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UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

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ECOFACOR, INC., :
 :
Plaintiff, :
 :
v. : Case No. 6:21-cv-00428
 :
ECOBEE, INC., :
 :
Defendant. :
 :
_____ :

VIDEOTAPED VIDEOCONFERENCED DEPOSITION OF JOHN PALMER
TAKEN THROUGH
ADVANCED REPORTING SOLUTIONS, a Veritext company
Part II

Taken on Friday, December 16, 2022
1:17 p.m. to 5:09 p.m.

Reported by: Abigail D.W. Johnson, RPR, CRR, CRC

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A P P E A R A N C E S

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1 December 16, 2022 1:17 p.m.
2 P R O C E E D I N G S (continued)
3 -o0o-
4 VIDEOGRAPHER: The time now is 1:17 p.m.
5 We are back on the record.
6 EXAMINATION (continued)
7 BY MS. WOODWORTH:
8 Q. Dr. Palmer, are you ready to continue?
9 A. Of course.
10 Q. If you could turn in your report to
11 paragraph 652.
12 (Clarification by the reporter.)
13 BY MS. WOODWORTH:
14 Q. This is part of your response to
15 Dr. D'Adrade's opinions regarding the combination of
16 the Ecobee SMART Thermostat with Benco and Jayadev;
17 correct?
18 A. Give me just a second to find it. Did you
19 say "552"?
20 Q. 652.
21 A. Oh, I'm sorry. Yes. This is with regard
22 to the -- the combination or the hypothetical
23 combination of Ecobee SMART Thermostat with Jayadev.
24 Q. And my understanding in this paragraph is
25 that it's your opinion that Ecobee, specifically, as a

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1 company, in its own patent filing did not cite the
2 Jayadev patent that somehow evidences a lack of
3 motivation for POSITA to combine the Ecobee SMART
4 Thermostat with Jayadev; is that correct?
5 A. Yes.
6 Q. If you could turn to Exhibit 6. It is
7 marked. And can you confirm that Exhibit 6 is a
8 printout of the Google patent version of Jayadev that
9 you had used to come to that conclusion?
10 A. Yes.
11 (Exhibit No. 6 was marked
12 for identification.)
13 BY MS. WOODWORTH:
14 Q. Do you understand that the obviousness
15 evaluation is not from the standpoint of any specific
16 person, but from the standpoint of a hypothetical
17 person of ordinary skill in the art; correct?
18 A. Yes. Hypothetical person of ordinary skill
19 in the art. But in this case, we have a proposed
20 combination involving, specifically, a party to the
21 case. And they presumably employ persons of, at least,
22 ordinary skill in the art in their research and
23 development domain. And yet the -- they're not
24 referencing the very things that Dr. D'Adrade -- sorry
25 Dr. D'Adrade is proposing would be obvious.

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1 A. A hysteresis band is the -- basically, the
2 operational or the control feature that has the
3 thermostat turned depending on whether you're cooling
4 or heating. Let's just give the example of cooling.
5 The cooling would be -- would come on when
6 the temperature is above the setpoint and would turn
7 off when the temperature is below the setpoint.
8 And that hysteresis band would be the
9 difference between the turn-on temperature and the
10 turn-off temperature, in terms of it being a range of
11 operational temperatures.
12 Q. Do those ranges typically revolve around
13 the setpoint for the system?
14 A. Typically, yes.
15 Q. In your mind, would employing a hysteresis
16 band constitute an intentional compressor delay, as
17 we've been using that term today?
18 A. The hysteresis band is not the same as an
19 intentional delay of the compressor. They -- a
20 hysteresis band can affect the delay of the compressor,
21 but it's not the same thing.
22 Q. Would that fall into the second category
23 that we described where the compressor is not on
24 because of the operation control of the compressor?
25 A. I would say that generally, yes, the

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1 off-time that would result from a change in the
2 hysteresis band would generally be a -- an
3 unintentional off-time, as -- as we've been using the
4 term.
5 Q. And I think you actually just answered my
6 next question, but let me just go ahead.
7 If you modify that hysteresis band, you
8 make the offset from the setpoint larger so there would
9 be a modified hysteresis band.
10 Would you also agree that the off-periods
11 for the compressor during a cycle of the modified
12 hysteresis period -- or modified hysteresis activity,
13 would still not constitute an intentional delay? Did
14 you understand that question?
15 A. I -- I think I understood your question.
16 And the answer is that increasing the width
17 of the hysteresis band is not exactly the same as
18 introducing a delay.
19 Q. And --
20 A. But it does impact the operation.
21 Q. -- you said it doesn't introduce a delay?
22 I just want to make sure that we are precise.
23 It doesn't introduce an intentional delay;
24 correct?
25 A. Correct.

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1 Q. In paragraph 107 and 108, you cite to other
2 portions of the specification that you say support the
3 -- this aspect of the '100 claims.
4 Do any of these cited sections disclose,
5 specifically, a method for selecting a particular
6 interval for a compressor delay?
7 A. Okay. I have read paragraph 107 and 108.
8 And I'm sorry, I have already forgotten your question.
9 Q. Do you refer to anywhere in these
10 paragraphs, do you cite to any part of the
11 specification that expressly discloses a method for
12 selecting an interval for a compressor -- for
13 compressor delay?
14 A. It -- it doesn't put it in specific terms,
15 but it does indicate the relationship between change in
16 inside temperature and the need for -- and how that
17 would inform a decision in specifying a compressor
18 delay.
19 Q. Those were all your words, though, correct,
20 not that of the specification?
21 A. Yes, those were my words. And I cited
22 where the information in the specification puts that
23 all in context.
24 Q. Paragraph 111 to 112, this describes the
25 portion of the specification that describes the ability

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1 to predict the rate of change of inside temperature
2 under varying conditions; is that correct?
3 A. Yes.
4 Q. Does this portion of the specification
5 describe, specifically, how that prediction is
6 performed?
7 What calculation is done?
8 MR. LINK: Objection. Compound question.
9 (Clarification by the reporter.)
10 THE WITNESS: It does not expressly
11 identify an equation for the calculation.
12 BY MS. WOODWORTH:
13 Q. Would a person of ordinary skill in the art
14 know how to calculate a rate of change of temperature?
15 A. Yes, they would.
16 Q. And these portions of the specification
17 also do not expressly specify how a rate of change can
18 be used to select the compressor delay setting;
19 correct?
20 A. These paragraphs, again, inform the overall
21 understanding of the relationship between rate of
22 change of temperature and desirable changes in -- in
23 the compressor delay. But it does not expressly call
24 it out in these paragraphs.
25 Q. Starting in paragraph 114 of your report,

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1 particular duty cycle and time period, let's say one
2 hour, would that constitute a compressor delay within
3 the meaning of the '100 patent?
4 MR. LINK: Objection. Incomplete
5 hypothetical.
6 THE WITNESS: It wouldn't necessarily,
7 because -- for one, I -- as -- and I may be remembering
8 wrong, but I thought that it was -- under Ehlers, it's
9 the customer that specifies the -- the duty cycle. But
10 even if it's the utility that specifies the maximum
11 duty cycle, that -- without knowing whether, you know,
12 the setpoint is satisfied in 5 minutes or in 7 minutes
13 or in 10 minutes, then --
14 And, you know, over one-hour period, you
15 may have under the -- under the hypothetical maximum
16 duty cycle, you may have that turn on and operate for 5
17 minutes, and then turn off and stay off for 5 minutes.
18 And then turn on again for -- for 7 minutes. And then
19 turn off again for another 5 minutes. And then turn on
20 again until you reach -- if you're picking a one-third
21 and a duty -- a one-third duty cycle, once you've
22 reached an on time of -- a total on-time of 20 minutes
23 in a given hour, then, then, whatever is left, is
24 whatever is left. And you've got to leave it off until
25 your hour is complete.

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1 So in other words, the duty cycle dictates
2 the ratio of on to off-time. And if you specify what
3 the duration of the on-time is, you can thereby
4 calculate the off-time. But the specific operation
5 does not -- is not the same as -- as determining a
6 delay.
7 BY MS. WOODWORTH:
8 Q. If we're looking at a cycle, as we defined
9 it earlier, as the amount of time that it takes to go
10 from peak to peak in the thermal wave form of an HVAC
11 system -- strike that. I'm going to move on.
12 Let's move on to Claim Element 1[c]. So
13 let me just make sure, actually, first, in your -- this
14 portion of your report, you don't have a section that
15 expressly falls out for Claim Element 1[b]; correct?
16 A. I'm sorry. I'm looking at the wrong
17 document. Let me get back to my report.
18 Can you tell me again what page we are on?
19 Q. Well, I think I found the answer to my
20 question in paragraph 125. It looks like you're
21 focused on Elements 1[a], 1[b], 1[d] and 1[e]; is that
22 correct?
23 A. Yes.
24 Q. Turning to 1[c], I believe that's
25 paragraph 133 and 134; correct?

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1 A. 1[c] begins on 133, yes. And then goes to
2 134.
3 Q. And it recites "a computer processor" --
4 "the processor configured to: access stored data
5 comprising a plurality of internal temperature
6 measurements taken within a structure and a plurality
7 of outside temperature measurements relating to
8 temperatures outside the structure."
9 Would you admit that as of the time of the
10 filing of this patent application, that such a
11 structure was known in the art to a person of ordinary
12 skill in the art?
13 MR. LINK: Objection. Vague.
14 THE WITNESS: A structure, meaning the
15 structure for which temperatures inside and outside are
16 being measured?
17 BY MS. WOODWORTH:
18 Q. No, the structure as claimed the computer
19 process can figure to access stored data as it's
20 described in this claim limitation.
21 A. The -- the existence of computer processors
22 that are capable of accessing data that's stored that
23 is taken over time is, by itself, not a -- not unheard
24 of.
25 Q. Well, and certainly EcoFactor did not

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1 invent that even within the context of that stored data
2 being a plurality of internal and external temperature
3 measurements; correct?
4 A. That is correct.
5 Q. You admit that Ehlers discloses sensing
6 inside temperature; correct?
7 A. I'm sorry, which paragraph are you
8 referring to?
9 Q. Of your report?
10 A. Yes.
11 Q. I'm just asking you right now: Do you
12 acknowledge that Ehlers discloses sensing inside
13 temperature measurements?
14 A. I do recall that Ehlers discloses measuring
15 inside temperature.
16 Q. And Ehlers discloses measuring outside
17 temperature as well; correct?
18 A. I'm looking. It looks like I make
19 reference to Dr. D'Adrade's report identifying the --
20 an outside temperature measurement. And then it
21 references -- it looks like paragraph 268 of Ehlers. I
22 can go and double-check that, but I do believe that
23 Ehlers makes -- or identifies temperature measurements
24 as being made, but it doesn't talk about storing those
25 temperature measurements over time.

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1 Q. Okay. Well, let's look at paragraph 268.
2 Do you understand that there it describes
3 as having a gateway node 1.10 that includes both a
4 processor, which can access data stored in a memory;
5 correct?
6 A. I'm sorry, I'm still trying to get there.
7 You said paragraph 268?
8 Q. Correct.
9 A. Yes.
10 Q. And that -- so that discloses a gateway
11 Node 1.10, which includes a processor that is
12 configured to access stored data in a memory; correct?
13 A. Yes. And then the next paragraph -- the
14 next 40-some paragraphs identify the parameters that
15 Ehlers recommends being stored in that memory.
16 Q. Let's go to the example in paragraph 293.
17 It states that one of the things that's stored is
18 "weather information and history data including at a
19 minimum outside temperature lows and highs"; correct?
20 A. Yes.
21 Q. So a minimum outside temperature low would
22 be at least one, and a minimum outside temperature high
23 would be at least a second outside temperature
24 measurement; correct?
25 A. Not -- not necessarily. That could be an

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1 almanac entry. I mean, it could be information
2 that's -- that's reported from the weather service that
3 he references as an almanac entry. But it's not a
4 multiplicity of measurements over time; it is a high
5 and a low for a given day.
6 Q. But those would be stored over time?
7 A. Sorry. That would be day, week or billing
8 period, is what it says later in the paragraph.
9 Q. Right. And next is those by day.
10 So that would be stored for each day;
11 correct?
12 A. Potentially, yes.
13 Q. And those are outside temperature lows and
14 outside temperature highs; correct?
15 A. That's what it says.
16 Q. Ehlers also teaches in Figure 4L that it is
17 going to provide reports -- or it can provide reports
18 to the user that reflect temperature reports that are
19 going to reflect temperature as well as heating and
20 cooling setpoint; correct?
21 A. 4L does -- does reflect a so-called daily
22 temperature report.
23 Q. And a person of ordinary skill in the art
24 would understand that to be daily inside temperature
25 measurements as well as the heating and cooling

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1 setpoints; correct?
2 A. It would be some temperature record,
3 whether it was temperature measurements or averages of
4 temperature over some period of time. Ehlers, in his
5 list of data stored, refers to temperature averages,
6 but, you know, what window those are averaged over is
7 not clear.
8 Q. In order to create an average temperature,
9 you have to have at least two temperature measurements;
10 correct?
11 A. It -- in order to create an average, you
12 would have to have two temperature measurements; that
13 is correct.
14 Q. Let's look at Figure 3D as well. We might
15 spend some time here.
16 This figure is described as how the system
17 tracks and learns the thermal gain characteristic of a
18 home; correct?
19 A. That's part of the description of -- of
20 this figure.
21 Q. And you understand that there's, kind of,
22 two sets of lines shown here, correct, those that start
23 with 3.12 and the second set that starts with 3.14?
24 A. You -- you're overlooking the one that's
25 marked 3.16, but yes, there are multiple sets of lines

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1 on this.
2 Q. Well, 3.16 is not a set, is it? Or is it a
3 set of one?
4 A. It doesn't fit in either of the other
5 categories. So yes, I would say it is probably a set
6 of one.
7 Q. But you do understand that those -- the two
8 sets, 3.12 and 3.14, refer to two different outside
9 weather temperature measurement conditions; correct?
10 A. I don't think I understood you correctly on
11 that.
12 Can you ask that question again?
13 Q. I said -- well, let me ask it this way.
14 You understand that the set of lines that
15 start with 3.12, that these are associated with an
16 outside temperature measurement of -- you wrote
17 90 degrees. I can't recall if it is 90 or 99. I think
18 it's 90. Yeah, 90.
19 A. No.
20 Q. I'm sorry, you're right. I did that wrong.
21 Let me start over.
22 For the set of lines 3.12 -- that start
23 with 3.12, you understand that these represent a series
24 of conditions when the indoor setpoint is originally 72
25 degrees?

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