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Transcript of Patrick McDaniel, Ph.D.

Date: June 5, 2024

Case: Samsung Electronics -v- Headwater Research (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

Headwater Research LLC
Ex. 2008, IPR2023-01337

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 SAMSUNG ELECTRONICS CO. LTD.,

6 Petitioner,

7 v.

8 HEADWATER RESEARCH LLC,

9 Patent Owner.

10
11 Case No. IPR2023-01337

12 Patent 9,521,578

13 DEPOSITION OF PATRICK McDANIEL, PH.D.

14 Conducted Virtually

15 Wednesday, June 5, 2024

16 9:06 a.m.

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19
20 Job No.: 540561

21 Pages: 1 - 19

22 Reported by: Karisa Ekenseair, CSR RPR RMR No. 802

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A P P E A R A N C E S

ON BEHALF OF THE PETITIONER (VIA ZOOM) :

JENNIFER HUANG, ESQUIRE

FISH & RICHARDSON, P.C.

60 SOUTH 6TH STREET, SUITE 3200

MINNEAPOLIS, MINNESOTA 55402

612-335-5070

ON BEHALF OF THE PATENT OWNER (VIA ZOOM) :

JAMES A. MILKEY, ESQUIRE

RUSS AUGUST & KABAT

12424 WILSHIRE BOULEVARD, 12TH FLOOR

LOS ANGELES, CALIFORNIA 90025

310-826-7474

ALSO PRESENT:

LUCIEN NEWELL, REMOTE TECHNICIAN

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P R O C E E D I N G S

PATRICK MCDANIEL

of lawful age, being first duly sworn, deposes and
says in reply to the questions propounded as
follows:

EXAMINATION

BY MR. MILKEY:

Q All right. Good morning, Dr. McDaniel.
I -- I understand that you've submitted a
declaration in this proceeding; is that correct?

A I have.

Q Okay. And this is challenging the
validity of the '578 patent?

A That's correct.

Q Approximately how long did you spend
preparing the opinions in your declaration?

A It's hard to say. It was submitted in
August of 2023. I think the balance of the work
was over the summer. I'd have to look at my notes
but, you know, in the order of probably somewhere
in the ballpark of 100 hours.

Q Okay. And did you do anything to prepare

1 for your deposition today?

2 A I did. I met with counsel on Monday and
3 then again yesterday, as well as last ten days
4 I've been reviewing documents. But the principal
5 amount of effort I put in preparing for this
6 deposition was Sunday through right now.

7 Q Okay. So if you could, turn in your
8 declaration to page 67 and just let me know when
9 you're there.

10 A Correct. I am at page 67. And it says 1E
11 in the middle of the page, just for confirmation.

12 Q Correct. Yeah. And that's exactly what I
13 wanted to ask about.

14 So you see that this limitation 1E of --
15 Claim 1 reproduced here?

16 A Yes.

17 Q Says: One or more processors configured
18 to implement application program interface (API).

19 Do you see that?

20 A I do.

21 Q Okay. What's your understanding of what
22 an API is?

1 A Well, so I can -- it's a broad concept
2 used in computer science that I can -- I can
3 describe, you know, in a general sense but I can't
4 provide a precise definition. But I know what --
5 an API is generally an interface used between two
6 computer components that has some sort of
7 structure.

8 Q Okay. What's the purpose of an API at a
9 high level?

10 A An API is there to provide access to some
11 function and/or data between components.

12 Q Okay. What do you mean by between
13 components?

14 A Well, APIs can either -- there's lots of
15 different kinds of APIs. There are APIs that can
16 go through -- between components of a -- of an
17 operating system, for example pieces of a kernel,
18 between applications in a kernel. They can also
19 be internal to applications. They can be APIs
20 from one part of an application to another part of
21 an application.

22 Generally, you know, it's most frequently

1 you have APIs to things like libraries that
2 support some sort of function within an
3 application in that sense. You can also have APIs
4 that go from individual components on a computer
5 system to a remote computer. But that's sort of
6 an non exhaustive list of the different kinds of
7 APIs.

8 Q Okay. If you could turn to paragraph 104
9 of your declaration. This is a few pages later.

10 A Yes.

11 Q Okay.

12 A Let me -- let me a -- do you mind if I
13 review real quick?

14 Q Yeah. Absolutely.

15 A I'm there. Thank you.

16 Q Okay. So you see the first sentence of
17 paragraph 104 says that: Additionally, Rao
18 describes that its remote access client 120 which
19 includes the agent 326 and/or the filter 322 may
20 be included within an application 338, right?

21 A Yes.

22 Q Okay. So what's your understanding of

1 this teaching of Rao? And specifically, what
2 application are you proposing that Rao teaches
3 that the remote access client 120 would be
4 included within?

5 A Rao is sort of non specific about which
6 application. This is a general concept. But
7 before we start talking about Rao, could --
8 could -- just for the record could I have access
9 to Rao? I have it here.

10 Q Yeah. Absolutely. You can look at Rao
11 and I'll also upload that into the chat.

12 A Okay. I'll -- I'll use -- I'll use your
13 copy just for cleanness.

14 Q And just so the record is clear, by Rao,
15 we're talking about Exhibit 1005 in this
16 proceeding.

17 A So as I said, you know, in -- in Rao what
18 it's really describing is whatever -- when you're
19 configuring a system to implement the policies
20 that are described you can include those in the
21 applications that are being governed.

22 Q Okay. So is the idea that you would

1 include the remote access client 120 into each
2 application that's being governed?

3 A You could, yes.

4 Q So when you see Rao's teaching that remote
5 access client 120 may be included within an
6 application 338, it's your understanding that that
7 could also include remote access client 120 being
8 included within each application 338; is that
9 fair?

10 A Yes. It could be within multiple
11 applications. It's -- it's -- the sentence is
12 fairly clear. It says it's describing broadly the
13 different architectures you could implement this,
14 either as individual components or at -- within
15 applications.

16 Q And I'm -- I'm looking at the realtime
17 transcript so I may be getting this wrong.

18 But previously, I believe you testified
19 that Rao is sort of nonspecific about which
20 application the remote access client is
21 incorporated into.

22 So with that context, my question is: In

1 your opinion, if a POSITA were to incorporate
2 remote access client 120 into one or more
3 applications 338 within Rao's system, what would
4 be the most logical way to do that?

5 MS. HUANG: Objection, calls for
6 speculation; form.

7 A So there -- there are many different ways
8 that the -- this could be done.

9 You could simply provide it as a library
10 that's linked with all of the applications so you
11 could replicate that functionality across devices.
12 In fact, the implementation of policies within
13 applications such as access control that's
14 described by Rao are fairly common. Things like
15 streaming media have portions of their -- their
16 code is actually implementing an access control
17 policy and up-sampling and down-sampling streams
18 based on conditions. So it's a fairly common
19 structure which Rao is sort of teaching here and
20 that's what a POSITA would understand.

21 Q Okay. So do you think it would be -- by
22 this common structure, you mean incorporating

1 something like the remote access client into
2 multiple applications using Rao; is that correct?

3 A That -- that would be one structure
4 because it would allow more flexibility for the
5 policies to be tailored to the actual application
6 and the application to have more influence over
7 them.

8 Q How would that provide more flexibility
9 for the applications to be tailored to the
10 specific -- or sorry, for the policies to be
11 tailored to the specific applications?

12 A Well, it could provide -- again, we're
13 talking about a hypothetical system here and sort
14 of inventing on the fly.

15 So in this hypothetical system, the
16 flexibility would come from the policies that
17 would be embedded in that application would be
18 specific to the behaviors and the semantics of
19 that application; and therefore, the policies
20 would be more tailored to the kinds of things that
21 that application would be sensitive to.

22 Q And do you understand Rao to teach that --

1 so strike that.

2 We've been talking a little bit about what
3 you said, a hypothetical system, where Rao -- you
4 know, Rao's remote access client could be
5 incorporated into multiple applications.

6 Do you understand Rao to teach that the
7 remote access client could be incorporated into
8 only a single application?

9 MS. HUANG: Objection, calls for
10 speculation.

11 A I think a POSITA would -- reading the
12 specification of Rao, would recognize that you
13 could have policy in one or more applications.

14 Q So if a POSITA, understanding that the
15 remote access client could be incorporated into
16 just a single application, were to implement a
17 system like that what would be an example of a
18 logical way that that system would operate?

19 MS. HUANG: Objection, calls for
20 speculation.

21 A Yeah. Again, I'm inventing -- you know,
22 you're asking me to -- to interpret Rao. Rao

1 gives the -- describes that you want to -- that
2 you would put one of these -- put the agent in the
3 application. One way to do that, as I mentioned,
4 would be to do it as a library. That would be a
5 logical way to do it.

6 Q Why would a POSITA put the remote access
7 client into only a single application?

8 MS. HUANG: Objection, calls for
9 speculation.

10 A So in -- in this instance, you know, the
11 answer would be that there's only one application
12 that needs regulation.

13 Q So is it fair to say that a POSITA would
14 understand that Rao teaches that to the extent the
15 remote access client is included within an
16 application, it should be included within each
17 application that needs regulation?

18 MS. HUANG: Objection, calls for
19 speculation.

20 A I don't -- I don't think a POSITA would
21 make that jump. I don't think that what Rao --
22 Rao is saying is specific in -- in 115 and

1 throughout specification is that you would
2 tailor -- you would have different architectures
3 for different needs. And so there isn't one, you
4 know, solution that they're promoting. They're
5 saying you can -- you can do it in -- in several
6 ways. It provides a lot of flexibility in how you
7 actually implement these things.

8 Q And which -- which of those possible
9 different ways does Rao actually disclose?

10 A All of them.

11 Q Okay. So where does Rao disclose that you
12 provide a remote access client in only one -- one
13 application out of many applications that are
14 subject to the -- the regulations?

15 A So a POSITA reading paragraph 115, in
16 particular, for example, in some embodiments, the
17 operations and functionality of remote access
18 client maybe be included within an application and
19 operations of the remote access -- well, I'll
20 just -- I'll stop there.

21 And so a POSITA reading that would say,
22 hey, Rao states that you can where it's desirable

1 put it in an application. It doesn't -- and a
2 POSITA wouldn't say, oh, well, that's all of them
3 or some of them or one of them. It would say
4 where needed.

5 That's how a POSITA would interpret that.
6 It wouldn't try to project a -- a limitation on
7 the different architectures. It's just saying
8 that's one architecture you could practice this
9 invention.

10 Q So let's assume that -- I mean, I don't
11 think we have to assume. I think Rao discloses
12 that multiple applications are subject to
13 regulations; is that fair?

14 A That's fair.

15 Q Okay. So in that context where multiple
16 applications are subject to regulations, when
17 would it make sense to put the remote access
18 client into only one of those applications?

19 MS. HUANG: Objection, calls for
20 speculation.

21 A So again, it would depend on the
22 circumstance. If the policies were tailored for

1 specific kinds of applications for -- again, I'll
2 talk about the streaming application, those are
3 very specific to streaming applications. And if
4 they're inside the application, then it's sort of,
5 you know, isolates or compartmentalizes those
6 policies inside the application. So that's one
7 instance where you'd want it in an application.

8 Q And then how would the other applications
9 be regulated in that scenario?

10 MS. HUANG: Objection, calls for
11 speculation.

12 A Again, in this hypothetical environment,
13 it would depend on which applications need it. So
14 if you have -- you could -- you could have all of
15 the other applications served by a policy that is
16 not inside the application, or you could have all
17 the other applications have policy inside of them
18 or some mix therein. It really just depends on
19 how you want to implement policy.

20 MR. MILKEY: So I mentioned that we'd
21 probably end a little early. I think I'm actually
22 getting close to wrapping up, but if we could go

1 off the record for a bit.

2 THE WITNESS: Sure. Do you need me to
3 step away?

4 MR. MILKEY: No. That's fine. Let's just
5 go off the record.

6 THE REPORTER: We're off.

7 (Whereupon a break was had.)

8 BY MR. MILKEY:

9 Q Welcome back, Dr. McDaniel. Did you speak
10 with your counsel during the break?

11 A I did not.

12 Q Okay.

13 MR. MILKEY: I have no further questions.

14 Counsel, do you have questions for Dr.
15 McDaniel?

16 MS. HUANG: I have no questions for
17 Dr. McDaniel.

18 MR. MILKEY: Okay. Well, let's go off the
19 record.

20 THE REPORTER: Okay. Can I get transcript
21 orders, please?

22 I'm sorry, Mr. Milkey, I do believe I have

1 standing orders for a rough draft and an expedited
2 to Wednesday, June 12th.

3 MR. MILKEY: Perfect.

4 THE REPORTER: Okay. Ms. Huang, for you?

5 MS. HUANG: Yeah. Same, except I don't
6 need it expedited to the extent it makes a
7 difference, but yeah.

8 THE REPORTER: But you'd like the rough
9 draft though?

10 MS. HUANG: Yes, please. Thank you.

11 (Whereupon the proceedings were concluded at
12 9:36 a.m. CT)

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CERTIFICATE OF SHORTHAND REPORTER

I, Karisa Ekenseair, Certified Reporter
and Notary Public within and for the State of
Arkansas do hereby certify: That PATRICK McDANIEL,
the witness whose deposition is hereinbefore set
forth, was duly sworn by me before the
commencement of such deposition and that such
deposition was taken before me and is a true
record of the testimony given by such witness.

I further certify that the adverse party,
Petitioner was represented by counsel at
the deposition.

I further certify that the deposition of
PATRICK McDANIEL, occurred virtually on
June 5, 2024, commencing at 9:06 a.m. to 9:36
a.m.

I further certify that I am not related
to any of the parties to this action by blood
or marriage, I am not employed by or an attorney
to any of the parties to this action, and that I
am in no way interested, financially or otherwise,
in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand
and affixed my notarial seal this 12th day of June
2024.

Kenneth L.

Karisa Ekenseair, CCR RPR RMR LS #802

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