

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

3

4 TELIT WIRELESS SOLUTIONS INC.

5 and

6 TELIT COMMUNICATIONS PLC,

7 Petitioner

8 v.

9 M2M SOLUTIONS LLC

10 Patent Owner

11

12 Case IPR2016-00055

13 Patent 8,648,717 B2

14

15 DEPOSITION of KIMMO SAVOLAINEN, an
16 expert witness on behalf of Petitioners, held at
17 the Law Office of Pearl Cohen Zedek Latzer
18 Baratz, 1500 Broadway, 12th Floor, New York, New
19 York, on July 7, 2016, commencing at 9:27 a.m.,
20 and before Helene Gruber, CSR, a Notary Public of
21 the State of New York.

22

23

24

25

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1 **A P P E A R A N C E S :**
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15 **ALSO PRESENT:**
16 **MILO EADAN, Patent Agent**
17
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20
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22
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25

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1 **KIMMO SAVOLAINEN,**
2 Having first been duly sworn, testified as
3 follows:
4 **EXAMINATION**
5 **BY MR. HENSCHKE:**
6 Q. Would you please state your full name
7 and residential address for the record.
8 A. Kimmo Olavi Savolainen,
9 Muottaajanpiha #10, Kempele, Finland 90450.
10 **MR. HENSCHKE:** As an initial
11 housekeeping matter, I would like to mark and
12 introduce as Savolainen Exhibit 1 the Patent
13 Owner's Notice of Deposition of Kimmo
14 Savolainen that has brought us here today.
15 (Patent Owner's Notice of Deposition
16 marked Savolainen Exhibit 1.)
17 Q. Let me show you a document that has
18 been marked as Exhibit 1105 in the IPR
19 proceedings, and that bears the title Declaration
20 of Kimmo Savolainen for inter partes review of
21 U.S. patent number 8,648,717.
22 **MR. LOEWENSTEIN:** Are you going to mark
23 it?
24 **MR. HENSCHKE:** I am not going to mark
25 it. We will refer to it by its exhibit

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1 number from the IPR proceedings, which is
2 1105.
3 Q. Do you recognize this, Mr. Savolainen,
4 as the declaration that you submitted in these IPR
5 proceedings?
6 A. I believe it is. Yes.
7 Q. So for purposes of our deposition
8 today, I am going to be referring to this as
9 either the Savolainen declaration or as Exhibit
10 1105. Is that clear?
11 A. It's clear.
12 Q. Let me show you another document that
13 has already been marked and submitted in these IPR
14 proceedings as Exhibit No. 1113, and this is a PCT
15 patent application with the inventor Van Bergen,
16 and it bears numbers WO 00/17021.
17 **MR. LOEWENSTEIN:** Off the record.
18 (Discussion off the record.)
19 Q. Mr. Savolainen, today I am going to be
20 referring to this as either Van Bergen or as
21 Exhibit 1113. Is that clear?
22 A. That's clear.
23 Q. Let me turn your attention to figure
24 2 in the Van Bergen patent application. Are you
25 familiar with the disclosures in Van Bergen about

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1 the subsystem that is called ALU 16?
 2 A. Yes, I am.
 3 Q. And ALU 16 is also referred to as the
 4 GSM mobile unit in Van Bergen, correct?
 5 A. I believe that's correct.
 6 Q. Would a person of ordinary skill
 7 understand ALU 16 as being capable of generating
 8 digital outputs that it could transmit to other
 9 subsystems in the Cell-Eye system?
 10 MR. LOEWENSTEIN: Object to the form.
 11 Can you put a date on that?
 12 A. Yes. The ALU 16 needs to
 13 communicate through the modem with the
 14 controller, and that would be using digital
 15 signals.
 16 Q. Is ALU 16 able to transmit digital
 17 outputs to modem 15?
 18 A. Digital outputs? There is some form
 19 of communication, and most likely there is a
 20 digital serial port in between the two.
 21 Q. Is ALU 16 able to transmit digital
 22 outputs to controller and memory unit 14?
 23 A. I believe through the modem, yes, it
 24 is.
 25 Q. Is ALU 16 able to transmit digital

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1 outputs to the alarm sensor interface 13?
 2 A. Through the chain, the modem and the
 3 controller relaying information from the ALU, I
 4 believe it is possible that that there are
 5 digital signals that are passed through the
 6 modem and controller to the alarm sensor
 7 interface.
 8 Q. So these digital outputs from ALU 16
 9 that we have been discussing, would they be
 10 considered digital inputs to the other subsystems
 11 that receive them?
 12 A. You could call them that.
 13 Q. Would you call them that?
 14 A. Yes, I could call them that.
 15 Q. So are these digital outputs that ALU
 16 16 can generate and transmit digital electronic
 17 signals?
 18 A. Yes. They would either be digital
 19 electronic signals, or you could potentially
 20 also use technologies like bluetooth to
 21 transfer them wirelessly.
 22 Q. So are there different types or
 23 categories of digital electronic signals that ALU
 24 16 could generate and transmit?
 25 MR. LOEWENSTEIN: Objection to the

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1 form.
 2 You could answer if you understand.
 3 A. I'm not sure I follow you. Can you
 4 say that question again?
 5 Q. I am trying to figure out if it is the
 6 case that there are different types of digital
 7 electronic signals that ALU 16 can transmit and
 8 generate. Would you consider there to be
 9 different types or categories of those signals?
 10 MR. LOEWENSTEIN: Same objection.
 11 Compound.
 12 A. There can be different signals,
 13 different commands, as an example, through the
 14 serial port.
 15 Q. Would some of the --
 16 MR. HENSCHKE: Strike that.
 17 Q. Would some of the digital electronic
 18 signals that ALU 16 could generate and transmit be
 19 data streams?
 20 MR. LOEWENSTEIN: I think I am going to
 21 object to the form of the question. I am not
 22 sure that term is used in the patent or has
 23 been defined in this IPR.
 24 A. I was going to ask you to define
 25 data stream, because that could be many things.

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1 Q. Well, I believe it would be a digital
 2 electronic signal that was principally data or
 3 carrying data?
 4 MR. LOEWENSTEIN: Are we excluding
 5 voice data? Voice, not voice?
 6 Q. Talking about a digital electronic
 7 signal and whether ALU 16 can issue one that is a
 8 data stream.
 9 MR. LOEWENSTEIN: My objection stands.
 10 If you understand it, you can answer.
 11 A. Well, it does send short bursts of
 12 data, which can include commands, instructions.
 13 If you can consider something like that a data
 14 stream, yes, it is possible.
 15 Q. Would some of the digital electronic
 16 signals that ALU 16 is capable of generating and
 17 transmitting be control signals?
 18 MR. LOEWENSTEIN: Objection to the
 19 form.
 20 You can answer.
 21 A. Well, in terms of generating control
 22 signals, I believe it does not make decisions
 23 on issuing control signals. Those control
 24 signals would come from somewhere else, but it
 25 can relay such control signals that it receives

<p style="text-align: right;">Page 10</p> <p>1 through the GSM network from the RMU in the 2 system. 3 Q. What, if anything, is the difference 4 between digital electronic signals that are data 5 outputs as opposed to digital electronic signals 6 that are control signals? 7 MR. LOEWENSTEIN: I am going to object 8 to the form. 9 You can answer. 10 A. Can you say that again? I'm not 11 sure I follow that question. 12 Q. We have talked about two different 13 types of digital electronic signals, one which is 14 issuing data or data stream, and then a second 15 category that we have called control signals, and 16 I am trying to figure out what the difference is 17 between those two types of digital electronic 18 signals, if any. 19 A. Well -- 20 MR. LOEWENSTEIN: Object to the form. 21 You can answer. 22 A. The control signal is a subcategory 23 of those data streams, but -- yeah. Those 24 control signals are coming through the GSM 25 network from the RMU and go through the ALU</p>	<p style="text-align: right;">Page 12</p> <p>1 notification about that to the controller. 2 It could send a notification when it 3 returns to said coverage. 4 If there is an SMS message that 5 arrives, it would notify the controller that such 6 an SMS has arrived, and it can be read from the 7 memory of the ALU, or it could automatically 8 forward that SMS message to the controller. 9 Q. Is there a technical term that you 10 would use to describe these types of status 11 notifications? 12 A. Well, I think status notification is 13 a fairly good description. 14 Q. Would what you are calling status 15 notifications be referred to as result codes? 16 A. In AT commands, the result codes 17 would be inside of those notifications so the 18 result code itself would not be a notification, 19 but it would be part of the notification, or it 20 could be part of the notification. 21 Q. What type of interface would ALU 16 22 have for transmitting these digital electronic 23 signals we have been discussing? 24 A. Most likely it would be an 25 asynchronous serial port.</p>
<p style="text-align: right;">Page 11</p> <p>1 into the controller or alarm sensory interface. 2 Q. Do you consider the control signals to 3 be a type of digital data? 4 A. Yes, you can consider those to be a 5 type of digital data. 6 Q. Do you consider that to be a -- that 7 control signal to be a binary output as 8 distinguished from a data stream? 9 MR. LOEWENSTEIN: Object to the form. 10 A. Well, data stream would also be 11 binary data. 12 Q. Would be or could be? 13 A. Most likely would be, and definitely 14 could be. 15 Q. Are there any other types of digital 16 electronic signals that we haven't discussed so 17 far that ALU 16 would be capable of generating and 18 transmitting? 19 A. Well, the ALU is a GSM mobile unit; 20 hence, it does operate as one, so it is a 21 communication device, and it does also send or 22 could, at least, send sort of a status data -- 23 status of the communication. 24 As an example, if it goes out of 25 coverage of the cell network, it could send a</p>	<p style="text-align: right;">Page 13</p> <p>1 Q. That is your understanding of what kind 2 of interface ALU 16 would have as shown there in 3 Figure 2? 4 A. Yes, I believe so. There was even 5 something said about that somewhere in this. 6 Q. For instance, if I direct your 7 attention to page 7, lines 25 through 31, does 8 that help? 9 A. Yes. That is referring to 10 asynchronous mode serial communication, which 11 could refer either to the communication -- 12 serial communication between those blocks or 13 modules in Figure 2, or it could also be 14 referring to the cellular communication. Both 15 are serial and asynchronous. 16 Q. Does this suggest for the Figure 2 17 embodiment, ALU 16 is sending electronic signals 18 as hard wire serial transmissions? 19 A. Could be hard wire, or hard wire 20 could be replaced by a bluetooth, as an 21 example. 22 Q. Is there any disclosure of bluetooth 23 communication in the Van Bergen patent 24 application? 25 A. I do not think there is in this</p>

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1 reference, but there was another reference, I
 2 believe it was called the Sonera reference,
 3 that was discussing bluetooth as an alternative
 4 for hard wire serial.
 5 Q. I am just asking you now about what Van
 6 Bergen teaches with respect to Figure 2. There is
 7 no teaching of a bluetooth transmission or the
 8 presence of a bluetooth transceiver in any of
 9 those subsystems, correct?
 10 MR. LOEWENSTEIN: Object to the form.
 11 You can answer.
 12 A. I believe you are correct. This
 13 particular reference does not discuss bluetooth
 14 as an alternative means for hard wire serial
 15 communication.
 16 Q. Van Bergen teaches that one example of
 17 what could serve as ALU 16 in Figure 2 is a Falcom
 18 A2 GSM mobile unit, correct?
 19 A. That I believe is correct.
 20 Q. In fact, if I direct your attention
 21 back to page 7 of Van Bergen at lines 33 to 34.
 22 A. Can you say the lines again?
 23 Q. I am on page 7 of Van Bergen at lines
 24 33 to 34.
 25 A. It does refer to Falcom A2 GSM

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1 mobile unit.
 2 Q. And it says that is an example of what
 3 could serve as the ALU 16 in the Figure 2
 4 embodiment, right?
 5 A. I believe you are correct.
 6 Q. Let me show you another exhibit that
 7 has already been previously marked in the IPR
 8 proceedings. This is a user manual for the Falcom
 9 A2 GSM mobile unit. This has been marked in the
 10 IPR proceedings as Exhibit 1130.
 11 Mr. Savolainen, is this Falcom A2 GSM
 12 mobile unit that is discussed in Exhibit 1130 the
 13 same as the one that is referred to in the Van
 14 Bergen patent application on page 7?
 15 A. I believe it is.
 16 MR. LOEWENSTEIN: You might want to ask
 17 the witness about the dates on the respective
 18 documents.
 19 A. Although I believe the PCT patent
 20 application was originally for this -- yes.
 21 The PCT patent application was filed before the
 22 date of this document.
 23 Q. But you would agree, Mr. Savolainen,
 24 that the Falcom A2 that is shown in Exhibit 1130
 25 is either the same or very similar to the Falcom

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1 that is referenced in the Van Bergen patent
 2 application, correct?
 3 MR. LOEWENSTEIN: I am going to object
 4 to the form of the question.
 5 A. The dates are indicating that at
 6 least this document would not be the same that
 7 the PCT application is referring to, but it is
 8 possible that it is similar.
 9 Q. In fact, you relied upon it in your IPR
 10 analysis as being the same or similar, didn't you?
 11 MR. LOEWENSTEIN: Object to the form.
 12 A. Let me check it what I said about
 13 that. I don't remember by heart.
 14 If you do remember where I did refer to
 15 Falcom A2 --
 16 MR. LOEWENSTEIN: It looks like it is
 17 on page 95.
 18 A. I believe I did indeed refer to this
 19 document.
 20 Q. You relied upon Exhibit 1130 in your
 21 analysis to show what kind of features and
 22 capabilities the Falcom unit referenced and Van
 23 Bergen had, right?
 24 MR. LOEWENSTEIN: Object to the form.
 25 A. I believe I did -- do refer to this

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1 document.
 2 Q. And you refer to it in the manner I
 3 just described, as showing what capabilities and
 4 features the Falcom unit that is referenced in Van
 5 Bergen had, right?
 6 A. I believe I did.
 7 Q. Let me turn you to page 64 of Exhibit
 8 1130, the Falcom user manual. So this shows on
 9 page 64 that the Falcom A2 embodiment of ALU 16
 10 would have had a nine-pin serial port interface,
 11 right?
 12 MR. LOEWENSTEIN: Object to the form.
 13 A. That is one of the interfaces.
 14 Q. And with regard to this serial port
 15 interface in particular, could any of the nine
 16 pins have been used by ALU 16 for outputting
 17 digital electronic signals?
 18 A. Yes. There are several signals here
 19 that can be used to -- outputting digital
 20 signals.
 21 Q. Which of the serial port pins shown
 22 here on page 64 could have been used to output
 23 digital electronic signals?
 24 A. Pin 2 and pin 3 are used for serial
 25 communication. This does not exactly tell

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