

In the Matter of:
Roku, Inc. vs
Universal Electronics, Inc.,

Michael S. Scordilis
September 21, 2023

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 ROKU, INC.,

6 Petitioner,

7 v.

8 UNIVERSAL ELECTRONICS INC.,

9 Patent Owner.

10
11 Case No. IPR2022-01289

12 Patent No. 9,847,083

13
14
15 DEPOSITION OF
16 MICHAEL S. SCORDILIS

17 Taken on Behalf of the Petitioner

18 DATE TAKEN: September 21, 2023
19 TIME: 9:59 AM - 10:46 AM
20 PLACE: 333 NE 2nd Avenue
21 Miami, Florida

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23
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EXAMINATION

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(No exhibits were marked at this time.)

P r o c e e d i n g s

Deposition taken before Michele Anzivino, Court
Reporter and Notary Public in and for the State of
Florida at Large, in the above cause.

- - -

Thereupon,

MICHAEL S. SCORDILIS,
having been duly sworn or affirmed, was examined and
testified as follows:

THE WITNESS: Yes.

DIRECT EXAMINATION BY MR. MCKEOWN:

Q. Good morning, Mr. Scordilis. My name is
Scott McKeown. I represent Roku in certain IPR matters
that we'll be talking about today. I see you have
counsel with you.

MR. MCKEOWN: Do you want to make
appearances?

MR. LUKAS: James Lukas, Greenberg Traurig on
behalf of the patent owner Universal Electronics,
Inc. and the witness Mr. Michael Scordilis.

BY MR. LUKAS:

Q. So as I mentioned, I represent Roku
Electronics. And we will be discussing IPR 2022-01289
which references US Patent 9,847,083. Is that your
understanding?

1 A. That's correct, yes.

2 Q. I'll pass you some exhibits, the first of
3 which is your declaration marked 2001. Take a look at
4 that and just confirm that that is as represented.

5 A. Yes, this is the one.

6 Q. I'll also hand you Exhibit 1001 which is the
7 '083 patent. Just confirm that, as well.

8 A. This is not the '083.

9 Q. Did I hand you the wrong one?

10 MR. LUKAS: Mine is the '083. I'll give him
11 mine. I have another copy.

12 BY MR. MCKEOWN:

13 Q. Just before we begin, aside from
14 typographical errors are there any changes or
15 corrections to your declaration as originally
16 submitted?

17 A. No.

18 Q. Okay. And again just for clarity of the
19 record you are not an attorney, correct?

20 A. I'm not an attorney.

21 Q. Okay. You're also not a patent agent?

22 A. That's correct.

23 Q. Okay. Do you know if petitioner's expert,
24 Mr. McNair, is a patent attorney?

25 A. I don't know.

1 Q. Okay. And you would not know if he's a
2 patent agent either?

3 A. No.

4 Q. Okay. Let's jump to declaration at pages 13
5 through 14. So I believe on pages 13 through 14 there
6 is a reproduction of independent Claims 1 and 12; is
7 that correct?

8 A. Yes.

9 Q. Okay. At the end of Claim 1 in the very last
10 line there there's a speech recognition engine
11 mentioned. Do you see that?

12 A. Yes.

13 Q. Okay. And same thing for the end of Claim
14 12. It's speech recognition.

15 A. Yes.

16 Q. Okay. Going over to Exhibit 1001, which is
17 the '083 patent, there are some drawings starting at
18 Figure 2 going over to Figure 3. Can you identify the
19 speech recognition engine as you understand it in both
20 Figures 2 and 3?

21 A. Neither of these figures specifically
22 mentions a speech recognition engine. The term speech
23 recognition engine is not there.

24 Q. Okay. But what components of those figures,
25 if any, would be performing the speech recognition

1 engine function?

2 A. I would say the processor. In Figure 2 there
3 is a microprocessor. And -- and also there is memory
4 associated connected to the microprocessor like blocks
5 204, 205, 206. And in Figure 3, that would be the
6 processor and the DSP. In block 300, for example,
7 which is the processor, and particularly at 304, 302.
8 And also the associated memory that is connected to
9 that processor. That would be -- these would be the
10 components that would implement a speech recognition
11 engine if that was to be there as the patent suggests.
12 And of course we'll take an input from a speaker, from
13 -- I'm sorry, from a microphone which is also depicted
14 as a speech input in these Figures.

15 Q. And so would that microprocessor in Figure 2
16 or DSP processor in Figure 3 implement an instruction
17 set?

18 A. Yeah. It would have to. If it has to
19 implement such an engine, that would be a
20 microprocessor that would implement such an engine.
21 This is typical in computing.

22 Q. And is that instruction set described in the
23 '083 patent?

24 A. Instruction set?

25 Q. Right.

1 A. You mean the speech recognition engine?

2 Q. Yes.

3 A. It describes -- it -- it -- speech
4 recognition engine is mentioned and is implied as being
5 a requirement for implementing the functions that are
6 described in the patent, namely how to handle and
7 process the spoken commands provided by the user. But
8 they don't go into detail as to, you know, the internal
9 operations of such an engine. My understanding is it's
10 a generic turnkey type of solution. It's a generic
11 service engine. It could be -- yeah.

12 Q. what do you mean by "turnkey"?

13 A. Means there's no customization involved in
14 the speech recognition engine. Very little
15 customization. The -- the intelligence and the
16 software that is required to carry out such a process
17 is already provided.

18 Q. Provided by who?

19 A. Provided by -- by could be -- it's -- it's
20 used as block box basically. You don't go into the
21 internal operations of such a device, such a process.

22 Q. So those instructions were well known in the
23 art?

24 A. Yes, these are well known in the art, right.

25 Q. Let's go to paragraph 53 of your declaration.

1 And feel free to read any necessary context or
2 paragraphs around that. I just have a question about
3 that. Just let me know when you're ready.

4 A. 53?

5 Q. Yes. It's on page 21.

6 A. Mm-hmm, yes.

7 Q. So the second sentence in paragraph 53 reads
8 "the Challenged Claims do not recite that the claimed
9 'protocol and formatting information' is part of the
10 claimed 'plurality of individual command function
11 entries'."

12 Did I read that correctly?

13 A. That's correct, yes.

14 Q. Why in your opinion is that relevant?

15 A. It is -- it is quite relevant because that's
16 actually a very -- a key aspect of the '083 patent, how
17 it organizes information and how it stores and where it
18 stores the protocol and formatting information, how it
19 stores in the devices that implement these patents,
20 namely the remote control device or app.

21 Q. So just so I'm understanding the conclusion,
22 there is the thinking that since it's not recited as
23 part of the claimed plurality of individual command
24 function entries, therefore it must be located
25 someplace else?

1 A. Well, in the claim language it mentions the
2 protocol and formatting information as a -- in the
3 claim language, and then it proceeds to introduce or to
4 mention the rest of the information. For example, the
5 provisioned codeset record comprising protocol and
6 formatting information and a plurality of individual
7 command functions. So that's in the claim language,
8 Claim 1 and Claim 2.

9 And also that further -- it's further
10 clarified or enhanced or emphasized in the
11 specifications, namely Figure 7b which is a block
12 diagram of how these components are organized in a
13 codeset record. Codeset record has a number. And it's
14 shown in that Figure 7b in the patent.

15 Q. I'm just trying to understanding the point
16 you're making with that sentence. You're saying it's
17 not recited in the plurality of individual command
18 function entries, and it just seems to me that there's
19 something missing. Therefore. Okay. It's not in the
20 command function entries as you've argued --

21 A. Yes.

22 Q. -- but so therefore?

23 A. Okay.

24 MR. LUKAS: Objection, form.

25 A. I shouldn't say therefore. Instead I should

1 say. Instead it is included as a distinct and separate
2 component or set of information distinct and separate
3 to the command functions and it is also shown
4 pictorially very clearly in Figure 7b that is it
5 distinct and separate to the individual function
6 details that follow from that -- in that Figure.

7 So the protocol and formatting information
8 for example is Block 752 which is across all the
9 components that describe -- describe the individual
10 standard functions which precede that. That's Block
11 754 below -- which are below the 752. So protocol and
12 formatting information is distinct and separate and it
13 is used or it is -- actually it is an input to the
14 standard function roles that are shown below that.

15 So it is distinct and separate, but it is
16 used for implementing every single function for a
17 particular remote control operation. That's the
18 suggestion here, and it is clearly written in the
19 language of the claim and clarified in this example in
20 Figure 7b. Actually it's not an example. It's just a
21 pictorial representation of what the claim describes.

22 Q. I'm just trying to understand the point being
23 made here. So is it that if it's not in the plurality
24 of individual command function entries you're
25 concluding therefore it must be outside?

1 MR. LUKAS: Objection, form.

2 A. I'm not concluding. It's obvious that it is.

3 Q. Okay.

4 A. It is not my personal conclusion. It's clear
5 in the claims language and as well as in the
6 specifications language.

7 Q. So those are the only possible locations,
8 within the command function entry or outside?

9 MR. LUKAS: Objection, form.

10 A. It is outside of the command function
11 entries, and that would be the most efficient and
12 reasonable way of including it rather than including it
13 in every function. Because including it in every
14 function, the functions could be quite a number, dozens
15 or maybe a hundred or more. And repeating it in every
16 function entry, that would be totally pointless and --
17 and inefficient.

18 Q. But with respect to the codeset record it's
19 either inside the command function entries or outside,
20 right?

21 MR. LUKAS: Objection, form.

22 A. It is outside the command function entries.
23 This is the specifications to this patent.

24 Q. Right. But I'm just trying to understand the
25 logic of this sentence. The sentence is stating that

1 it's not inside the command function entries, fair?

2 A. That's right.

3 Q. Okay. So you're concluding it must be
4 outside the command function entries.

5 A. Yeah. From the language of the claim I -- it
6 is -- for me it is a very obvious conclusion that it is
7 distinct and separate and outside the command function
8 entries. And that is further confirmed by the
9 specifications in the patent. And particularly there's
10 a good summary in Figure 7b that shows it outside as
11 being distinct and separate to the command function
12 entries.

13 Q. So the possibilities could be inside the
14 command function entries or outside the command
15 function entries?

16 MR. LUKAS: Objection, form.

17 A. I mean, you know there -- there -- these are
18 possibilities. But what is -- what would be the most
19 robust and reasonable solution from the engineering
20 point of view would be to have this protocol and
21 formatting information, the complete protocol and
22 complete formatting information that is required for
23 this -- for a particular application to be distinct and
24 separate because you don't want to repeat it every
25 time. It's just pointless.

1 Q. I'm just trying to understand the realm of
2 options, not why you would select one over the other.

3 So it's either going to be inside or outside,
4 fair?

5 A. well if you have -- that's right. If you
6 have complete protocol and formatting information that
7 are required to carry out a communication task from the
8 remote control, which is the controlling device, to the
9 target, the controllable appliance, then if you have to
10 have the complete protocol and formatting information
11 in its -- in their entirety, that had to be separate
12 from the individual function information. So that
13 every -- that when you realize any of these functions
14 listed in the functionality of the remote control
15 process, you would have to use -- those would have to
16 go and obtain the -- you know, the method that is
17 outlined in the protocol, the particular protocol and
18 particular formatting set of information so that can
19 carry out the physical communication between the remote
20 control device and the controllable appliance.

21 So you have it there in tact available to all
22 -- available so that you may implement any function
23 that the user may require. So it requires a function
24 and the -- the instructions and the intelligence and
25 the software that is included in the remote control

1 application or process would have -- would fetch the
2 protocol and formatting information every time it is
3 asked to carry out a particular function.

4 Q. Looking up at paragraph 51, at the end of
5 that paragraph, the last sentence concludes "the data
6 contained in the command function entries."

7 Do you see that?

8 A. The data contained in the command function
9 entries, absolutely.

10 Q. what do you mean by "contained"?

11 A. well, command function entries has several
12 different types of data. And if you will go to the
13 specifications of this particular patent, these command
14 function entries consist of some ID, numerical or
15 otherwise ID for a particular command just to enumerate
16 the functions 1 to 50 or whatever, 1 to 20, and then
17 the function name which is a pneumatic label for a
18 function name. For example, volume up, volume down,
19 mute, unmute, et cetera, stop, start, whatever. And
20 then there's other fields which is specific to this
21 patent, namely the phonetic presentation, and then the
22 actual command data that -- with this particular
23 function. So this is the command function entries.

24 Q. Yeah. Just to be clear, I'm not asking for a
25 definition of command function entries. I'm asking

1 what you mean by the word "contained" in that passage.

2 A. Contained, the word "contained" -- so the
3 command function entries contain all the information
4 required to carry out or to identify actually a
5 particular command. Not to carry out a command, but to
6 identify its functionality and also to facilitate the
7 voice interaction with such a device which is also one
8 key aspect of this patent.

9 Q. And above that -- well, in the same sentence
10 you use the language "separate and distinct".

11 A. That's right.

12 Q. Do you see that?

13 A. Yes.

14 Q. What do you mean by that?

15 A. We mean that this protocol and formatting
16 information is distinct from the command function
17 entries information in the sense that the command
18 function entries information do not include the
19 protocol and formatting information.

20 Q. And separate, is that separate and -- well,
21 let's take one at a time.

22 "Separate" meaning a separation in storage?

23 A. That will mean a separation in storage.
24 Because they're all in the same physical location. But
25 when you look at the various parts of a remote control

1 or operation then, you know, we have how a memory is
2 partitioned, et cetera. We go into technical details
3 now.

4 Q. Right.

5 A. But it would be physically separate in some
6 memory location that is distinct from the function
7 entries, function -- command function entry locations
8 in memory.

9 Q. Okay. I think you referred earlier to one of
10 the figures of the '083 patent. Was that Figure 7b?

11 A. Yes.

12 Q. So in the block diagram of Figure 7b the
13 protocol and formatting information is block 752; is
14 that right?

15 A. Yes.

16 Q. Okay. And following that protocol and
17 formatting block there's a series of additional blocks
18 identified as a command line entry, and that's 74 in
19 Figure 7b; is that correct?

20 A. 74?

21 Q. What did I say?

22 A. 754.

23 Q. 754, I'm sorry.

24 A. That is correct.

25 Q. Okay. Do you understand the claims of the

1 '083 patent to require that the series blocks in 754
2 follow the protocol and formatting information block
3 752?

4 MR. LUKAS: Objection, form.

5 A. well, geometrically or a physical location
6 follow or precede is, you know, really irrelevant here.
7 The thing is that they're not -- they're distinct as I
8 answered before. They are distinct pieces of
9 information. They are distinct blocks.

10 Q. But you agree Figure 7b supports a series of
11 blocks defined as the command line entry 754 following
12 protocol and formatting information block 752, correct?

13 A. Yes, yes.

14 Q. Okay. Do you understand the claims of the
15 '083 patent to require that the series of blocks
16 illustrated in Figure 7b and identified as command line
17 entry 754 to require that specific order shown?

18 A. A specific order for every row of 754?

19 Q. The individual block. So do you understand
20 the claims to require a standard function ID to be
21 first followed by the function name followed by the
22 phonetic representation followed by the command data?

23 A. In my opinion this is just a pictorial
24 representation. I mean, you could change the ordering
25 in every row of 754. That would be of no significance

1 whatsoever because what is important here is how the
2 processor, the actual intelligence that is expressed in
3 the software that carries out the remote control
4 operation uses those blocks. Whether it takes the
5 first the first and then the second and then the third,
6 or if we are in that order then we take the number
7 three first, the number two second, et cetera.

8 So this order is just for our -- for us or
9 for a -- for clarifying the ideas in the patent. I
10 mean, it don't have to be physically first and
11 physically second and physically third. It's just a
12 pictorial representation. It actually makes sense. It
13 makes clear the concepts of the patent.

14 Q. But you agree that Figure 7b supports a
15 particular order of blocks in line -- or I should say
16 row 754, correct?

17 MR. LUKAS: Objection, form.

18 A. Yes, I agree that they show a particular
19 order in every row of 754. And depending on how the
20 actual remote control function is used and implemented,
21 the processing operation would perhaps go to the -- may
22 go to phonetic representation first and then, you know,
23 subsequently may go and use the function name and then
24 may use the function ID, for example. Or it may start
25 with a function name. It depends how the remote

1 control is used.

2 Q. I'm going to pass you an exhibit marked 1004.
3 Do you recognize that document?

4 A. Yes, I do.

5 Q. What is that document?

6 A. This is patent 8,995,981 authored by Aginsky,
7 et cetera, and others.

8 Q. I'm going to ask you to turn to column 8 of
9 Aginsky.

10 A. Okay.

11 Q. And starting at line 21 which references
12 Figure 1b, if you could just take a second to read that
13 column to the bottom of the page I'll have some
14 questions about that.

15 A. To the bottom of the page?

16 Q. Right, just the --

17 A. Okay.

18 Q. Just column 8, page 21 through to the end.

19 A. Right.

20 Q. Starting at column 8, line 21 there's a
21 reference to Figure 1b in reference to columns 112-1
22 and 112-2. Do you see that?

23 A. Yes.

24 Q. What is your understanding of the content of
25 the memory at those locations?

1 A. 112-1 and 112-2?

2 Q. Correct.

3 A. So the single columns 112-1 and 112-2 contain
4 a set of signals that this device would use, that is
5 the remote device would use to communicate with a
6 controllable appliance.

7 Q. Toward the bottom of column 8 it -- right
8 around the second sentence to the last it says, "a
9 frequency set".

10 Do you see that?

11 A. At the bottom of the page, right?

12 Q. Yes.

13 A. "Frequency set or a coded IR signal", et
14 cetera. Yes.

15 Q. What is your understanding of a frequency
16 set?

17 A. Frequency set is the carrier frequency of the
18 actual physical signal that would need to be specified
19 for a particular remote control operation.

20 Q. And moving over to column 9, if you want to
21 read the remainder of that first paragraph on the page
22 I have a question about that.

23 A. Yes. Okay. I read that.

24 Q. At line 6, column 9, the word "bluetooth" is
25 used.

1 Do you see that?

2 A. Yes.

3 Q. What is that referencing?

4 A. Bluetooth is a very popular and nowadays
5 widely known standard for communicating between
6 devices, and -- yeah, it's a very well known standard
7 in the industry, widely used nowadays.

8 Q. That's a standard protocol?

9 A. It is a standard protocol which is very
10 effective and useful for particular setups, particular
11 situations.

12 Q. And bluetooth is a radio frequency protocol?

13 A. Yes.

14 Q. All right. Let's take a break. I think I'm
15 done.

16 (Brief recess taken.)

17 BY MR. LUKAS:

18 Q. I have no further questions.

19 MR. LUKAS: I have no questions.

20 (Thereupon, the deposition was concluded at
21 10:46 a.m.)

22

23

24

25

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF MIAMI-DADE)

I, Michele Anzivino, Court Reporter, do hereby certify that I was authorized to and did stenographically report the deposition of MICHAEL S. SCORDILIS, that a review of the transcript was not requested; and that the foregoing transcript, pages 1 through 23, is a true and correct record of my stenographic notes.

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

DATED this 21st day of September, 2023.

Michele Anzivino

MICHELE ANZIVINO, Court Reporter
Notary Public - State of Florida
My Commission Expires: 03/19/2027
My Commission No.: HH-375658

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