UNITED STATES PATENT TRIAL AND APPEAL BOARD

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WEBASTO ROOF SYSTEMS, INC.

Petitioner

V.

UUSI, LLC

Patent Owner

Case IPR2014-00648

Patent 8,217,612

Case IPR2014-00649

Patent 7,548,037

Case IPR2014-00650

Patent 7,579,802

Deposition of Dr. Mark Ehsani

March 13th, 2015

8:52 a.m.

Reported By:
KELLY BRYANT
Job No: 38002

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1   A-P-P-E-A-R-A-N-C-E-S
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   ALSO PRESENT:
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1   P R O C E E D I N G S
2   (March 13, 2015)
3   VIDEOGRAPHER: We're on the record.
4 The date is March 13th, 2015, the time 8:52 a.m.
5 beginning of the deposition of Mark Ehsani.
6   MR. SANDERS: This is Charles Sanders of
7 Goodwin, Procter, on behalf of the petitioner, Webasto
8 Roof Systems.
9   MR. KESKAR: Hemant Keskar, on behalf -- of
10 Harness, Dickey & Pierce, on behalf of the patent owner,
11 UUSI.
12   VIDEOGRAPHER: And will the court reporter
13 please swear in the witness?
14   DR. MARK EHSANI,
15 having been first duly sworn, testified as follows:
16   DIRECT EXAMINATION
17 BY MR. SANDERS:
18   **Q. Good morning, Dr. Ehsani.**
19   A. Good morning.
20   **Q. Is there anything that would prevent you from**
21 **testifying truthful today?**
22   A. No.
23   **Q. And you understand that this will be a two-day**
24 **deposition, today and Saturday, tomorrow?**
25   A. It's kind of short, but we'll try to enjoy it as

5

1 much as we can.
2   **Q. Understood. And I instruct you that you can't**
3 **discuss overnight the contents of this deposition with**
4 **your counsel.**
5   **Do you understand that?**
6   A. I understand that.
7   **Q. And you've been deposed before, Dr. Ehsani,**
8 **correct?**
9   A. Yes.
10   **Q. Dr. Ehsani, one of the patents that you reviewed**
11 **in this case was UUSI '612 patent.**
12   **Do you recall that?**
13   A. Yes.
14   **Q. Now, the '612 patent does not disclose a working**
15 **example of an algorithm that was implemented, correct?**
16   A. I don't know if that's correct or not.
17   We have to look at the patent and you have to
18 show me where it's not.
19   **Q. Well, actually, Dr. Ehsani, you're the expert.**
20 **So you'll tell me whether it's there or not.**
21   MR. SANDERS: Just as a housekeeping issue,
22 these exhibits have been premarked as exhibit -- with
23 this petition. So unless -- unless Dr. Ehsani writes on
24 them, I propose that we just simply use them with the
25 exhibit numbers we have.

1   MR. KESKAR: Sure.
2   THE WITNESS: Thank you.
3   (Petitioner's Exhibit 1001 premarked)
4   Q. (BY MR. SANDERS) Dr. Ehsani, I've provided you
5 with a copy of the '612 patent, which is Exhibit 1001,
6 in the '612 patent IPR.
7   And my question is whether this, excuse me -- my
8 question -- I wanted you to confirm that the '612 patent
9 does not disclose any working example of an algorithm
10 that was implemented.
11   A. Is that something I -- I recite in my report or
12 are you asking something outside of my report?
13   Q. Actually, I'm just asking the question.
14   A. Is this related to my report, or is it outside of
15 my report?
16   Q. Dr. Ehsani, you understand that here today,
17 you're -- you're here to answer my questions. I'm not
18 here to answer yours.
19   So if you can't answer the question, that's okay,
20 just tell me that you -- you can't answer it; but,
21 otherwise, please, confirm that this '612 does not
22 disclose any working example of an algorithm that was
23 implemented.
24   A. I may be wrong, but my understanding is that I'm
25 here to answer questions related to my report, and I'd

1 be happy to entertain general, unrelated questions, as
2 long as you identify them as such. That's why I'm
3 asking for clarification.
4   If I have stated in my report that there's no
5 working algorithm, then I'd be happy to read that and
6 elaborate.
7   But if you're asking general questions outside of
8 my report, I would like to know that.
9   Q. Dr. Ehsani, let me be very clear. You're here to
10 answer my questions. I'm not here to answer yours.
11   If you can't answer the question, you can let me
12 know that, but, otherwise, I'll give you one more chance
13 to review this '612 patent and tell me whether you can
14 answer my question.
15   My question is: Can you confirm that the '612
16 patent does not disclose any working example of an
17 algorithm that was implemented?
18   A. I believe you are not correct in your general and
19 vague assessment of the '612.
20   Q. Is it your testimony that the '612 patent does
21 disclose a working example of an algorithm that was
22 implemented?
23   A. Sorry, that's a different question from the
24 previous question.
25   Q. You didn't answer my previous question. I'm

1 going to give you one more chance, and then we'll just
2 move on and mark the transcript that you were unable to
3 answer.
4   A. Sir --
5   Q. My question is: Can you confirm that the '612
6 patent does not disclose any working example of an
7 algorithm that was implemented?
8   A. I disagree with that assessment.
9   Q. Do you believe the '612 patent does disclose a
10 working example of an algorithm that was implemented?
11   A. The '612 shows a series of equations and
12 procedures that are the foundations of an algorithm and
13 it shows the configuration of the hardware that can run
14 that algorithm, and it gives examples of its results.
15   That, in my mind, is what an algorithm consists
16 of, and an algorithm, itself, being a rather vaguely
17 defined term and not being specific codes of a software
18 based on an algorithm.
19   With that understanding, it is my belief that
20 this is sufficient disclosure of an algorithm.
21   Q. Does the '612 patent disclose that algorithm was
22 implemented?
23   A. My understanding is a patent is not a reporting
24 of past events, but it is disclosure of a method or
25 apparatus to the level of enablement of the reader to

1 reproduce it and not a report of whether that was done
2 in the past or not.
3   It is not the way I read a patent.
4   Q. Okay. You've answered a different question,
5 which is how you read a question patent.
6   My question is -- could I please have my question
7 read back?
8   (Reporter read requested material)
9   A. Again, my understanding is that you're asking me
10 that there is the reporting of an event in time.
11   I have to read the patent over to see if a
12 reporting was done. I read their patent for the
13 disclosure of the invention, and its embodiment in the
14 specifications.
15   I have not read the patent, or at least I don't
16 -- I have to read it over again to see if it reports
17 events of the past. It may be there. It may not be
18 there.
19   My understanding is that patents are not written
20 about -- you don't -- you don't patent events. You
21 patent methods and apparatus.
22   Q. Let me make this very simple.
23   If you believe that the '612 discloses an example
24 of an algorithm that was implemented, please give me the
25 column and line numbers where you believe that

3 (Pages 6 to 9)

1 disclosure is in the patent.
2 A. As I mentioned to you, the disclosures, as I read
3 them, are enabling for the claims that it has listed.
4 My understanding is that it is not necessary for
5 someone to have actually built one or not.
6 I have to read the whole patent to -- I have
7 actually never read a patent that said we did this and
8 we did it on such and such date and it was nice or
9 anything like that. So a description of an event in the
10 laboratory is probably not in this patent.
11 But if you are asking me the implication that the
12 person was in possession of the patent at the time of
13 filing, I believe the answer is, yes.
14 Q. Actually, none of that is what I asked. I asked
15 you to identify column and line numbers. You have the
16 patent in front of you.
17 If you believe that the '612 patent discloses a
18 working example of an algorithm that was implemented,
19 please identify the column and line numbers where that
20 is disclosed in the patent.
21 A. Again, that's a very, very complicated and
22 composite question.
23 Q. No, it's not. I asked you to identify the column
24 and line number.
25 A. May I finish my answer --

1 Q. No, you may not.
2 A. If you interrupt me, sir, you will not get an
3 answer. You have to let me finish my answer.
4 Q. You were asked for column and line numbers and
5 you're not even looking at the patent.
6 I'll try this one more time. If you're not
7 capable of answering the question, we'll simply mark the
8 transcript and move on, and we'll deal with it down the
9 line.
10 My question is: If you believe that the '612
11 patent discloses a working example of an algorithm that
12 was implemented, please identify the column and lines
13 where that is disclosed.
14 A. It will take me a while because I have to review
15 the entire patent, with your indulgence.
16 I'm on column 2, I have not finished my entire
17 search yet. Line 3 says, An exemplary system built in
18 accordance with one embodiment of the invention, built,
19 implements position and speed sensing is via electronic
20 motor control commutation pulse sensing of the motor --
21 of the drive motor, and so on and so forth.
22 That, sir, to me says that it was built. It's an
23 event in time. It was based on the invention. I would
24 like to continue to look for all the other occurrences
25 of this event.

1 Q. Just to be clear, what column and lines were you
2 speaking about?
3 A. Patent number U.S. 8217612 B2, column 2, starting
4 from line 3.
5 Q. Continue your review.
6 A. Yeah, I'm not finished.
7 Another occurrence is in column 2 of the same
8 patent, starting from line 9, In one exemplary
9 embodiment stored empirical parameter characteristics
10 and algorithms adaptively modify.
11 Stored is an event in time. It implies
12 implementation, to me, and it goes on to say,
13 Empirically -- Empirical parameter characteristics and
14 algorithms adaptively modify, obstacle detection
15 thresholds, during an ongoing actuation for improved
16 obstacle detection sensitivity and threshold, resulting
17 in quicker obstacle detection, with lower initial force,
18 lower final pinch force, and reduced -- reduced
19 occurrence of false obstacle detection.
20 I read that to mean it is an implementation.
21 It's reporting of an event in the past.
22 (Reading)
23 A. In column 10, line 13, it says, One
24 representative vehicle sunroof has approximately 3,000
25 commutation pulses over the full actuation range of the

1 full open to full closed positions of the sunroof.
2 This -- again, trying to answer your question
3 with as much fidelity as I can, on a brief review of
4 this patent, is clearly an empirical reporting of an
5 event that was measured.
6 And this, obviously, was not measured, in my
7 mind, out of just a curiosity about geometry, but in
8 connection with implementing this methodology.
9 Since this is not theoretical and cannot be
10 guessed at, it implies actual measurement of the
11 rotation of a DC motor in a power system, including the
12 actuation and the movement of the enclosures and all the
13 things that had been described here.
14 That is -- that's a representative of having
15 implemented what they're talking about, in some sense.
16 (Reading)
17 A. Column 15, line 55, the inventor states, Figure 4
18 shows typical start-up energization characteristics of
19 current and per speed for motor -- excuse the English.
20 Start-up obstacle detection is somewhat
21 difficult, because so on and so forth.
22 This figure, if you look at it, refers to
23 something that is not theoretical and it's not
24 exemplary. It is typical. You cannot get that from
25 calculations.

1   This implies to me that this was obtained
2   empirically. And to obtain this, I assume that -- it's
3   reasonable to assume that they did this experiment with
4   their machinery and with their algorithm to get these
5   things.
6   So they are in possession of a running experiment
7   to get these curves. I could be wrong. This could just
8   be an artist rendition. It's got -- it's too nuanced
9   beyond what they need to use for their arguments.
10   So I'm led to believe that this is an actual
11 working system representative curvature.
12   THE WITNESS: Am I going too fast? Can you
13 keep up?
14   (Reading)
15   A. In column 25, I will read from line 55, because
16 it shows the person has done these experiments
17 physically, Empirical actuation motor load profile
18 equation and algorithm.
19   Nominal operation parameters for obstacle
20 detection threshold are empirically characterized as
21 motor current loading versus actuator position.
22 Alternative empirical characterization --
23 characterizations include motor current versus time,
24 motor speed versus time, motor speed versus position and
25 combinations thereof, as period as per -- as per period

1   art references.
2   In the present embodiment this algebraic
3   representation has a general, simplified large --
4   simplified algebraic form for fast commutation via speed
5   processing, particularly implementing, adding and/or bit
6   shifting and/or bite shifting operations.
7   These types of empirical data manipulation for
8   conversion to fast computing real time micro controller
9   algorithm have been found to be applicable to various
10 diverse combinations of vehicle sunroofs.
11   This, to me, implies that this might include the
12 authors -- they have found through experimentation.
13   (Reading)
14   A. On a very quick reading of the patent in response
15 to your questions about whether the inventor actually
16 practiced and experimented the algorithm and the system
17 that they have claimed, I found the references that I
18 mentioned to you.
19   Q. I would like to direct your attention to the
20 first passage that you identified at column 2, starting
21 at line 3, you identified that paragraph as well as the
22 paragraph starting at line 9.
23   Do you have that in front of you?
24   A. I do.
25   Q. Do you see -- you read in column 2 about line 9,

1   there's a reference to stored empirical parameter
2   characterizations.
3   A. Are you talking about column 2?
4   Q. Yes, that's what I directed you to.
5   A. Column 2, line 10, One exemplary embodiment
6   stored parameter characterization and algorithms
7   adaptively modified obstacle detection thresholds,
8   during an ongoing actuation for improved obstacle
9   detection sensitivity and threshold, resulting in a
10 quicker obstacle detection, with lower initial force,
11 lower final pinch force, and reduced the occurrence of
12 false detection, correct.
13   Q. So we established that you have seen it.
14   There's no disclosure of any values of the stored
15 empirical parameter characterizations, correct?
16   A. This passage is not about naming numbers. It is
17 about --
18   Q. Thank you.
19   You also read the language adaptively modify
20 obstacle detection thresholds as part of that sentence.
21   My question is: Whether you see in this passage
22 any disclosure of how that adaption was done?
23   A. Of course, you understand much better than I do
24 that this is a summary of the invention. So it is
25 acknowledging what will be disclosed in the

1   specifications in detail.
2   Q. There's also notice of disclosure in that section
3   of what specific algorithm was used, correct?
4   A. Again, I don't really agree with your
5   characterization of disclosure. This is a summary of a
6   disclosure of those algorithms.
7   Q. What specific algorithm was used in the passage
8   that you identified, column 2, lines 3 through 15?
9   A. Again, I have to read through the whole thing to
10 match with that. These are very, very specialize
11 questions. I haven't read these from the perspective of
12 that question.
13   Would you like me to take time and to try to
14 match --
15   Q. No. If you haven't been able to figure it out
16 after an hour of review, then that's sufficient for my
17 purposes.
18   A. No, sir. That's a mischaracterization of my
19 answer -- sir, let me finish my answer.
20   Q. Actually --
21   A. You interrupt me, then you're asking the question
22 and moving on.
23   Q. I'm moving on.
24   A. Okay. Because -- I would like to put on the
25 record that you mischaracterized my answer and the

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