

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

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioners,

V.

MAXELL, LTD.,
Patent Owner

Case: IPR2025-01310
U.S. Patent No. 12,160,681

* * * * *

DEPOSITION OF: ROBERT STEVENSON, PH.D.
DATE TAKEN: May 20, 2026
TIME: 9:00 A.M.
PLACE: BY VIDEOCONFERENCE
REPORTED BY: MICHELLE PULIDO STUBBEN,
REGISTERED PROFESSIONAL REPORTER,
FPR-C and NOTARY PUBLIC

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Job No. 7122420

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A P P E A R A N C E S

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C O N T E N T S

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EXHIBITS.....NONE ATTACHED

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S T I P U L A T I O N S

It is hereby agreed and so stipulated by and
between the parties hereto, through their respective
counsel, that the reading and signing of the transcript
is expressly waived by the Deponent.

- - - - -

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

2 THE REPORTER: Please raise your right hand to
3 be sworn in.

4 Do you swear or affirm that the testimony you
5 will give in this matter will be the truth, the
6 whole truth, and nothing but the truth, so help you
7 God?

8 WHEREUPON,

9 ROBERT STEVENSON, PH.D.,
10 was called as a witness, and having first been duly
11 sworn, testified as follows:

12 THE WITNESS: Yes, I do.

13 DIRECT EXAMINATION

14 BY MR. BRUNEEL:

15 Q. Good morning, Dr. Stevenson.

16 A. Good morning.

17 Q. My name is Seth Bruneel. I represent Maxell
18 in this IPR.

19 Please state your full name.

20 A. Robert Louis Stevenson.

21 Q. And, Dr. Stevenson, have you been deposed
22 before?

23 A. Yes.

24 Q. About how many times?

25 A. Not sure of the number. It would be over 50,

1 though.

2 Q. And most recently? Or when was the most
3 recent deposition?

4 A. In the past month.

5 Q. And was that in person or virtual?

6 A. That was in person.

7 Q. When was your last virtual deposition?

8 A. It feels like it has been over a year, maybe
9 two.

10 Q. Any questions about the procedure as we
11 proceed virtually?

12 A. No.

13 Q. Okay. All the exhibits are premarked, and
14 I'll share them through the chat as we need them.

15 A. Okay. Just -- I have -- I printed out fresh
16 copies of my declaration and the patent. So I have
17 paper copies, if I can expediate looking through them
18 that way.

19 Q. And there is no notes on those copies.
20 Correct?

21 A. No. Printed them out fresh this morning.

22 Q. Is there any reason you would not be able to
23 testify truthfully today?

24 A. No.

25 Q. So this IPR relates to U.S. Patent

1 Number 12160681. Is that your understanding?

2 A. Yes.

3 Q. So if I refer to this as the '681 Patent, will
4 you understand this is the patent I'm referring to?

5 A. Yes.

6 Q. And you may do the same.

7 So let's go ahead and -- I guess, you have
8 your declaration in front of you?

9 A. Yeah.

10 Q. Okay.

11 MR. BRUNEEL: And, Counsel Alan, let me know
12 if you would like me to share a copy in the chat.

13 BY MR. BRUNEEL:

14 Q. So, Dr. Stevenson, you have that Exhibit 1003
15 in front of you?

16 A. Yes.

17 Q. And on the very last page -- and I'll refer to
18 exhibit pages today. So this is exhibit page 119.

19 Should be the last page. Let me know when you see that.

20 A. Are you referring to it as the PDF page
21 number?

22 Q. No. So on the bottom right-hand, there is
23 Exhibit 1003 and then a page number on that. It
24 probably corresponds to the PDF page.

25 A. Okay. Let me download it.

1 Q. In the printed version, it is page 109.

2 A. Okay. That's what I was looking at, page 109.

3 Q. So on page 109, that is your signature.

4 Correct?

5 A. Yes.

6 Q. Okay. And when did you begin preparing this
7 declaration?

8 A. Working on the document?

9 Q. Yes.

10 A. Well, it is a little vague. I don't remember
11 exactly when. I believe I was hired a couple of months
12 before this date, so that is when I started working on
13 forming the opinions. In term of the actual writing,
14 I'm not sure how much before.

15 Q. And who asked you to prepare this declaration?

16 A. Lawyers for Samsung.

17 Q. And in preparing this declaration, did you
18 speak with anyone from Samsung outside of -- let's say,
19 that's not outside counsel for Samsung?

20 A. No.

21 Q. In paragraph 2, which is on page 1 of your
22 declaration, let me know when you have that in front of
23 you.

24 A. Yes.

25 Q. It says, I currently hold the opinions set

1 forth in this declaration.

2 Is that still the case today?

3 A. Yes. I found I think two typos that don't
4 really affect my opinion, just clarifications.

5 Q. Do you have them on top of your head that you
6 would like to share?

7 A. Yeah, I can find them pretty quickly. I
8 remember the paragraph numbers. One was paragraph 94,
9 Subsection DL, Claim 8. That first paragraph there, in
10 the parenthetical, it says, Revised EDID information, or
11 latest Sequence Number 903. The "or latest Sequence
12 Number 903" should just be scratched out. This section
13 just discusses the revised EDID information on them.

14 Q. Okay. That was on page 37.

15 A. And the other one was paragraph 303. In that
16 paragraph, I reference a previous section, it's written
17 as Section 10-A-12. That should be the same -- it
18 should be referencing the same major section, which I
19 believe is 14, if I remember right. So, yes, that
20 should be an XID, if I remember my numbers right.

21 Q. Okay. So XID.A.12 is the section?

22 A. Yeah.

23 Q. Okay. Thank you.

24 Any other typos that you noticed?

25 A. Not that I noticed in my review.

1 Q. And you are a professor at Notre Dame; is that
2 correct?

3 A. Correct.

4 Q. And you have been there since 1990; is that
5 right?

6 A. Yep.

7 Q. So you were there at the time of the priority
8 date for the '681 Patent?

9 A. Yes.

10 Q. And what were you working on at the time?

11 A. By the early 2000s through 2010, I was working
12 on kind of the video camera type systems you would see
13 in a cell phone. Some of the image processing you would
14 do, some of the communications you would do with that,
15 and how you would capture those images and transmit them
16 places.

17 Q. And were you doing any work outside of
18 academia at the time?

19 A. I was doing this sort of litigation consulting
20 by that time.

21 Q. And the work you described, was that all --
22 was that limited to just the university setting?

23 A. Yeah, that was what I was referring to as my
24 work at Notre Dame, my primary research.

25 Q. Okay. And in your background section

1 discussing your qualifications in your declaration on
2 page 2, in paragraph 9, let me know when you see that.

3 A. Okay.

4 Q. The second sentence, As an academic
5 researcher, I attempt to develop novel ideas for
6 systems, then publish and present those ideas to the
7 technical community.

8 What types of publishing and presenting have
9 you done to the technical community?

10 A. I mean, that could easily just be looked at on
11 my CV. I keep a list of all publications there by date.
12 There are various conferences, journal publications,
13 book chapters. So at this time, I was very active in
14 organizing conferences and being in charge of putting
15 those together and publishing results.

16 Q. And some of those are listed in paragraph 13
17 on page 4 of your declaration. About halfway down, you
18 start referring to book chapters; is that right?

19 A. Yes, that is right.

20 Q. Are any of those book chapters used as prior
21 art in this IPR?

22 A. No, I don't think so.

23 Q. Paragraph 14 on the next page says, Several
24 leading computer companies, including Intel, Sun
25 Microsystems, Apple computer, and Microsoft have

1 supported my research at Notre Dame.

2 Do you see that?

3 A. Yes.

4 Q. Has Samsung ever supported your research at
5 Notre Dame?

6 A. No.

7 Q. Outside of any litigation consulting, have you
8 done any work for Samsung, any Samsung entity?

9 A. I have done some technical consulting for
10 them.

11 Q. And what was the time frame for that?

12 A. I would probably need to refer to some
13 records. It was a while ago. It would have been maybe
14 the late '90s, early 2000s, somewhere in that time
15 frame. But I would have to dig through some records to
16 be more specific.

17 Q. Do you remember what type of technology you
18 were --

19 A. Yeah. It was video processing for their
20 television sets, some of the enhancing stuff I was doing
21 at the time.

22 Q. And I believe you are a named inventor on a
23 patent?

24 A. Yes.

25 Q. Is that patent used as prior art for this IPR?

1 A. No.

2 Q. Do you know any of the -- so there are -- on
3 page 7 of your declaration, there is a list of exhibits,
4 including the prior art. Do you see that?

5 A. Yes.

6 Q. Do you know any of the authors for these
7 publications personally?

8 A. No.

9 Q. Flipping ahead in your declaration to
10 paragraph 30, so page 11. Let me know when you are
11 there.

12 A. Okay.

13 Q. And this is in the Relevant Patent Law Legal
14 Standard section for obviousness. There in
15 paragraph 30, you say, I also understand that when
16 considering the obviousness of a patent claim, one could
17 consider whether a teaching, suggestion, or a motivation
18 combine the reference exists so as to avoid
19 impermissibly applied hindsight when combining or
20 modifying the prior art.

21 Do you see that?

22 A. Yes.

23 Q. When you say impermissibly applying hindsight,
24 is there a circumstance where it would be permissible to
25 apply hindsight?

1 A. It does not seem like that would be correct,
2 no.

3 Q. You also have a few pages on claim
4 construction in your declaration. Are you offering any
5 opinions on claim construction in this declaration?

6 A. No. The position I took I think in the
7 declaration was that I just use the plain and ordinary
8 meaning of the terms.

9 Q. So you -- does the POSITA mean to construe any
10 terms for this IPR?

11 A. I don't think it is necessary. I mean,
12 certainly, they are free to.

13 Q. I think we'll be pretty quick today.
14 One of the references you are relying on is a
15 Funabiki. Is that how you say it?

16 A. Your guess is as good as mine.

17 Q. Okay. I'll go ahead and place that in the
18 chat, but if you have a printed copy...

19 A. I do have a printed copy of that.

20 Q. Okay. Let me know when you have that in front
21 of you.

22 A. Okay. I have that.

23 Q. So let's look at Figure 10. That is PDF
24 page 6.

25 A. Okay.

1 Q. So let's get on the same page here.
2 Funabiki's connection flow here shows the source
3 transmitting and authentication request. The sync
4 transmitting and authentication completion signal. And
5 then the source transmitting a signal EDID request
6 signal.

7 You agree with me so far?

8 A. I probably would not completely agree with the
9 way you characterize it.

10 Q. What would you disagree with? Or is it just
11 too abstract?

12 A. Yeah, I mean, it is a flow chart, so it's an
13 algorithm for -- it's implemented, you know, in the
14 hardware and software of the convention.

15 Q. So let's turn to page -- I think it's 73 of
16 your declaration. No. Paragraph 83, page 27.

17 A. Okay.

18 Q. One second. I might have got you in the wrong
19 spot.

20 All right. It is paragraph 83 on page 32.
21 Apologies. My notes were in the PDF pages.

22 So here you cite to some of Funabiki's
23 disclosures related to Figure 11. Do you see that?

24 A. Yes.

25 Q. And you are relying on the authentication

1 request described in paragraph 64 of Funabiki as
2 disclosing the claim's second request message; is that
3 right?

4 MR. IKEGAMI: Object to the form.

5 And, Seth, I'm sorry to interrupt. We haven't
6 stated appearances on our side yet, so I would like
7 to go ahead and do that if it is okay.

8 Jon Ikegami for petitioner Samsung from DLA
9 Piper. With me is Alan Limbach also from DLA
10 Piper.

11 MR. BRUNEEL: Thanks, Jon.

12 And Seth Bruneel from Mayer Brown on behalf of
13 the patent owner Maxell.

14 THE WITNESS: Okay. I'm a little confused.
15 You pointed me to paragraph 83, and then started
16 talking about the authentication signal, I believe,
17 in the authentication process. We didn't really
18 discuss paragraph 83, so I guess I'm not following
19 your question at the moment.

20 BY MR. BRUNEEL:

21 Q. That's fair. So let's go in the claim
22 language. We are looking at Ground 1, I think. Well,
23 not I think. So we are looking at Ground 1, right?

24 A. Yeah.

25 Q. This is anticipation based on -- what are we

1 calling it, Funabiki, right?

2 A. Correct.

3 Q. And for Limitation 1K, this requires, When a
4 predetermined condition is met, transmit to the display
5 apparatus via the wireless communication circuitry. The
6 second message, together with a second number, which is
7 different from the first number.

8 That is 1K, right?

9 A. Yes.

10 Q. So in this ground, what are you relying on as
11 the second request message?

12 A. Well, if you refer to, for example, Figure 11,
13 the arrow going from the left to the right labeled EDID
14 response signal -- well, let me -- excuse me. Sorry.

15 If you look at Figure 11 going from the right
16 to the left, the EDID request signal is the one I'm
17 pointing to as needing the second request message in the
18 context of my explanation here.

19 Q. And in the context of Figure 11, the EDID
20 request signal is set from source --

21 A. I think -- maybe it would be a little more
22 clear. If we look at the Figure 11 of the patent, not
23 in my little snippet that I didn't include on the --
24 above paragraph 83 --

25 Q. And by the --

1 A. Excuse me?

2 Q. By the patent, you mean Funabiki?

3 A. Yeah, yeah. The Funabiki patent itself
4 instead of the clip.

5 It is the second EDID request signal going
6 from -- arrow that's going from the right to the left,
7 which is lower down on the page than the snippet above
8 paragraph 83. That would be the second message. Or an
9 example that matches the message. It's just --

10 Q. I see.

11 A. Power cycle.

12 Q. So it is --

13 A. And that's not giving you exactly the best
14 illustration either. It is one of these EDID response
15 request signals coming from the source we are talking
16 about to the synced device. As I described, you know,
17 the functioning of the apparatus.

18 Q. Okay. And this EDID request signal occurs
19 after the authentication -- no -- request?

20 A. So when one of the devices is turned on, for
21 instance, if the sync was turned on second, this
22 authentication request is going to be sent, and then a
23 time period after that process is completed, the --
24 these EDID request signals are going to be sent.

25 Q. Well, let's jump over to Ground 3 in your

1 declaration, let's jump to paragraph 248.

2 A. Okay.

3 Q. And Ground 3 is a combination of Funabiki and
4 Guo; is that right?

5 A. Correct.

6 Q. So here you propose modifying Funabiki's
7 authentication completion signal to include a secret
8 number -- not secret -- sequence number from Guo; is
9 that right?

10 A. I mean, that is what I explain in the
11 paragraph previous to the one you pointed to, which
12 is 247.

13 Q. Okay. Thank you.

14 And what is a sequence number as used in Guo?
15 And I'll put it in the chat for you.

16 So you have Exhibit 1005 Guo if you need it.

17 A. So the sequence number in Guo is referred to
18 as a package sequence number. So when it adds that word
19 packet, this is referring to how we -- kind of a
20 packetized communication protocol that we use in a lot
21 of systems where groups of bits that are associated with
22 each other are grouped together and, you know, various
23 header information is added to them, and part of that
24 header information is the sequence number that is
25 referred to in Guo.

1 Q. And is the sequence number used so the source
2 device can verify an order?

3 A. Yes. So especially when you are dealing with
4 wireless channels, things can be transmitted and
5 received in and out of order. So it is important to be
6 able to match them up so that you can understand the
7 responses you get and how they relate to which request
8 you might have made.

9 Q. And one of those requests is the EDID request?

10 A. In Guo or?

11 Q. Yeah, in Guo.

12 A. I believe that is correct. I just want to
13 make sure. Yeah, that would be an example of a request
14 you would make in Guo.

15 Q. So let's look at Guo paragraph 122 on page 19.
16 Let me know when you have that.

17 A. I'm looking at it.

18 Q. And here, Guo explains that -- starting in the
19 third sentence where it starts with "in particular." Do
20 you see that?

21 A. Yes.

22 Q. Each packet header contains a packet sequence
23 number. Sync and source devices can use the sequence
24 number to get synchronized with each other.

25 Did I read that right?

1 A. I believe so.

2 Q. So the packet sequence number is used for
3 synchronization of encrypted packets in HDCP over ASMI;
4 is that right?

5 A. I mean, it is just in many different
6 locations, different ways, but that is the way Guo is
7 using it.

8 Q. So does Guo teach using HDCP packet sequence
9 numbers as request message numbers for adding HDCP
10 sequence numbers to an authentication completion signal?

11 MR. IKEGAMI: Objection to form.

12 THE WITNESS: Well, I think that -- you know,
13 one skilled in the art reading this would know what
14 a packets are, you know, the packetized
15 communication-type systems. And the sort of header
16 information you have, including things like
17 sequencing, this paragraph would be easily
18 understandable about one skilled in the art. There
19 is nothing new there being thought by Guo.

20 It is just the idea that when we're -- a
21 packetized network, especially something like a
22 wireless network, you know, we mention about the
23 matching up, but there is also issues with things
24 coming in and out of order. And so you have to
25 reorder things, and that is why there is a

1 numbering, so you can get things back in the right
2 order.

3 There is a couple of reasons why we do it, but
4 it is very common practice. So in the combination
5 that I see, it would be obvious, all of the -- all
6 we are talking about is the idea that -- doing
7 these communication between these two devices, the
8 packet information that, you know, thought by Guo
9 would be obvious to combine in that communication
10 channel so that you can do the same thing in
11 Funabiki.

12 BY MR. BRUNEEL:

13 Q. Is there a specific paragraph in Guo, or
14 are -- that you are relying on, or is that all obvious
15 to a POSITA?

16 A. You know, the idea of, you know, packetized
17 communications and the importance of sequence numbers in
18 packetized sequence would be background knowledge. I
19 think it is disclosed right there in Guo and what they
20 are talking about in paragraph 122 and other parts of
21 Guo. But, like I said, there is nothing particularly
22 new to a person of ordinary skill in the art reading
23 that paragraph.

24 Q. And then in your declaration of paragraph 249,
25 your rationale to combine them -- well, you say a

1 POSITA -- do you have that in front of you?

2 A. Yeah, I'm looking at it.

3 Q. A POSITA would have been motivated to
4 implement HDCP and thereby modify Funabiki's
5 authentication completion signal in the above manner to
6 ensure greater security for its video/audio signals.

7 So the motivation to import the HDCP headers
8 from Guo to Funabiki is to ensure greater security; is
9 that right?

10 A. Well, the HDCP is -- I think it might be high
11 definition copyright protection or something along those
12 lines is what that stands for. It is a security
13 protocol layered over video transmissions that a lot of
14 video content providers require in order to be able to
15 transmit, you know, even from like a DVD player to a TV.
16 But in this case, Guo is talking about this wireless
17 channel. But that whole thing is about security and
18 when you're transmitting video between two devices.

19 And so Funabiki is exactly that, transmitting
20 wirelessly video between two different devices. So, you
21 know, the use of HDCP over such a channel would be
22 obvious to do. People would be motivated to do it
23 because that is what content providers provide --
24 require. You can't play a Disney movie to your TV
25 wirelessly if it is not using this sort of copyright

1 protection.

2 Q. So is Funabiki a -- does Funabiki express a
3 need to ensure greater security?

4 MR. IKEGAMI: Objection to form.

5 THE WITNESS: I have not reviewed Funabiki
6 with that question exactly in mind. But since it
7 is talking about authentication, I would say, yes,
8 it clearly is talking about security at that level.
9 And so it is thinking about security in a secure
10 communication process.

11 BY MR. BRUNEEL:

12 Q. Do you recall the problem that Funabiki set
13 out to solve?

14 A. Not off the top of my head. I'd have to
15 review the patent.

16 Q. So turn to paragraph 5 of Funabiki on PDF
17 page 11.

18 A. I see that paragraph.

19 Q. Okay. And -- actually, I'll -- go ahead and
20 read it to yourself and let me know when you are done
21 with it.

22 A. Okay. I read it.

23 Q. And so what problems does Funabiki recite as
24 setting out to solve in that paragraph?

25 A. The -- you know, when you have a source that's

1 synced -- so a video source and a, you know, display
2 device, for example -- you know, part of the process of
3 establishing that communication channel so that you can
4 actively send video across that channel in the right
5 format.

6 Q. And Funabiki provided a solution to this
7 problem, didn't it?

8 MR. IKEGAMI: Objection to form.

9 THE WITNESS: I mean, in the Funabiki patent,
10 it describes, you know, as provided mixed claims.
11 That is the problem they set out addressing, I
12 guess, if you want to think about it that way.

13 BY MR. BRUNEEL:

14 Q. And looking at the next page of Funabiki,
15 specifically paragraph 21. Let me know when you see
16 that.

17 A. Okay.

18 Q. And then I'll go ahead and let you read it to
19 yourself. Let me know when you are done.

20 A. I see that paragraph.

21 Q. And so this is under the header Effects of the
22 Invention. So the effects of the invention was really
23 working towards the wireless element, wasn't it?

24 MR. IKEGAMI: Objection to form.

25 THE WITNESS: I'm not -- I guess I have not

1 spent a lot of time thinking exactly what Funabiki
2 invented. I read the patent as, you know, a
3 disclosure about, you know, a piece of prior art.
4 And so I read it in the context of understanding,
5 you know, what it disclosed about the '618. I did
6 not specifically try to ascertain what Funabiki
7 independently invented. So I'm not sure how to
8 answer your question without, you know, kind of
9 doing that work.

10 BY MR. BRUNEEL:

11 Q. So then shifting to Guo, did you analyze Guo
12 in the same light?

13 A. This was a piece of prior art. I understood
14 what it taught someone about the technology in this time
15 frame and how a person of ordinary skill would
16 understand it and what it disclosed about the invention
17 of the '618. I did not independently try to figure out
18 exactly what Guo invented and what his claims might have
19 covered.

20 Q. Is that the same answer that would -- is that
21 the same way you analyzed the other prior art used in
22 this IPR as well?

23 A. Well, one of them is not even an invention, so
24 I certainly did not try to ascertain what it might have
25 invented there. But I looked at them as pieces of prior

1 art. They were disclosing what people knew about this
2 technology, this technology area, you know, prior to the
3 claimed invention of the '681. And so that is the
4 context that I read them and tried to get information
5 from them.

6 Q. Let's jump a little bit more again to -- go
7 back to Ground 1. Let's look at your paragraph 85,
8 which I think is on page 33 in the paper copy, and let
9 me know when you have that in front of you.

10 A. Okay.

11 Q. So, again, we are in Ground 1. This is the
12 anticipation of Funabiki. And I want to make sure that
13 we are on the same page. So it's Ground 1, Claim
14 Element 1L. And you point to Funabiki's sequence number
15 as meeting the claim first number transmitted. Correct?

16 A. Yes. That is part of what I do in this
17 paragraph.

18 Q. And the other part is that the first number
19 transmitted with the first request message where the
20 first request message is Funabiki's EDID signal; is that
21 right?

22 A. So the first request message, you know, as I
23 previously identified, was an EDID request signal, and
24 I'm talking about a number that is within that request,
25 the sequence number.

1 Q. Okay. And then the claim requires second
2 number transmitted with the second request message. And
3 what are you relying on for those? What does Funabiki
4 teach for those?

5 A. Well, as I explained in my -- you know, you
6 read the entire thing, I'm talking about the operation
7 of the particular device, you know, the disclosed
8 apparatus in Funabiki. And I'm looking at the situation
9 where you would be sending a second request in such a
10 device, a second EDID request, and explain the
11 conditions when that would happen, and then look at the
12 sequence number there also.

13 Q. And the -- so for the claimed -- the second
14 number in the claim that corresponds to -- let me get it
15 from your words. That is also a sequence number?

16 A. It is a sequence number associated with this
17 second EDID request signal.

18 Q. And so how is the second sequence number
19 determined?

20 A. Well, these devices operating over time, it is
21 making multiple requests. Each request generates a --
22 you know, information that has a sequence number
23 associated with it. So it depends on what two messages
24 you point to, but one is going to have one number and
25 the other one, depending on how many messages are in

1 between, is going to have another number -- a different
2 number because it is incremented between each message.
3 So depending on how many messages you are talking about,
4 it could be one, two, five, or larger.

5 Q. So the increment is always one between
6 sequential sequence numbers?

7 MR. IKEGAMI: Objection to form.

8 THE WITNESS: I'm not sure the -- I'm not sure
9 I understand you. You are talking about, like,
10 first and second sequence number is the increment
11 always one?

12 BY MR. BRUNEEL:

13 Q. So you said it depends on how many messages
14 are in between.

15 A. Right.

16 Q. So if there is no messages in between, then
17 the difference between the first sequence number and the
18 second sequence number is one according to Funabiki?

19 A. I'm not sure your hypothetical is, you know,
20 kind of within the teachings of Funabiki, if I recall.
21 I don't know if it will ever actually be as small as
22 one. I would have to dig in deeper to see if that is
23 true or not.

24 Q. In paragraph 86 of your declaration, you say,
25 Furthermore, a POSITA would understand that a counter is

1 used to increment numbers by a predetermined amount.

2 A. Correct.

3 Q. So there is a pattern to the numbers?

4 A. Well, the counter is incrementing by one, but
5 depending on what two messages you point to, there is,
6 you know, an arbitrary number of messages, you know, of
7 counter counts. So if you took it the way I point to
8 the first sequence number and the second sequence
9 number, there would be some number of, you know, that it
10 is increased by.

11 You asked me the hypothetical, could that
12 number be as small as one, and I'm not sure that is
13 true. I would have to look specifically to see if it
14 could be as small as one.

15 Q. So the incrementing by a predetermined amount,
16 is the predetermined amount arbitrary?

17 A. For a counter? I mean, you could --

18 MR. IKEGAMI: Objection to form.

19 THE WITNESS: You could make it whatever you
20 want. Typically, you know, the counter counts by
21 one. This doesn't have to do with how the counter
22 works. It has to do with the messaging that is
23 occurring within the system, what's -- what that --
24 what that difference is between the first and
25 second sequence number. It depends on, you know,

1 how you might be operating the system even.

2 BY MR. BRUNEEL:

3 Q. So the difference between the first sequence
4 number and second sequence number depends on how many
5 messages are in between the two transmissions?

6 A. At least in part, yes.

7 MR. IKEGAMI: Object to the form.

8 Sorry, Bob.

9 BY MR. BRUNEEL:

10 Q. And in Ground 2 for the same limitation, this
11 is based on Guo alone, paragraph 177. Let me know when
12 you are there.

13 A. Yes.

14 Q. And, again, we are looking at Claim
15 Limitation 1L. And one of the things requires a first
16 number transmitted with the first message. So based on
17 Guo, what is the first number and the first message?

18 A. Well, the first message is, for example, the
19 EDID request packet.

20 Q. And the first number would be?

21 A. I give two examples. Either the packet
22 sequence number or the timestamp that would be
23 associated with that request.

24 Q. And then the second request message would be
25 the subsequent EDID request packet; is that right?

1 A. Yes.

2 Q. And the second -- the subsequent EDID request
3 has its own packet sequence number; is that right?

4 A. Yeah, it would have a different number with
5 something greater.

6 Q. So how is the -- how are the numbers -- how
7 are the sequence numbers determined in Guo?

8 A. Well, you know, the normal thing is just to
9 increment, you know, a counter that is keeping track of
10 the pack of sequence numbers so that you are making
11 different numbers each time. So the two packet numbers
12 would depend on, you know, the set of packets that were
13 sent in between.

14 The timestamp is more about there is a --
15 independent of the sending of packets, there's
16 multisystems have a concept of a system clock, which is
17 just a counter that we could relate to a number of
18 seconds or microseconds or milliseconds. Something like
19 that.

20 And that is usually a common thing to put in
21 there, so that sort of timestamp would be an alternative
22 reading for the first number to the second number.

23 MR. BRUNEEL: Mrs. Stubben, did you get that
24 full answer? He cut out for a second for me.

25 THE REPORTER: He did. What I wrote is what I

1 got, so I'm not sure if there was a lag or just an
2 interruption.

3 BY MR. BRUNEEL:

4 Q. Sorry, Dr. Stevenson. What I heard was the
5 timestamp is more about there is an independent of
6 sending packets, their multisystems have a concept of
7 systems clock, which is a counter that we could relate
8 to a number of seconds or microseconds or milliseconds
9 or something like that. And that is usually a common
10 thing to put in there. So that sort of timestamp would
11 be an alternative reading for the first number to the
12 second number.

13 Was that your full answer?

14 A. I think so. You hit the high points
15 certainly.

16 Q. Okay. Just making sure I did not miss
17 something.

18 So the timestamp, is that -- is the time
19 something separate from the EDID request packet?

20 A. No. It would be part of the request packet.

21 Q. And how does it get -- how is it part of the
22 EDID request packet?

23 A. Well, when the --

24 MR. IKEGAMI: Objection to form.

25 THE WITNESS: You know, in this instance, we

1 are talking about something like the source device
2 wanting to send information to a sync device, in
3 choosing this packetized communication protocol
4 that's described in Guo. And so whatever the
5 content of that message might be, maybe just the
6 code saying send me EDID, whatever that message
7 looks like, it gets attached to the necessary
8 information in order for it to go through the
9 packetized channel. And so that necessary
10 information would include things like the packet
11 sequence number or timestamp, and so they are all
12 bundled together and then put onto the channel to
13 get to the source.

14 BY MR. BRUNEEL:

15 Q. So is the timestamp generated outside of the
16 message?

17 A. I'm not sure what you mean by that.

18 Q. It seems like the time -- a timer would be
19 running, and at some point, that -- the timestamp is a
20 capture of whatever the timer is at that time. Is that
21 a correct explanation of it?

22 A. I think I understand what you mean. Probably
23 not the words I would use, but...

24 Q. Okay. What words would you use then?

25 A. I -- so, you know, this concept of a timestamp

1 in a packetized communication like what is being
2 discussed in Guo is, you know, when I want to send a
3 message from -- an example, we are talking about from
4 the source to the sync, I got to -- I got to build that
5 message, I have to put the information together to put
6 the message on the channel so that it rises at the sync.

7 That message is going to, you know, contain
8 various pieces of information. You know, in the example
9 of an EDID request, there is usually some sort of code
10 that the other side is going to understand as being an
11 EDI request. You can't just put that code on the
12 channel. It will never get there. It will never be
13 understood.

14 So that code is not an EDID request package or
15 message. You got to bundle the appropriate information
16 together. The -- and, you know, kind of -- and part of
17 that information in Guo is things like the packet
18 sequence number and the timestamp. And so that bundle
19 of information is the EDID request message, which I call
20 the first message.

21 Q. And so the timestamp that gets bundled in
22 there, that is copied from a running timer?

23 A. I don't -- copy is not the word I would
24 probably use in this context. But, you know, the
25 digital bits that are representative of the information

1 that needs to be bundled together are put into the
2 bundle.

3 Q. But the -- and the information representing
4 the timestamp is obtained from the timer; is that right?

5 A. I mean, you can do various things within a
6 system. You know, one example in -- you know, it is
7 pretty straightforward -- would just be to have a system
8 timer that is providing the bits that you would want to
9 put into the bundle to make a message.

10 Q. So the bits associated with a timestamp are
11 based on the system timer; is that right?

12 MR. IKEGAMI: Objection to form.

13 THE WITNESS: That could be an example too.

14 BY MR. BRUNEEL:

15 Q. And a timer is independent of -- the system
16 timer would be independent of any EDID requests; is that
17 right?

18 A. No.

19 MR. IKEGAMI: Same objection.

20 BY MR. BRUNEEL:

21 Q. So the system timer depends on EDID requests,
22 is that what you are saying?

23 A. The EDID request depends on the system timer.
24 You don't have an EDID request without -- in the system
25 without having the bits from the system timer.

1 Q. And -- but the system timer exists separately
2 or keeps timing -- how would -- let me ask a better
3 question.

4 The system timer, how would you describe a
5 system timer? Does it keep incrementing? Does it keep
6 ticking?

7 A. There's lots of ways of doing a system timer.
8 Generally, you have some -- these are digital systems we
9 are talking about here. You would have some register
10 that would be updated in -- by hardware that would
11 contain a bit pattern that represents that system timer,
12 the -- that system time.

13 To create the EDID message, you would have to
14 take those bits bundled together, for example, with a
15 code, you know, and some packet information and put that
16 out onto the channel to send to the synced device for
17 that message to be created and to be received.

18 Q. And, in general, the register that is updated
19 by hardware -- that bit pattern is updated -- it -- I'll
20 get there.

21 The system timer doesn't use the EDID message
22 as an input, does it?

23 MR. IKEGAMI: Form objection.

24 THE WITNESS: I -- I don't -- I'm not sure I
25 understand that question.

1 BY MR. BRUNEEL:

2 Q. So the -- one way of doing a digital system as
3 timer -- a system timer in a digital system is to update
4 a register using hardware, right?

5 A. Okay. That is, I believe, characterization of
6 what I said before.

7 Q. And the updating to the register, that is
8 consistent or systematic? What words would you use?

9 MR. IKEGAMI: Objection to form.

10 THE WITNESS: In that sort of limitation, you
11 know, you would say it would be, you know,
12 controlled by hardware.

13 BY MR. BRUNEEL:

14 Q. And does the EDID request part of that
15 control?

16 MR. IKEGAMI: Objection to form.

17 THE WITNESS: I don't understand what you mean
18 there. The EDID message is the output. That is
19 what you are going to use that information to form.
20 I don't see that as very -- you know, I'm not sure
21 I understand the distinction you are trying to
22 draw, you know, compared to, say, the preferred
23 embodiment of the '681.

24 You know, the revision number is not a
25 function of the EDID message. It is the revision

1 number. It is independent. But you don't have a
2 message until you put it together. Similar here.
3 You don't have a message until we put the timestamp
4 along with whatever code on the message you are
5 trying to send.

6 MR. BRUNEEL: All right. Well, I promised I
7 would be short. So that is all I have. I can pass
8 the witness.

9 MR. IKEGAMI: Okay. Why don't we take a short
10 break? And we'll come back and follow up from
11 there.

12 THE WITNESS: All right.

13 MR. IKEGAMI: Let's go off the record for ten
14 minutes.

15 MR. BRUNEEL: Sounds good.

16 (Break 10:03 a.m. until 10:12 a.m.)

17 MR. IKEGAMI: We have nothing further at this
18 time, so we can consider this deposition concluded.

19 (Deposition concluded at 10:12 a.m.)

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REPORTER'S CERTIFICATE

STATE OF FLORIDA

COUNTY OF ORANGE

I, MICHELLE PULIDO STUBBEN, RPR, FPR-C Court Reporter and Notary Public, certify that I was authorized to and did stenographically report the foregoing deposition of ROBERT STEVENSON, PH.D.; that a review of the transcript was requested; and that the transcript, Pages 4 through 38, is a true record of my stenographic notes.

I FURTHER CERTIFY that I am not a relative, employee, attorney, or counsel of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the action.

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DATED June 2, 2026.



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1 CERTIFICATE OF OATH

2

3 STATE OF FLORIDA

4 COUNTY OF ORANGE

5

6 I, MICHELLE PULIDO STUBBEN, RPR, FPR-C,
7 Court Reporter and Notary Public, State of Florida,
8 certify that ROBERT STEVENSON, PH.D. personally appeared
9 before me by videoconference and was duly sworn on
10 May 20, 2026.

11

12 WITNESS my hand and official seal this
13 20th day of May, 2026.

14

15 Personally Known:

16 Or Produced Identification: Yes

17 Type of Identification Produced: Driver's License

18

19

20


MICHELLE PULIDO STUBBEN, RPR, FPR-C
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1 WITNESS NOTIFICATION LETTER

2 June 2, 2026
3 ROBERT STEVENSON, PH.D.
4 C/O: JON IKEGAMI, ESQUIRE
5 ALAN LIMBACH, ESQUIRE
6 DLA PIPER, LLP
7 33 Arch Street #26
8 Boston, MA 02110

6 In Re: SAMSUNG ELECTRONICS CO., LTD. vs. MAXELL, LTD.
Deposition, taken May 20, 2026
7 Job No. 7122420

8 The transcript of the above-referenced proceeding has
9 been prepared and is being provided to your office for
review by the witness.

10 We respectfully request that the witness complete their
11 review within 30 days and return the errata sheet to our
office address or via email:

12

13 Sincerely,

14

15

16 MICHELLE PULIDO STUBBEN, RPR, FPR-C

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