

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

SAMSUNG ELECTRONICS CO., LTD., GOOGLE LLC, AND
SAMSUNG ELECTRONICS AMERICA, INC.,
PETITIONER,

V.

HEADWATER RESEARCH LLC,
PATENT OWNER.

CASE IPR2024-00341
PATENT 8,406,733

DEPONENT: PATRICK TRAYNOR

TAKEN: OCTOBER 25, 2024

REPORTER: DANNIELLE COPELAND, RDR, CRR
CALIFORNIA CSR 14444

JOB NUMBER 104880

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I N D E X

EXAMINATION:	PAGE
BY ATTORNEY MILKEY	4
CERTIFICATE	39

1 THE DEPOSITION OF PATRICK TRAYNOR, TAKEN
2 PURSUANT TO NOTICE HERETOFORE FILED, VIA ZOOM
3 VIDEOCONFERENCE, ON OCTOBER 25, 2024, AT APPROXIMATELY
4 10:13 A.M., EASTERN TIME, UPON ORAL EXAMINATION, AND TO
5 BE USED IN ACCORDANCE WITH THE CALIFORNIA CODE OF CIVIL
6 PROCEDURE.

7

8

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VIA ZOOM VIDEOCONFERENCE

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1 PATRICK TRAYNOR, AFTER BEING FIRST DULY
2 SWORN, WAS EXAMINED AND DEPOSED AS FOLLOWS:

3

4 EXAMINATION

5

6 BY ATTORNEY MILKEY:

7 Q. Good morning, Dr. Traynor.

8 A. **Good morning.**

9 Q. Did you -- did you prepare for today's
10 deposition?

11 A. **Yes.**

12 Q. And what did you do to prepare for today's
13 deposition?

14 A. **I re-read my report, looked at the source
15 materials.**

16 Q. Okay. Did you meet with anyone in
17 preparation for today's deposition?

18 A. **I chatted with Karan, Parvin, and Turhan.**

19 Q. Okay. Anyone else?

20 A. **I don't believe so. Not to my
21 recollection, no.**

22 Q. And you understand that this deposition is
23 regarding a challenge to U.S. Patent Number 8,406,733?

24 A. **I do.**

25 Q. Okay. And is it fair if we refer to that

1 as the '733 patent?

2 A. Yes.

3 Q. And so your theory of invalidity of the
4 '733 patent in this proceeding is based off of two
5 references, primarily, as I understand it, the 23.140
6 specification as well as Ogawa; is that correct?

7 A. Yes, that's correct.

8 Q. Okay. I'll try to refer to TS 23.140 as
9 that or Exhibit 1004, but is it -- if I refer to the
10 MMS specification, is that also your understanding that
11 that -- that is the TS 23.140 reference?

12 A. Yes. Any of the things you've mentioned or
13 just "TS 23" or "the MMS standard" are fine.

14 Q. Okay. Perfect.

15 And do you have a copy of TS 23 available?

16 A. I believe you put it into the chat, and so
17 I have a copy of it in front of me.

18 ATTORNEY JHURANI: I'll just -- just really
19 quick, just for the record, I'll flag that Dr. Traynor
20 has an unmarked digital set of all of the exhibits and
21 the declaration. So he probably will want to refer to
22 his local copy, but if you prefer he uses the one that
23 you put in the chat, we can do that and we can just
24 have both of them up. I just wanted to flag that for
25 the record.

1 ATTORNEY MILKEY: Yeah. If it's unmarked,
2 we have no objection to using whatever copy.

3 THE WITNESS: I can confirm that all of my
4 exhibits are unmarked.

5 BY ATTORNEY MILKEY:

6 Q. Perfect.

7 So if you could turn to page 55 of Exhibit 1004,
8 the TS 23 specification.

9 A. Page 55?

10 Q. Sorry. Page 54.

11 A. I'm on page -- just so we're clear, it's
12 page 55 of the PDF but page 54 of the document,
13 correct?

14 Q. To me it's the same, actually.

15 A. Just so we're -- one moment, please.

16 Q. So what I'm looking at is a page that has
17 Section 7.1.18 on it, which is "Support for
18 Transporting Application Data."

19 A. Yes, I have that in front of me.

20 Q. Okay. And what page number is that for
21 you?

22 A. I've -- I'm using now the -- the version
23 that you put in the chat. It is page 55 both on the
24 page number and in the PDF document.

25 Q. Okay. So I -- if I could share my screen

1 really quick, I'm looking at -- at page 54 here, and it
2 shows 7.1.18, "Support for Transporting Application
3 Data."

4 Is -- is this different than what you're looking
5 at? I thought that this was the same file that I
6 uploaded.

7 A. No, I have this file in front of me right
8 now that looks exactly like this. The top thing on my
9 screen says "sender address." It says "54" at the top,
10 and the last word on my screen is "formatted," which
11 seems to be exactly the same as yours.

12 Q. Okay. And this is -- but this is page 54,
13 right?

14 A. That's correct. You asked me to initially
15 go to 55. So I may have made an error that said I am
16 looking precisely at what you have on the screen on my
17 screen.

18 Q. Okay. No worries. I just wanted to make
19 sure that we were looking at the same document, on the
20 same page there, literally, so...

21 A. Thank you.

22 Q. Yep. Absolutely. And my apologies for
23 misspecifying the page number.

24 So in Exhibit 1004, Section 7.1.18 refers to
25 support for transporting application data, correct?

1 A. That's correct.

2 Q. Okay. And the first sentence under that
3 section reads, "Apart from using MMS as a service for
4 users to exchange messages, MMS may also be used to
5 transport data specific to applications."

6 Do you see that?

7 A. I do see that.

8 Q. Okay. So do you agree that the feature of
9 transporting application data is an optional
10 requirement for an implementation of MMS?

11 ATTORNEY JHURANI: Objection to form and
12 scope.

13 THE WITNESS: I'm not quite sure that I
14 understand the -- the question.

15 BY ATTORNEY MILKEY:

16 Q. Is it your opinion that for a device to be
17 MMS compatible, that it has to support transporting
18 application data using MMS?

19 ATTORNEY JHURANI: Objection to form.

20 THE WITNESS: So this is the MMS standard
21 that's in front of me. I think what the sentence is
22 saying here is that you can use MMS for classic
23 messaging or that application data, you know, can be
24 also delivered, you know, through this mechanism, but
25 I -- I don't know how I would have a hypothetical

1 implementation where I -- I couldn't send application
2 information. I can -- I can deliver any information, I
3 believe, via MMS.

4 BY ATTORNEY MILKEY:

5 Q. I guess my question is more about the
6 device, the user -- strike that.

7 When we refer to a UE, is that the same as like
8 user device or user equipment?

9 A. A UE generally refers to a user's phone,
10 essentially the -- sorry to redefine user equipment,
11 but a phone. It could be a cellular-enabled laptop.

12 Q. Okay.

13 A. It's the device the user controls.

14 Q. All right. So if a UE is MMS compatible,
15 does that UE need to support reception and forwarding
16 of application data via MMS?

17 ATTORNEY JHURANI: Objection to form and
18 scope.

19 THE WITNESS: Again, the -- the way that
20 this standard is written, MMS is a -- is a vessel. MMS
21 delivers data. Whether that's through the classic text
22 messaging style or whether that information is consumed
23 by an application, I would expect that -- that an
24 implementation does both.

25 BY ATTORNEY MILKEY:

1 Q. Okay. Regardless of what you would expect,
2 is it your opinion that an implementation of MMS has to
3 be both?

4 A. Again, we're talking about a -- a
5 hypothetical here. MMS is a means of delivering
6 information. Whether that information is consumed, you
7 know, by a -- a user through classical messaging or by
8 an application, it -- it seems to be part of any
9 standard implementation.

10 Q. Okay. So I know that you cite to this
11 Exhibit 1002 -- 1028 in your declaration. I think it's
12 the Mostafa reference.

13 Do you recall that?

14 A. Sorry. You're asking me to go to 120 -- to
15 an exhibit you haven't provided me with?

16 Do you want me to open it up here?

17 Q. Yeah. If you can just open it up on your
18 local copy, and I'll also upload it to the chat.

19 A. I have the document in front of me, Exhibit
20 1028.

21 Q. Okay. And you rely on this document for
22 evidence of what the TS specification discloses,
23 correct?

24 ATTORNEY JHURANI: Objection, form,
25 mischaracterizes document.

1 THE WITNESS: So I -- I certainly cite this
2 document.

3 Is there a specific place in my report that
4 you would like to talk about?

5 BY ATTORNEY MILKEY:

6 Q. Did you review this document?

7 A. Yes. At -- at some point in my writing the
8 report, I did.

9 Q. Are you aware of any inaccuracies in this
10 document?

11 A. Not at the current time.

12 Q. Okay. So if we could go to -- feel free to
13 look at the -- the full paragraph for context, but I
14 want to direct you to numbered page 6 on the bottom.
15 It corresponds to page 734 on the top left of this
16 document.

17 And partway through the sentence there at the very
18 top of that page, it says, "The support for the new
19 feature of transporting application data is an optional
20 requirement for an implementation of MMS."

21 Do you see that?

22 A. I do.

23 Q. And do you have any reason to disagree with
24 that statement?

25 ATTORNEY JHURANI: Objection to form.

1 THE WITNESS: So at the -- the time of the
2 writing of this article, that may have been the case,
3 but, again, whether -- this article is talking about
4 specific formatting of data. Prior to this time,
5 again, an application still could have consumed the
6 message that was sent over SMS -- or I'm sorry, over
7 MMS, so no change in my opinion.

8 BY ATTORNEY MILKEY:

9 Q. Okay. So you agree that at the time of the
10 writing of this article, that support for the new
11 feature of transporting application data was an
12 optional requirement for an implementation of MMS?

13 ATTORNEY JHURANI: Objection to form.

14 THE WITNESS: I apologize. Can anybody
15 hear me?

16 ATTORNEY MILKEY: Yeah. We can hear you.
17 I don't know if you said something previously, but --

18 THE WITNESS: I'm sorry, Mr. Milkey.
19 Everyone has frozen. I now see you moving again and
20 just heard you say that you could hear me. I believe I
21 heard Karan say objection to form.

22 ATTORNEY MILKEY: Yeah. Let me just re-ask
23 the question so that it's clear.

24 BY ATTORNEY MILKEY:

25 Q. At the time of the writing of the Mostafa

1 article, Exhibit 1028, do you agree that support for
2 the new feature of transporting application data was an
3 optional requirement for an implementation of MMS?

4 ATTORNEY JHURANI: Objection to form.

5 THE WITNESS: The Mostafa article talks
6 about the use of -- of XML to provide a general
7 framework for applications, but prior to this time
8 applications could still, you know, take -- take
9 content of messages and use them.

10 So that -- that this specific mechanism was
11 available, it -- it was not at the time, to my
12 knowledge. But again, applications could simply format
13 data in their own ways and -- and process the
14 information without what's mentioned here in Mostafa.

15 BY ATTORNEY MILKEY:

16 Q. So it sounds like what you're saying is
17 that you agree that what's described in Mostafa is
18 optional.

19 Is that correct or I -- you said a lot of other
20 things, but I'm just trying to understand, is -- is it
21 your opinion that what Mostafa describes as support for
22 the new feature of transporting application data as
23 being optional?

24 A. So let me -- let me clarify a little here.

25 ATTORNEY JHURANI: Let me -- Dr. Traynor,

1 I'll just interpose my objection before you answer.

2 I'll object to form of that question.

3 THE WITNESS: What --

4 ATTORNEY JHURANI: Go ahead.

5 THE WITNESS: Thank you.

6 What Mostafa is talking about is XML, which
7 is a -- a framework for how data is formatted, so it
8 provides a uniform way in which applications can format
9 their data.

10 There's no requirement, though, that an
11 application must use XML in order to send or process
12 data. It's merely a convenient way to do so. It's a
13 common technology, but not necessary. So to the extent
14 that the claim is that XML wasn't available, I'm not
15 arguing against that, but beyond that, that
16 applications were simply unable to use MMS, I disagree
17 with that.

18 BY ATTORNEY MILKEY:

19 Q. So you think that in order to use MMS, a
20 user equipment has to be able to transport application
21 data via MMS?

22 ATTORNEY JHURANI: Objection to form and
23 scope.

24 THE WITNESS: So sorry. Let me -- let me
25 be clear again because I feel as if I've said this a

1 few times.

2 When a message comes in, whether -- it
3 could simply be text. Whether that's processed or read
4 by the user or processed or read by the application, as
5 an example, you know, if the weather is going to be 75
6 degrees today, a user could take that and read it
7 themselves or an application could take that and
8 display it inside itself.

9 We don't necessarily need XML to do that.
10 XML is just a framework through which one may choose to
11 format their data.

12 BY ATTORNEY MILKEY:

13 Q. My question didn't ask anything about XML,
14 Dr. Traynor. My -- and this paragraph and, in fact,
15 this whole discussion that I'm referring to in Mostafa
16 isn't discussing XML. My question is about the support
17 for the new feature of transporting application data.

18 Do you see that?

19 That's what's on the page of Mostafa, page 6 and
20 page 734.

21 So why are -- why are you talking about XML in
22 your answer?

23 A. So you can see that Mostafa talks
24 extensively about the use of XML, and, as I've
25 mentioned before, XML is one way, a standard way, of

1 formatting data for applications. It's used widely in
2 the web. So again, not having this specific format or
3 framework doesn't mean that applications could not have
4 taken the data from a message before this.

5 Q. Okay. So to be clear, my -- my question is
6 not about XML. I don't -- I think it's clear from the
7 record -- and the board can evaluate this -- that
8 the -- the compatibility problem and solution section
9 of Mostafa does not mention XML and is not limited to
10 XML. So my question is, again, not asking anything
11 about XML.

12 Is the support for the new feature of transporting
13 application data an optional requirement for an
14 implementation of MMS?

15 ATTORNEY JHURANI: Objection to form, asked
16 and answered.

17 ATTORNEY MILKEY: Karan, you understand
18 that he was talking about XML and my question's not
19 about XML, so that's a completely inappropriate
20 objection.

21 ATTORNEY JHURANI: I disagree. I'm still
22 going to lodge that objection.

23 ATTORNEY MILKEY: Okay.

24 BY ATTORNEY MILKEY:

25 Q. So, Dr. Traynor, my question is, again, not

1 asking anything about XML because Section 3 of Mostafa
2 does not -- is not limited to XML and doesn't discuss
3 XML.

4 My question is: Was the support for the new
5 feature of transporting application data an optional
6 requirement for an implementation of MMS?

7 ATTORNEY JHURANI: Objection to form.

8 THE WITNESS: So I'll -- I'll try to answer
9 again with the same example from before. Applications
10 were able to use information from MMS prior to this.
11 This is just proposing a standard way for them to do
12 so.

13 An application that was looking at weather
14 could take the literal string "it's going to be 75
15 degrees outside today," parse that, and display it
16 at -- at this time.

17 So I -- I believe I've been consistent in
18 trying to answer your question.

19 BY ATTORNEY MILKEY:

20 Q. I don't understand whether it's a yes or
21 whether it's a no or whether it's an it depends. I
22 really don't understand your answer.

23 Can you clarify?

24 A. So you're asking me if -- if prior to this
25 Mostafa article an application was able to use MMS to

1 receive data, and I'm saying that yes, it can --

2 Q. No, Dr. Traynor.

3 My question is: As of the time of the writing of
4 the Mostafa article, was the -- the feature of
5 transporting application data an optional requirement
6 of MMS or was it mandatory?

7 ATTORNEY JHURANI: Objection to the form.

8 THE WITNESS: Again, I've said a few times
9 that the data delivered to the -- the user agent could
10 be interpreted by an application. There was nothing
11 that would necessarily prevent an application from
12 interpreting that data.

13 BY ATTORNEY MILKEY:

14 Q. Was the support for the new feature of
15 transporting application data a mandatory requirement
16 for an implementation of MMS?

17 A. Again, I -- I see the words in front of me.
18 As a person of ordinary skill in the art, certainly
19 there were applications at the time that were capable.
20 This suggests a framework for doing it and support for
21 that framework. But prior to the publication of this
22 article, applications were indeed capable.

23 Q. Okay. And it's your opinion, right, that
24 in order for a UE to be MMS compatible, it was a
25 mandatory requirement that they had to be able to

1 transport application data via MMS?

2 ATTORNEY JHURANI: Objection to form.

3 THE WITNESS: Sorry. Can you -- can you
4 repeat that?

5 BY ATTORNEY MILKEY:

6 Q. Yeah.

7 You're not saying whether or not you agree with
8 this statement in Mostafa that the feature of
9 transporting application data was an optional
10 requirement, so I'm trying to understand: Is it your
11 opinion that transporting application data via MMS was
12 a mandatory requirement for a UE implementation of MMS?

13 ATTORNEY JHURANI: Objection to form.

14 THE WITNESS: Again, I -- I feel like I've
15 answered this before.

16 MMS can deliver whatever is sent. So if
17 that is data that is to be consumed by an application,
18 then the application, I assume, would be able to parse
19 that -- that data.

20 BY ATTORNEY MILKEY:

21 Q. Okay. Are there any situations in MMS
22 where a recipient MMS user agent may not support the
23 transport of application data?

24 A. So this is a -- a really broad question. I
25 mean, are you asking me if I have any knowledge of

1 noncompliant implementations, or what -- can you help
2 me narrow that question?

3 Q. Yeah, so I guess that's a -- that's a
4 helpful clarification.

5 Is it your opinion that if an -- that if an MMS
6 user agent did not support the transport of application
7 data, that that would be noncompliant with the TS MMS
8 specification?

9 ATTORNEY JHURANI: Objection to form.

10 THE WITNESS: Again, I'm trying to be
11 consistent.

12 Assuming that the -- the user agent is able
13 to parse the information that's been delivered, whether
14 it's an MMS communication between two users or that
15 ultimately the application is -- that's expecting it, I
16 would expect that it would be able to -- to read the --
17 the content that it was sent. If it wasn't, it might
18 drop that error -- that message or return it in error.

19 BY ATTORNEY MILKEY:

20 Q. Okay. Could you please turn to the TS
21 specification at page 30.

22 A. Just to make sure that we're on the same
23 page again with this document, what I'm seeing at page
24 30 is "Content information provided by," the first
25 sentence?

1 Q. That's correct.

2 A. I'm there.

3 Q. And do you see Section 7.1.3.1 talks about
4 "Terminal Capability Negotiation"?

5 A. I see that.

6 Q. Okay. And towards the bottom of page 30,
7 there's a list of bullet points. And then right before
8 that list of bullet points, it says, "The MMS user
9 agent's capability information should include."

10 Do you see that?

11 A. Yes, I do.

12 Q. Okay. And then going on to page 31, the
13 last bullet point there says -- within the list of what
14 the MMS user agent's capability information should
15 include, it states, "An indication if the recipient MMS
16 user agent supports transporting application data."

17 Do you see that?

18 A. Yes, I do.

19 Q. Okay. So is it possible that certain MMS
20 user agents may not support transporting application
21 data?

22 ATTORNEY JHURANI: Objection to form.

23 THE WITNESS: So I see what's here. And
24 just to provide content -- or context, rather, so to
25 the extent that this is the -- the standard support,

1 it's possible. That said, again, using MMS as a means
2 of delivering messages and having applications parse
3 them themselves would still allow an application to --
4 to support -- or to use MMS as a -- a means of
5 communication.

6 BY ATTORNEY MILKEY:

7 Q. Okay. What's -- what's your evidence for
8 that?

9 ATTORNEY JHURANI: Objection to form,
10 scope.

11 THE WITNESS: Again, I'm going to go back
12 to the example I've given a few times.

13 If I have an application for weather, I can
14 simply say it's going to be 75 degrees today. A user
15 could read that, an application could read that. An
16 application would have no problem parsing that, and
17 so...

18 BY ATTORNEY MILKEY:

19 Q. How would the application receive that in
20 that example?

21 A. So on modern smartphone platforms it could,
22 you know, request access to SMS, so certainly at the
23 time something like Symbian would have allowed
24 applications to have access to messaging, and when that
25 message came in maybe it would -- the first thing in it

1 would say "weather app," and then it would know to
2 parse the rest.

3 Q. And is that -- is identification of
4 applications via something like weather app, is that
5 what you understand the MMS specification to teach?

6 A. So I -- I talk about application
7 identifiers in my report.

8 Is there something specific there you would like
9 me to talk about?

10 Q. So in -- in your Symbian example, is that
11 an MMS implementation, or is that an SMS
12 implementation?

13 A. Symbian would have had SMS and MMS.

14 Q. What happens if the MMS user agent receives
15 application data from an MMS relay server but the MMS
16 user agent does not support transporting application
17 data?

18 A. Well again, transporting user data, as in
19 the case I've mentioned before, this would have been a
20 standard function, so I -- I'm struggling to understand
21 the scenario in which "the weather is going to be 75"
22 wouldn't be supported.

23 Q. But you agree that the MMS specification
24 teaches that that may not be supported, correct?

25 A. Sorry. You said "that." What -- what

1 precisely are you referring to by "that"?

2 Q. What I'm referring to is -- let me re-ask
3 the question in a better way.

4 You agree that the MMS specification teaches that
5 the MMS user agent may not support the transport of
6 application data, correct?

7 A. So just to repeat what I've said a few
8 times, there may be specific formats that are or are
9 not supported, but application data would have been
10 able to flow over MMS in precisely the case that I've
11 given you a few times. Again, standard text that the
12 application knows it's for it can parse because it
13 knows the format to expect.

14 Q. So you think that when MMS is saying that
15 the recipient MMS user agent does not support the
16 transport of application data, it's just referring to
17 certain formats of application data?

18 A. I look at this entire set of bullets that
19 you've pointed me to, and you can see lots of things
20 here. For example, MIME types, these are multimedia
21 types. These are specific things that are supported or
22 not supported.

23 So for example, if I sent an image type that
24 wasn't supported by the device, it -- it may not work.
25 That doesn't mean that the device can't handle other

1 kinds of images. Similarly, if I sent a message that
2 said the weather is going to be 75 today, I would
3 imagine that that would be supported.

4 Q. Okay. So I understand that you're
5 imagining things about what the MMS specification
6 teaches.

7 Can you point me to anywhere in the MMS
8 specification itself that says that when an MMS user
9 agent does not support the transport of application
10 data, that it's only referring to certain formats of
11 application data?

12 ATTORNEY JHURANI: Objection to form.

13 THE WITNESS: So I want to be -- I want to
14 take issue a little bit. You used the word
15 "imagining."

16 Many applications worked in this fashion.
17 They take incoming messages, they take the information
18 out of them directly. So that's -- that's not a
19 scenario I'm making up. That's a standard means in
20 which applications at the time and some still get
21 the -- get the data that they use.

22 BY ATTORNEY MILKEY:

23 Q. Why would an MMS user agent only support
24 some formats of application content and not other
25 formats?

1 A. Many reasons. One is that perhaps they
2 have a -- a way of parsing that they prefer. Certainly
3 in talking to engineers in the past, people have their
4 favorite libraries, routines, ways of presenting data,
5 so an application developer could have said this way
6 that I like, that I'm familiar with, is sufficient.
7 I've done that. Those are -- those are engineering
8 decisions, so...

9 Q. So it's your opinion that the MMS user
10 agent itself parses the application-specific data; is
11 that correct?

12 ATTORNEY JHURANI: Objection, form and
13 scope.

14 THE WITNESS: You're asking me about all
15 possible implementations. An MMS user agent can
16 certainly look at the data. Whether the parsing is
17 necessarily happening -- happening there in the
18 application, I can't say universally.

19 BY ATTORNEY MILKEY:

20 Q. Can the MMS user agent modify the
21 application-specific data before sending it to the
22 application?

23 ATTORNEY JHURANI: Objection, form and
24 scope.

25 THE WITNESS: So as I talk about in the MMS

1 Ogawa combination, yeah, possibly. Decryption could be
2 one of those things. So it could receive an encrypted
3 message, decrypt it, and then send it along. That's
4 one possible example.

5 BY ATTORNEY MILKEY:

6 Q. Other than encryption, can you think of any
7 other examples in which the MMS user agent would modify
8 the message content before sending it to the
9 application?

10 ATTORNEY JHURANI: Objection to form and
11 scope.

12 THE WITNESS: It's a -- a hypothetical.
13 It's not something I considered or investigated before
14 this. I'd need to think about it for a while and think
15 about what the purpose of doing that was. So I haven't
16 considered further.

17 Just a quick note, I know we started a
18 little late, but we are approaching 10:00. When it's
19 convenient I would love to take a break if in the next
20 couple of minutes there's a natural breaking point.

21 ATTORNEY MILKEY: Yeah. I think now is a
22 good time, actually, and we can resume in five or ten
23 minutes.

24 THE WITNESS: I'm okay coming back at 11:00
25 a.m. Does that work for you?

1 ATTORNEY MILKEY: That's perfect.

2 THE WITNESS: Thank you.

3 ATTORNEY MILKEY: Thank you.

4 (RECESS TAKEN.)

5 BY ATTORNEY MILKEY:

6 Q. Dr. Traynor, if you could turn to page 54
7 of the TS specification.

8 A. I'm there.

9 Q. Okay. And under Section 7.1.18, "Support
10 for Transporting Application Data," the third sentence
11 there says, "Details of these applications or how an
12 MMS user agent or an MMS VAS application would
13 interface with them are outside the scope of this
14 specification."

15 Do you see that?

16 A. I do.

17 Q. Okay. What is an MMS user agent?

18 A. This is the software that's running on a UE
19 that receives the -- the incoming MMS.

20 Q. Okay. And what is an MMS VAS application?

21 A. So VAS stands for value-added service. So
22 this might be something like a weather application or a
23 game, and it uses MMS as its -- as one of its means of
24 communicating information to the -- to the -- an
25 application on the user's device.

1 Q. And then the second sentence under 7.1.18
2 says, "Applications that intend to transport
3 application-specific data using MMS may either reside
4 on an MMS user agent or on an MMS VAS application."

5 Do you see that?

6 A. I do.

7 Q. Okay. What does it mean for an application
8 to reside on an MMS VAS application?

9 A. Well, as I mentioned before, in the context
10 of a -- a weather application, this could be, you know,
11 where the information for the user is sent. So this
12 weather application at the -- the VAS server would send
13 an MMS, that MMS would then go to the -- over the MM7
14 interface, would go to the MMS relay, which would then
15 ultimately be delivered to the user's device.

16 Q. Okay. So what I'm specifically asking is
17 the specification says that applications may reside on
18 an MMS VAS application, and my specific question is
19 what it means for an application to reside on the VAS
20 application.

21 A. Sure. So again, this is just going to be
22 some -- some feature or function. So this larger VAS
23 application could have multiple subapplications, so
24 it's -- we have some -- we have some service that's
25 implemented on this server.

1 Q. So are these applications then part of the
2 MMS VAS application, if they reside on it?

3 I'm just trying to understand what "reside on"
4 means in this context.

5 ATTORNEY JHURANI: Objection to form.

6 THE WITNESS: So I -- I could imagine an
7 application -- a VAS application that's games. And
8 let's say it's from the same company, one is checkers,
9 one is chess, they could reside within a larger
10 application or application framework and still have
11 these subparts for specific games.

12 BY ATTORNEY MILKEY:

13 Q. Okay. And then it talks about
14 application -- it also says, "Applications that intend
15 to transport application-specific data using MMS may
16 reside on an MMS user agent."

17 What does it mean for an application to reside on
18 an MMS user agent?

19 A. So just one moment, please. I just want to
20 find this because I talk about it in my report.

21 So can you go to paragraph 51 of my report,
22 please?

23 Q. Yes. I'm there.

24 A. So what I point out here in -- in paragraph
25 51 is that the standard uses some language

1 interchangeably, and that is sometimes it uses the user
2 agent to refer to the device, and sometimes it's being
3 specific actually about the thing that is receiving
4 the -- the MMS message.

5 Q. Okay. And in support of that statement you
6 rely on Exhibit 1028, Mostafa, correct?

7 A. That is one thing that I cite to, but I
8 also note that, again, as a person of ordinary skill in
9 the art at the time, that these terms were often used
10 interchangeably.

11 Q. Okay. So in this context an MMS user agent
12 would essentially be referring to an MMS-capable UE?

13 ATTORNEY JHURANI: Objection to form.

14 THE WITNESS: So again, in this context
15 I'm -- the context that I'm interpreting what you're
16 saying is in the context of 7.1.18, and that is that it
17 would be a UE that was capable of -- of processing MMS
18 messages.

19 Again, sometimes this standard is more
20 specific, it's talking about the thing that's actually
21 doing the processing on the UE, but the terms are used
22 imprecisely and interchangeably.

23 BY ATTORNEY MILKEY:

24 Q. Okay. Could you please turn to paragraph
25 202 of your declaration?

1 And if it makes it easier, this is on page 116.

2 A. Yes. If you just give me a moment, I'm
3 just -- I want to read the -- the text around this.

4 Q. Yeah.

5 A. Okay. I've read the text at and around
6 202.

7 Q. Okay. Perfect.

8 So the third sentence of paragraph 202 says, in
9 part, that "A POSITA would have had a reason to
10 implement the destination application to assist in
11 providing such presentations to the user visually
12 because it was conventional and obvious for messages
13 containing visual content to be presented visually to
14 users."

15 Do you see that?

16 A. Yes.

17 Q. What do you mean by "providing such
18 presentations to the user visually" in this sentence?

19 A. Well, as an example, if the application
20 data here is an image, the likely point of that image
21 is for the user to see it. It could be in a format
22 that the application has expertise in rendering, and so
23 it would render that image.

24 Q. Okay. And in this third sentence of
25 paragraph 202, it says "Alternatively," to begin with,

1 and I understand that to be an alternative to the --
2 the second sentence where you say, "A POSITA would have
3 understood that a destination application that receives
4 an MM would be configured to assist in presenting the
5 notification of any visual content contained in the
6 received MM."

7 Is that a correct understanding, that the third
8 sentence is an alternative to the second sentence?

9 A. So just to clarify, the second sentence is
10 talking about presenting a notification of the visual
11 content. The third sentence is about -- is more so
12 about the content itself.

13 So as an example, perhaps the notification shows a
14 small version of the image, and in the alternative
15 perhaps the full image is rendered.

16 Q. What evidence do you cite in support of
17 your statement that a POSITA would have understood that
18 a destination application that receives an MM would be
19 configured to assist in presenting the notification of
20 any visual content contained in the received MM?

21 A. Again, because I was a person of ordinary
22 skill in the art at the time, I'm -- I'm citing to my
23 experience. I've given the example when an image comes
24 in, an application would want to display that image to
25 the user, so it's a fairly intuitive, straightforward

1 **example.**

2 Q. Okay. If you could please turn to
3 paragraph 153 of your declaration.

4 A. **One moment, please.**

5 **I'm there.**

6 Q. Okay. And I'm asking in the context of
7 paragraph 153 because I think that's the cleanest part
8 of that of your report, but I also understand that you
9 refer back to Section 1D3, so feel free to refer to any
10 part of your declaration that you want to here.

11 But my question is: In paragraph 153 you identify
12 the application-specific data from VAS applications as
13 being the claimed message content; is that correct?

14 A. **That's what's in 153, correct. It could**
15 **also include metadata about that -- that content, but**
16 **yes.**

17 Q. Okay. So my question is: Which messages
18 that are -- that are sent to the MMS user agent in the
19 TS 23 specification do include -- strike that. I'll --
20 I'll re-ask it slightly clearer.

21 So my understanding is that there are multiple
22 messages that can be sent to the MMS user agent or
23 multiple types of messages that can be sent to the MMS
24 user agent in TS 23.

25 Which of those include application-specific data

1 from VAS applications?

2 ATTORNEY JHURANI: Objection to form.

3 THE WITNESS: Sorry. Just to be -- just to
4 be clear, it's a really broad question.

5 I -- I don't know the -- the universe of
6 VAS applications, but an application that is sending,
7 you know, data from -- from a VAS to -- to a user
8 agent, whether that data is somehow encoded or just a
9 message would qualify. Again, I don't know the whole
10 bounds of this hypothetical.

11 BY ATTORNEY MILKEY:

12 Q. Okay. Could you go to page 60 of the TS
13 specification?

14 A. Okay. I'm there.

15 Q. Okay. And you see here there's Figure 6,
16 "Example Abstract Message Flow."

17 A. I see Figure 6.

18 Q. Okay. And so I'm looking at the types of
19 messages that are -- in this figure that are sent to
20 the recipient MMS UA, and I -- I only see two -- I'm
21 not asking you to confirm that it's limited to these
22 two, but here I see two types of messages being sent to
23 the -- the recipient MMS UA. There's an
24 MM1_notification.REQ, and there's an MM1_retrieve.RES.

25 Do you see those two messages as being sent to the

1 recipient MMS UA in Figure 6?

2 A. In Figure 6 I see the direct communication
3 between the MMS relay server and the recipient MMS UA,
4 and I do see those two messages you're talking about.

5 Q. Okay. And is it your opinion that either
6 of those two messages can include application-specific
7 data from VAS applications?

8 ATTORNEY JHURANI: Objection to form.

9 THE WITNESS: So again, these are messages
10 specifying what happens on the MM1 interface between
11 the relay server and -- and the MMS UA. And so
12 certainly in the MM1 retrieve, application data from
13 the -- from a VAS could be delivered there.

14 BY ATTORNEY MILKEY:

15 Q. Okay. Is it your opinion that data from a
16 VAS application would be delivered in the MM1
17 notification request?

18 A. I'm just taking a moment to read something
19 in my report, if you just give me a few.

20 So I'd take you to paragraph 168 in my report.
21 This is around Claim 6. I talk a little bit here about
22 the MM1 notification request, and I talk about, for
23 example, charging-related information.

24 So that would be information specific to the
25 application that was being conveyed in that message.

1 Q. When you refer to application-specific data
2 in VAS applications in paragraph 153, what are you
3 referring to?

4 A. So I think I -- I mentioned this earlier.
5 Again, it could be applications -- sorry to define it
6 recursively here, data for that application or metadata
7 about that application.

8 ATTORNEY MILKEY: Okay. I think I'm close
9 to wrapping up, if we could take a ten-minute break
10 just for me to review my notes.

11 ATTORNEY JHURANI: Sure. That's fine.
12 (RECESS TAKEN.)

13 BY ATTORNEY MILKEY:

14 Q. Dr. Traynor, did you discuss anything with
15 your attorneys during the pendency of today's
16 deposition?

17 A. No, I haven't spoken to anybody.

18 ATTORNEY MILKEY: I have no further
19 questions at this time.

20 ATTORNEY JHURANI: All right. Give us
21 five, seven maybe, no more than ten minutes to just
22 convene, and then we'll -- we'll see if we have any
23 redirect.

24 ATTORNEY MILKEY: Okay.
25 (RECESS TAKEN.)

1 ATTORNEY JHURANI: No further questions --
2 or no questions on our end.

3 ATTORNEY MILKEY: All right. Great.
4 Can we go off the record.
5 (CONCLUDED AT 11:40 A.M.)

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REPORTER'S CERTIFICATE

I, DANNIELLE COPELAND, RDR, CRR, DO HEREBY CERTIFY THAT THE FOREGOING DEPOSITION OF PATRICK TRAYNOR WAS TAKEN BEFORE ME AT THE TIME AND PLACE AND FOR THE PURPOSE IN THE CAPTION STATED; THAT THE WITNESS WAS FIRST DULY SWORN TO TELL THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE TRUTH; THAT THE DEPOSITION WAS TAKEN BEFORE ME STENOGRAPHICALLY AND AFTERWARDS TRANSCRIBED UNDER MY DIRECTION; THAT THE FOREGOING IS A FULL, TRUE, AND CORRECT TRANSCRIPT OF THE SAID DEPOSITION SO GIVEN; THAT THERE WAS A REQUEST THAT THE WITNESS READ AND SIGN THE TRANSCRIPT; THAT THE APPEARANCES WERE AS STATED IN THE CAPTION.

I FURTHER CERTIFY THAT I AM NEITHER OF COUNSEL NOR OF KIN TO ANY OF THE PARTIES TO THIS ACTION, AND AM IN NO WAY INTERESTED IN THE OUTCOME OF SAID ACTION.

WITNESS MY SIGNATURE ON OCTOBER 30, 2024.

Dannielle Copelan

DANNIELLE COPELAND, RDR, CRR
CALIFORNIA CSR 14444
TENNESSEE LICENSE 807
WASHINGTON CSR 22000824

1 STATE OF _____)
2 COUNTY OF _____) SS.

3

4 I, THE UNDERSIGNED, DECLARE UNDER PENALTY OF
5 PERJURY THAT I HAVE READ THE FOREGOING TRANSCRIPT, AND
6 I HAVE MADE ANY CORRECTIONS, ADDITIONS, OR DELETIONS
7 THAT I WAS DESIROUS OF MAKING; THAT THE FOREGOING IS A
8 TRUE AND CORRECT TRANSCRIPT OF MY TESTIMONY CONTAINED
9 THEREIN.

10 EXECUTED THIS _____ DAY OF _____,
11 20_____, AT _____, _____.
12 (CITY) (STATE)

13

14

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PATRICK TRAYNOR

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1 Errata Sheet

2

3 NAME OF CASE: Samsung Electronics Co. LTD. vs Headwater Research LLC

4 DATE OF DEPOSITION: 10/25/2024

5 NAME OF WITNESS: PATRICK TRAYNOR

6 Reason Codes:

7 1. To clarify the record.

8 2. To conform to the facts.

9 3. To correct transcription errors.

10 Page ____ Line ____ Reason ____

11 From _____ to _____

12 Page ____ Line ____ Reason ____

13 From _____ to _____

14 Page ____ Line ____ Reason ____

15 From _____ to _____

16 Page ____ Line ____ Reason ____

17 From _____ to _____

18 Page ____ Line ____ Reason ____

19 From _____ to _____

20 Page ____ Line ____ Reason ____

21 From _____ to _____

22 Page ____ Line ____ Reason ____

23 From _____ to _____

24

25 _____

1	3	734	agree	29:4,7,8,10, 12,18,19,20, 23 30:2,7,10, 14,17 32:10, 19,22 33:3, 18,24 35:6 36:12,16,25 37:6,7
1002 10:11	3 17:1	11:15 15:20	8:8 12:9 13:1, 17 19:7 23:23 24:4	
1004 5:9 6:7 7:24	30 20:21,24 21:6	75 15:5 17:14 22:14 23:21 25:2	ahead 14:4	
1028 10:11,20 13:1 31:6	31 21:12	8	allowed 22:23	application- specific 26:10,21 29:3 30:15 34:12, 25 36:6 37:1
10:00 27:18	5	8,406,733 4:23	alternative 33:1,8,14	
116 32:1	51 30:21,25	A	Alternatively 32:25	
11:00 27:24	54 6:10,12 7:1,9, 12 28:6	a.m. 27:25 38:5	apologies 7:22	applications 8:5 13:7,8,12 14:8,16 16:1, 3 17:9 18:19, 22 22:2,24 23:4 25:16,20 28:11 29:2,17 30:1,14 34:12 35:1,6 36:7 37:2,5
11:40 38:5	55 6:7,9,12,23 7:15	Absolutely 7:22	apologize 12:14	
120 10:14	6	Abstract 35:16	app 23:1,4	
153 34:3,7,11,14 37:2	6 11:14 15:19 35:15,17 36:1,2,21	access 22:22,24	application 6:18 7:2,25 8:9,18,23 9:1, 16,23 10:8 11:19 12:5,11 13:2,22 14:11,20 15:4,7,17 16:13 17:5, 13,25 18:5, 10,11,15 19:1,9,11,17, 18,23 20:6,15 21:16,20 22:3,13,15, 16,19 23:6, 15,16 24:6,9, 12,16,17 25:9,11,24 26:5,18,22 27:9 28:10, 12,20,22,25	approaching 27:18
168 36:20	60 35:12	address 7:9		arguing 14:15
1D3 34:9	7	agent 18:9 19:22 20:6,12 21:16 23:14,16 24:5,15 25:9, 23 26:10,15, 20 27:7 28:12,17 29:4 30:16,18 31:2,11 34:18,22,24 35:8		art 18:18 31:9 33:22
2	7.1.18 6:17 7:2,24 28:9 29:1 31:16	agent's 21:9,14		article 12:2,3,10 13:1,5 17:25 18:4,22
202 31:25 32:6,8, 25	7.1.3.1 21:3	agents 21:20		assist 32:10 33:4,19
23 5:13,15 6:8 34:19,24	733 5:1,4			assume 19:18
23.140 5:5,8,11				Assuming 20:12

ATTORNEY 4:6 5:18 6:1,5 8:11,15,19 9:4,17,25 10:24 11:5,25 12:8,13,16, 22,24 13:4, 15,25 14:4, 18,22 15:12 16:15,17,21, 23,24 17:7,19 18:7,13 19:2, 5,13,20 20:9, 19 21:22 22:6,9,18 25:12,22 26:12,19,23 27:5,10,21 28:1,3,5 30:5, 12 31:13,23 35:2,11 36:8, 14 37:8,11, 13,18,20,24 38:1,3	board 16:7 bottom 11:14 21:6 bounds 35:10 break 27:19 37:9 breaking 27:20 broad 19:24 35:4 bullet 21:7,8,13 bullets 24:18	chat 5:16,23 6:23 10:18 chatted 4:18 checkers 30:8 chess 30:9 choose 15:10 cite 10:10 11:1 31:7 33:16 citing 33:22 claim 14:14 36:21 claimed 34:13 clarification 20:4 clarify 13:24 17:23 33:9 classic 8:22 9:21 classical 10:7 cleanest 34:7 clear 6:11 12:23 14:25 16:5,6 35:4 clearer 34:20	close 37:8 combination 27:1 common 14:13 communicati ng 28:24 communicati on 20:14 22:5 36:2 company 30:8 compatibility 16:8 compatible 8:17 9:14 18:24 completely 16:19 CONCLUDED 38:5 configured 33:4,19 confirm 6:3 35:21 considered 27:13,16 consistent 17:17 20:11 consumed 9:22 10:6 12:5 19:17 contained 33:5,20	content 13:9 20:17,24 21:24 25:24 27:8 32:13 33:5,11,12,20 34:13,15 context 11:13 21:24 29:9 30:4 31:11,14,15, 16 34:6 controls 9:13 convene 37:22 convenient 14:12 27:19 conventional 32:12 conveyed 36:25 copy 5:15,17,22 6:2 10:18 correct 5:6,7 6:13 7:14,25 8:1 10:23 13:19 21:1 23:24 24:6 26:11 31:6 33:7 34:13,14 corresponds 11:15 couple 27:20 current 11:11
attorneys 37:15 aware 11:9	capability 21:4,9,14 capable 18:19,22 31:17 case 12:2 23:19 24:10 cellular- enabled 9:11 challenge 4:23 change 12:7 charging- related 36:23	C		
B	back 22:11 27:24 34:9 based 5:4 begin 32:25 bit 25:14 36:21			

D	delivered 8:24 18:9 20:13 29:15 36:13,16	discloses 10:22	engineers 26:3	expertise 32:22
data 6:18 7:3,25 8:5,9,18,23 9:16,21 11:19 12:4,11 13:2, 13,22 14:7,9, 12,21 15:11, 17 16:1,4,13 17:5 18:1,5,9, 12,15 19:1,9, 11,17,19,23 20:7 21:16,21 23:15,17,18 24:6,9,16,17 25:10,11,21 26:4,10,16,21 28:10 29:3 30:15 32:20 34:12,25 35:7,8 36:7, 12,15 37:1,6	delivering 10:5 22:2	discuss 17:2 37:14	entire 24:18	extensively 15:24
	delivers 9:21	discussing 15:16	equipment 9:8,10 14:20	extent 14:13 21:25
	depends 17:21	discussion 15:15	error 7:15 20:18	F
	DEPOSED 4:2	display 15:8 17:15 33:24	essentially 9:10 31:12	fact 15:14
	deposition 4:10,13,17,22 37:16	document 6:12,24 7:19 10:19,21,25 11:2,6,10,16 20:23	evaluate 16:7	fair 4:25
	describes 13:21	drop 20:18	evidence 10:22 22:7 33:16	fairly 33:25
	destination 32:10 33:3,18	DULY 4:1	EXAMINATION 4:4	familiar 26:6
	Details 28:11	E	EXAMINED 4:2	fashion 25:16
decisions 26:8	developer 26:5	earlier 37:4	examples 27:7	favorite 26:4
declaration 5:21 10:11 31:25 34:3,10	device 8:16 9:6,8,13 24:24,25 28:25 29:15 31:2	easier 32:1	exchange 8:4	feature 8:8 11:19 12:11 13:2,22 15:17 16:12 17:5 18:4,14 19:8 29:22
decrypt 27:3	digital 5:20	encoded 35:8	exhibit 5:9 6:7 7:24 10:11,15,19 13:1 31:6	feel 11:12 14:25 19:14 34:9
Decryption 27:1	direct 11:14 36:2	encrypted 27:2	exhibits 5:20 6:4	figure 35:15,17,19 36:1,2
define 37:5	directly 25:18	encryption 27:6	expect 9:23 10:1 20:16 24:13	file 7:5,7
degrees 15:6 17:15 22:14	disagree 11:23 14:16 16:21	end 38:2	expecting 20:15	find 30:20
deliver 9:2 19:16		engineering 26:7	experience 33:23	

fine 5:13 37:11	5:17 6:19 7:7 8:21 10:19 18:17	heard 12:20,21	implemented 29:25	interpreted 18:10
flag 5:19,24	frozen 12:19	helpful 20:4	imprecisely 31:22	interpreting 18:12 31:15
flow 24:10 35:16	full 11:13 33:15	hypothetical 8:25 10:5 27:12 35:10	inaccuracies 11:9	intuitive 33:25
form 8:11,19 9:17 10:24 11:25 12:13,21 13:4 14:2,22 16:15 17:7 18:7 19:2,13 20:9 21:22 22:9 25:12 26:12, 23 27:10 30:5 31:13 35:2 36:8	function 23:20 29:22	I	inappropriate 16:19	invalidity 5:3
format 13:12 14:8 15:11 16:2 24:13 32:21	game 28:23	identification 23:3	include 21:9,15 34:15,19,25 36:6	investigated 27:13
formats 24:8,17 25:10,24,25	games 30:7,11	identifiers 23:7	incoming 25:17 28:19	issue 25:14
formatted 7:10 14:7	general 13:6	identify 34:11	indication 21:15	J
formatting 12:4 16:1	generally 9:9	image 24:23 32:20, 23 33:14,15, 23,24	information 9:2,22 10:6 13:14 17:10 20:13,24 21:9,14 25:17 28:24 29:11 36:23,24	JHURANI 5:18 8:11,19 9:17 10:24 11:25 12:13 13:4,25 14:4, 22 16:15,21 17:7 18:7 19:2,13 20:9 21:22 22:9 25:12 26:12, 23 27:10 30:5 31:13 35:2 36:8 37:11,20 38:1
forwarding 9:15	give 32:2 36:19 37:20	images 25:1	initially 7:14	K
framework 13:7 14:7 15:10 16:3 18:20,21 30:10	good 4:7,8 27:22	imagine 25:3 30:6	inside 15:8	Karan 4:18 12:21 16:17
free 11:12 34:9	Great 38:3	imagining 25:5,15	intend 29:2 30:14	kinds 25:1
front	guess 9:5 20:3	implement 32:10	interchangeably 31:1,10,22	knowledge 13:12 19:25
	H	implementati on 8:10 9:1,24 10:2,9 11:20 12:12 13:3 16:14 17:6 18:16 19:12 23:11,12	interface 28:13 29:14 36:10	
	handle 24:25	implementati ons 20:1 26:15	interpose 14:1	
	happening 26:17			
	hear 12:15,16,20			

L	M			
language 30:25	made 7:15	25:17 31:18 32:12 34:17, 22,23 35:19, 22,25 36:4,6, 9	22 MM1_ NOTIFICATIO N.REQ 35:24	modern 22:21
laptop 9:11	make 7:18 20:22	messaging 8:23 9:22 10:7 22:24	Mm1_ retrieve.res. 35:24	modify 26:20 27:7
larger 29:22 30:9	makes 32:1	metadata 34:15 37:6	MM7 29:13	moment 6:15 30:19 32:2 34:4 36:18
late 27:18	making 25:19	Milkey 4:6 6:1,5 8:15 9:4,25 11:5 12:8,16,18, 22,24 13:15 14:18 15:12 16:17,23,24 17:19 18:13 19:5,20 20:19 22:6,18 25:22 26:19 27:5,21 28:1,3,5 30:12 31:23 35:11 36:14 37:8,13,18,24 38:3	MMS 5:10,13 8:3,4, 10,17,18,20, 22 9:3,14,16, 20 10:2,5 11:20 12:7,12 13:3 14:16, 19,21 16:14 17:6,10,25 18:6,16,24 19:1,11,12, 16,21,22 20:5,7,14 21:8,14,15,19 22:1,4 23:5, 11,13,14,15, 23 24:4,5,10, 14,15 25:5,7, 8,23 26:9,15, 20,25 27:7 28:12,17,19, 20,23 29:3,4, 8,13,14,18 30:2,15,16,18 31:4,11,17 34:18,22,23 35:20,23 36:1,3,11	morning 4:7,8
left 11:15	mandatory 18:6,15,25 19:12			Mostafa 10:12 12:25 13:5,14,17,21 14:6 15:15, 19,23 16:9 17:1,25 18:4 19:8 31:6
libraries 26:4	materials 4:15			moving 12:19
limited 16:9 17:2 35:21	means 10:5 22:1,4 25:19 28:23 29:19 30:4			multimedia 24:20
list 21:7,8,13	mechanism 8:24 13:10			multiple 29:23 34:21, 23
literal 17:14	meet 4:16			
literally 7:20	mention 16:9	MIME 24:20		N
local 5:22 10:18	mentioned 5:12 13:14 15:25 23:19 29:9 37:4	minutes 27:20,23 37:21		narrow 20:2
lodge 16:22		mischaracteri zes 10:25		natural 27:20
looked 4:14	message 12:6 15:2 16:4 20:18 22:25 25:1 27:3,8 31:4 34:13 35:9,16 36:25	misspecifying 7:23		necessarily 15:9 18:11 26:17
lot 13:19		MM 33:4,6,18,20	MMS- CAPABLE 31:12	Negotiation 21:4
lots 24:19	messages 8:4 13:9 22:2	MM1 36:10,12,16,		noncompliant 20:1,7
love 27:19				

note 27:17 31:8	20:5 26:9 36:5,15	26:3	prefer 5:22 26:2	provided 10:15 20:24
notes 37:10	optional 8:9 11:19	patent 4:23 5:1,4	preparation 4:17	providing 32:11,17
notification 33:5,10,13,19 36:17,22	12:12 13:3, 18,23 16:13 17:5 18:5 19:9	PATRICK 4:1	prepare 4:9,12	publication 18:21
number 4:23 6:20,24 7:23	order 14:11,19 18:24	PDF 6:12,24	presentations 32:11,18	purpose 27:15
numbered 11:14	ordinary 18:18 31:8 33:21	pendency 37:15	presented 32:13	put 5:16,23 6:23
O		people 26:3	presenting 26:4 33:4,10, 19	Q
object 14:2	P	perfect 5:14 6:6 28:1 32:7	prevent 18:11	qualify 35:9
objection 6:2 8:11,19 9:17 10:24 11:25 12:13, 21 13:4 14:1, 22 16:15,20, 22 17:7 18:7 19:2,13 20:9 21:22 22:9 25:12 26:12, 23 27:10 30:5 31:13 35:2 36:8	paragraph 11:13 15:14 30:21,24 31:24 32:8,25 34:3,7,11 36:20 37:2	person 18:18 31:8 33:21	previously 12:17	question 8:14 9:5 12:23 14:2 15:13,16 16:5,10,25 17:4,18 18:3 19:24 20:2 24:3 29:18 34:11,17 35:4
obvious 32:12	parse 17:15 19:18 20:13 22:2 23:2 24:12	phone 9:9,11	prior 12:4 13:7 17:10,24 18:21	question's 16:18
Ogawa 5:6 27:1	parses 26:10	place 11:3	problem 16:8 22:16	questions 37:19 38:1,2
open 10:16,17	parsing 22:16 26:2,16	platforms 22:21	proceeding 5:4	quick 5:19 7:1 27:17
opinion 8:16 10:2 12:7 13:21 18:23 19:11	part 10:8 30:1 32:9 34:7,10	point 11:7 21:13 25:7 27:20 30:24 32:20	process 13:13 14:11	R
	partway 11:17	pointed 24:19	processed 15:3,4	re-ask 12:22 24:2 34:20
	Parvin 4:18	points 21:7,8	processing 31:17,21	re-read 4:14
	past	POSITA 32:9 33:2,17	proposing 17:11	
		possibly 27:1	provide 13:6 21:24	
		precisely 7:16 24:1,10		

read 15:3,4,6 20:16 22:15 32:3,5 36:18	redefine 9:10	requirement 8:10 11:20 12:12 13:3 14:10 16:13 17:6 18:5,15, 25 19:10,12	16:8 17:1 21:3 28:9 34:9	33:22
reads 8:3	redirect 37:23		send 9:1 14:11 27:3 29:12	slightly 34:20
reason 11:23 32:9	refer 4:25 5:8,9,21 9:7 31:2 34:9 37:1	reside 29:3,8,17,19 30:2,3,9,16, 17	sender 7:9	small 33:14
reasons 26:1	reference 5:11 10:12	rest 23:2	sending 26:21 27:8 35:6	smartphone 22:21
recall 10:13	references 5:5	resume 27:22	sentence 8:2,21 11:17 20:25 28:10 29:1 32:8,18, 24 33:2,8,9, 11	SMS 12:6 22:22 23:11,13
receive 18:1 22:19 27:2	referring 15:15 24:1,2, 16 25:10 31:12 37:3	retrieve 36:12		software 28:18
received 33:6,20	refers 7:24 9:9	return 20:18	server 23:15 29:12, 25 36:3,11	solution 16:8
receives 23:14 28:19 33:3,18	relay 23:15 29:14 36:3,11	review 11:6 37:10	service 8:3 28:21 29:24	sounds 13:16
receiving 31:3	rely 10:21 31:6	running 28:18	set 5:20 24:18	source 4:14
reception 9:15	render 32:23		share 6:25	specific 8:5 11:3 12:4 13:10 16:2 23:8 24:8,21 29:18 30:11 31:3,20 36:24
RECESS 28:4 37:12,25	rendered 33:15	S	shows 7:2 33:13	specifically 29:16
recipient 19:22 21:15 24:15 35:20, 23 36:1,3	rendering 32:22	scenario 23:21 25:19	Similarly 25:1	specification 5:6,10 6:8 10:22 20:8,21 23:5,23 24:4 25:5,8 28:7, 14 29:17 34:19 35:13
recollection 4:21	repeat 19:4 24:7	scope 8:12 9:18 14:23 22:10 26:13,24 27:11 28:13	simply 13:12 14:16 15:3 22:14	
record 5:19,25 16:7 38:4	report 4:14 11:3,8 23:7 30:20,21 34:8 36:19,20	screen 6:25 7:9,10, 16,17	situations 19:21	spoken 37:17
recursively 37:6	request 22:22 36:17, 22	section 6:17 7:24 8:3	skill 18:18 31:8	standard 5:13 8:20 9:20 10:9

15:25 17:11 21:25 23:20 24:11 25:19 30:25 31:19 stands 28:21 started 27:17 statement 11:24 19:8 31:5 33:17 states 21:15 straightforward 33:25 strike 9:6 34:19 string 17:14 struggling 23:20 style 9:22 subapplications 29:23 subparts 30:11 sufficient 26:6 suggests 18:20 support 6:17 7:2,25 8:17 9:15 11:18 12:10 13:1,21 15:16	16:12 17:4 18:14,20 19:22 20:6 21:20,25 22:4 23:16 24:5,15 25:9,23 28:9 31:5 33:16 supported 23:22,24 24:9,21,22,24 25:3 supports 21:16 SWORN 4:2 Symbian 22:23 23:10, 13 T taking 36:18 talk 11:4 23:6,9 26:25 30:20 36:21,22 talking 10:4 12:3 14:6 15:21 16:18 26:3 31:20 33:10 36:4 talks 13:5 15:23 21:3 30:13 teach 23:5 teaches 23:24 24:4	25:6 technology 14:13 ten 27:22 37:21 ten-minute 37:9 Terminal 21:4 terms 31:9,21 text 9:21 15:3 24:11 32:3,5 theory 5:3 thing 7:8 22:25 31:3,7,20 things 5:12 13:20 24:19,21 25:5 27:2 thought 7:5 time 11:11 12:1,4, 9,25 13:7,11 17:16 18:3,19 22:23 25:20 27:22 31:9 33:22 37:19 times 15:1 18:8 22:12 24:8,11 today 15:6 17:15 22:14 25:2	today's 4:9,12,17 37:15 top 7:8,9 11:15, 18 transport 8:5 14:20 19:1,23 20:6 24:5,16 25:9 29:2 30:15 transporting 6:18 7:2,25 8:9,17 11:19 12:11 13:2,22 15:17 16:12 17:5 18:5,15 19:9,11 21:16,20 23:16,18 28:10 Traynor 4:1,7 5:19 13:25 15:14 16:25 18:2 28:6 37:14 TS 5:8,11,13,15 6:8 10:22 20:7,20 28:7 34:19,24 35:12 Turhan 4:18 turn 6:7 20:20 28:6 31:24 34:2 type 24:23	types 24:20,21 34:23 35:18, 22 U U.S. 4:23 UA 35:20,23 36:1,3,11 UE 9:7,9,14,15 18:24 19:12 28:18 31:12, 17,21 ultimately 20:15 29:15 unable 14:16 understand 4:22 5:5 8:14 13:20 16:17 17:20,22 19:10 23:5,20 25:4 30:3 33:1 34:8 understanding 5:10 33:7 34:21 understood 33:3,17 uniform 14:8 universally 26:18 universe
--	--	--	--	--

35:5	7 36:7,13,16	wrapping	
unmarked	37:2	37:9	
5:20 6:1,4	version	writing	
upload	6:22 33:14	11:7 12:2,10,	
10:18	vessel	25 18:3	
uploaded	9:20	written	
7:6	visual	9:20	
user	32:13 33:5,		
9:6,8,10,13	10,20		
10:7 14:20	visually	X	
15:4,6 18:9	32:11,13,18		
19:22 20:6,12		XML	
21:8,14,16,20		13:6 14:6,11,	
22:14 23:14,	W	14 15:9,10,	
16,18 24:5,15		13,16,21,24,	
25:8,23 26:9,	wanted	25 16:6,9,10,	
15,20 27:7	5:24 7:18	11,18,19	
28:12,17	ways	17:1,2,3	
29:4,11	13:13 26:4		
30:16,18	weather		
31:1,11	15:5 17:13		
32:11,18,21	22:13 23:1,4,		
33:25 34:18,	21 25:2 28:22		
22,24 35:7	29:10,12		
user's	web		
9:9 28:25	16:2		
29:15	widely		
users	16:1		
8:4 20:14	word		
32:14	7:10 25:14		
	words		
V	18:17		
value-added	work		
28:21	24:24 27:25		
VAS	worked		
28:12,20,21	25:16		
29:4,8,12,18,	worries		
19,22 30:2,7	7:18		
34:12 35:1,6,			