15:20,22 18:17 18:22 19:6 20:24 21:11,24 22:19 23:9 23:19,20,25 24:4,12 26:11,14 27:6,11
10:08
31:14,15
10:23
31:15,18
1000
3:10
1001
11:1 22:24
1001s
10:19
1003
11:3
1016
11:15 19:22
1017
11:15
11
14:24 15:5 29:25 34:20 38:9
11:01
46:1,2
11:05
46:2,6
11:06
46:19
11:07
47:3
1111
14:23
118
29:7
12th
3:5
122
19:17,18
123
19:17,18,19 20:21
124
21:4
12424
3:4
13
1:14 2:14 6:1
13B
29:4,5,9,16,16 30:4 30:12,24 31:7
13th
6:10 46:18

MAGNA
LEGAL SERVICES

131
24:20
1350
29:10
13916
1:20 2:15 7:10 49:24
144
43:17,17
145
32:11 33:8 42:11,12
146
34:18
151
11:23
159
11:20,24,25 12:2
171
8:25 9:13 10:20 11:4 11:11,21 15:17,19 15:21 16:22 18:22 19:5,7,16 21:20,24 22:3,19 32:2 38:22 42:23 43:10
18
43:18
180
29:7
186
8:25 9:12 10:20 22:23 23:1,2 24:4 24:19 25:15,25 26:11 27:7,11,19,22 31:25
19
13:1,3,15,16,21,22 14:6
19th
49:20

2

2
16:6 18:17,17 20:24 31:17 43:11
20
13:1
20024
3:11
202
3:11
2026
1:14 2:14 6:1,10 46:18 48:12 49:20
21
17:6,7
22
14:1,3,5,9,21 15:3 16:9 17:22
25
29:11,23

3

3
18:18 20:24 46:4
310
3:6
32
14:15
34
23:19

5

59
24:20

6

604
44:8
626-7717
3:11
68
32:6,9,12,17
69
42:11,12

7

7
4:5 38:22
71
44:5
74
29:20

8

8
13:4,24
826-7474
3:6

9

9A
20:11 24:21
9:04
1:15 2:13 6:2
9:05
6:11
90025
3:5
902
19:24 20:10 22:17 24:24 25:7 28:22 35:21 37:23,24 38:1 40:1
904
25:1
93
35:18 37:16

MAGNA
LEGAL SERVICES