

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
3 -----X
4 TOYOTA MOTOR CORPORATION,
5
6 Petitioner,
7
8 IPR2013-00412
9 VS. IPR2013-00413
10 IPR2013-00416
11
12 AMERICAN VEHICULAR SCIENCES, LLC,
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14 Patent Owner.
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DEPOSITION OF
NIKOLAOS PAPANIKOLOPOULOS, PH.D.
Monday, February 24, 2014
New York, New York

Reported By:
LINDA J. GREENSTEIN
JOB NO. 89371



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CORRECTED
AVS EXHIBIT 2002

1 Nikolaos Papanikolopoulos, Ph.D.
2 exploited -- we had a camera mounted inside
3 the car, and we use a location of the
4 license plate with respect to the rest of
5 the car, and we tried to compute also other
6 characteristics; say, characteristics of
7 the license plate.

8 And then based on the size, we
9 try to keep the size constant, it allows us
10 to keep constant distance as part of a
11 vehicle following application.

12 Q. Did that system use a pattern
13 recognition algorithm?

14 MR. BERKOWITZ: Object to form.

15 A. Again, let me clarify since we
16 have these terms in my -- the claim
17 construction I was given. Do you want me
18 to answer --

19 Q. As you normally use that term,
20 did that system, the one that you refer to
21 in paragraph 4 of your 419 application, use
22 a pattern recognition algorithm?

23 MR. BERKOWITZ: Object to form.

24 Lack of foundation.

25 A. Normally use -- again, under the

1 Nikolaos Papanikolopoulos, Ph.D.
2 assumption of the claim construction that I
3 was given, the answer is yes.

4 Q. What about under your ordinary
5 usage of that term?

6 MR. BERKOWITZ: Object to form
7 and lack of foundation.

8 A. By using the claim construction
9 of pattern recognition, yes.

10 Q. I wasn't asking about the claim
11 construction in this case.

12 I was just asking about as you
13 would normally use that term in your
14 research, did the system of paragraph 4 use
15 a pattern recognition algorithm?

16 MR. BERKOWITZ: Object to form.
17 Lack of foundation.

18 A. Given the precision that I need
19 to provide with respect -- since we have
20 many terms which are used, I think I need
21 to stick to use of the term in my
22 declaration. So in this case, yes.

23 Q. So you've used the term "pattern
24 recognition" in some of your papers,
25 haven't you?

1 Nikolaos Papanikolopoulos, Ph.D.
2 part of the claim construction, so I'm
3 going to ask you the same clarification.

4 Q. First, as you've construed the
5 claims in this case, did your license plate
6 system involve trained pattern recognition?

7 MR. BERKOWITZ: Object to form
8 and foundation.

9 A. So given the claim construction
10 I have here, we didn't use trained pattern
11 recognition means.

12 Q. And then as you used that term
13 before these IPR matters, would you have
14 said that that used trained pattern
15 recognition?

16 MR. BERKOWITZ: Object to form
17 and lack of foundation.

18 A. The term "trained pattern
19 recognition" is not really common. I mean,
20 we use other terms, so I would say no.

21 Q. Okay.
22 How did the system detect a
23 license plate?

24 A. So I can give you my
25 recollection.

1 Nikolaos Papanikolopoulos, Ph.D.
2 perimeter of the license plate, so it was a
3 scale or a number, to I don't want to be --
4 but mainly images.

5 Q. Okay.

6 And did you have on the system
7 any data or images relating to license
8 plates?

9 A. I don't recall this, to be
10 precise.

11 One thing I recall is actually
12 we used to have rectangles, or models of
13 rectangles.

14 I don't recall exactly if we had
15 the license plates or -- and also, I'm not
16 sure in Yue Du's thesis -- I asked him do
17 this, but I'm not sure if this was ever
18 implemented.

19 Q. So it's possible in a system of
20 this type to have the system look for
21 rectangles rather than specifically compare
22 captured images to stored images of license
23 plates?

24 MR. BERKOWITZ: Object to form.
25 Foundation.

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