

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

SIEMENS MOBILITY, INC.,) Case Nos.
GROUND TRANSPORTATION) IPR2023-00468
SYSTEMS USA, INC.,) and
HUMATICS CORP. and PIPER) IPR2023-00470
NETWORKS INC.,)
Petitioners,) Patent Nos.
vs.) 9,043,131
METROM RAIL, LLC,) and
Patent Owner.) 8,812,227

The videotaped deposition of JAMES
MARCHI, called as a witness for examination, taken
via videoteleconference pursuant to the Federal
Rules of Civil Procedure of the United States
District Courts pertaining to the taking of
depositions, taken before VICTORIA C. CHRISTIANSEN,
a Certified Shorthand Reporter of the State of
Illinois, CSR No. 84-3192, on the 30th day of
November, A.D. 2023, at 10:00 a.m.



800.211.DEPO (3376)
EsquireSolutions.com

1 PRESENT:

2 CROWELL & MORING LLP,
3 (455 North Cityfront Plaza Drive, Suite 3600,
4 Chicago, Illinois 60611,
5 312-840-3270), by:
6 MR. JOSHUA JAMES,
7 jjames@crowell.com,

8
9 appeared via videoteleconference on
10 behalf of Petitioner Siemens Mobility,
11 Inc.;

12
13 FAEGRE DRINKER BIDDLE & REATH LLP,
14 (320 South Canal, Suite 3300,
15 Chicago, Illinois 60606,
16 312-212-6500), by:
17 MR. THATCHER A. RAHMEIER,
18 thatcher.rahmeier@faegredrinker.com,

19
20 appeared via videoteleconference on
21 behalf of Petitioner Ground
22 Transportation Systems USA, Inc.;

23
24 WOLF GREENFIELD & SACKS,
25 (605 Third Avenue,
26 New York, New York 10158,
27 212-849-3338), by:
28 MR. GREGORY S. NIEBERG,
29 gregory.nieberg@wolfgreenfield.com,

30
31 appeared via videoteleconference on
32 behalf of Petitioner Humatics Corp.;

1 PRESENT (Continued):

2 WISNIA, P.C.,
3 (12636 High Bluff Drive, Suite 400,
4 San Diego, California 92130,
5 858-461-0989), by:
6 MR. HOWARD WISNIA,
7 howard@wisnialaw.com,

8 appeared via videoteleconference on
9 behalf of Petitioner Piper Networks;

10 McANDREWS HELD & MALLOY,
11 (500 West Madison Street, 34th Floor,
12 Chicago, Illinois 60661,
13 312-775-8203), by:
14 MR. GREGORY SCHODDE,
15 gschodde@mcandrews-ip.com,

16 appeared via videoteleconference on
17 behalf of Patent Owner.

18
19
20
21 VIDEOTAPED BY: MICHAEL BENDER, Legal Videographer,
22 Esquire Deposition Solutions;

23
24 REPORTED BY: VICTORIA C. CHRISTIANSEN, RPR, CRR,
 Illinois CSR No. 84-3192.



1 THE VIDEOGRAPHER: Good morning. We are now
2 on the record. The current time is 10:00 a.m.
3 Today's date is November 30, 2023.

4 This begins the videotaped deposition of
5 James Marchi in the matter of Siemens Mobility,
6 Incorporated, et al., vs. Metrom Rail LLC. The
7 case number is IPR2023-00468-470.

8 My name is Michael Bender. I'm your
9 remote videographer. Your court reporter is Vicki
10 Christiansen.

11 Counsel, will you please introduce
12 yourselves and the witness will be sworn.

13 MR. WISNIA: Good morning. Howard Wisnia on
14 behalf of the petitioner.

15 MR. SCHODDE: Greg Schodde for Patent Owner
16 Metrom Rail.

17 MR. RAHMEIER: Thatcher Rahmeier from Faegre
18 Drinker Biddle & Reath for Ground Transportation
19 Systems USA, Inc.

20 MR. NIEBERG: Gregory Nieberg for the Humatics
21 petitioner.

22 MR. JAMES: Joshua James of Crowell & Moring
23 for the petitioners.
24



1 (WHEREUPON, the witness was duly
2 sworn.)

3 JAMES MARCHI,
4 called as a witness herein, having been first duly
5 sworn, was examined and testified as follows:

6 EXAMINATION

7 BY MR. WISNIA:

8 Q. Good morning, sir. My name is Howard
9 Wisnia.

10 A. Good morning.

11 Q. Would you kindly state your full name
12 and your business address.

13 A. Sure. My full name is James A. Marchi,
14 and our business address is in Lakemoor, Illinois.
15 It's it 27- -- I believe 27992 Route 120, Unit 120,
16 Lakemoor, Illinois.

17 Q. And what is your home address?

18 A. [REDACTED],
19 Illinois.

20 MR. SCHODDE: And, counsel, can we agree that
21 personally identifiable information like home
22 addresses, Social Security numbers, phone numbers
23 will be redacted from the public transcript?

24 MR. WISNIA: That's fine for me.



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1 BY MR. WISNIA:

2 Q. Sir, where are you today if you --

3 A. I'm in my home.

4 Q. Okay. Which is the address you just
5 gave us?

6 A. Correct.

7 Q. Okay. And who else is in your house
8 today?

9 A. In other parts of my house, my -- my
10 daughter and my wife.

11 Q. All right. Anybody in the room that
12 you're in?

13 A. No, just myself.

14 Q. And what -- and what type of equipment
15 are you using?

16 A. I'm using a Microsoft notebook.

17 Q. All right. Besides your computer, what
18 other documents or devices do you have within
19 hand's reach?

20 A. I have my phone and I have my
21 declaration and supplemental declaration and I have
22 a notebook to take notes if needed.

23 Q. Do you have any notes in the notebook?

24 A. I do not.

1 Q. And your copies of the declaration, are
2 they clean or have you made notations on them?

3 A. No notations. They're clean copies.

4 Q. Okay. And on your -- and I'd ask you to
5 just shut off your phone, if that's possible,
6 unless you're expecting a super-important call.

7 A. Okay.

8 Q. And then -- thank you. So you've shut
9 your phone off?

10 A. I just shut it off.

11 Q. Okay. And on your computer, besides the
12 Zoom, what other programs, if any, do you have
13 open?

14 A. I believe I have Outlook where my e-mail
15 is. I can close that, if you'd like.

16 Q. Yes, please.

17 By the way, during -- during breaks,
18 feel free to turn your phone on and check your
19 e-mails or whatever. While we're on the record,
20 I'd ask you to keep that stuff shut off.

21 Mr. Marchi, it looks like maybe you
22 froze. Can you hear me? Mr. Marchi, your -- your
23 connection seems to have frozen, so if you could
24 hear us, when you come back, just let us know.

1 (WHEREUPON, there was a short
2 interruption.)

3 MR. SCHODDE: Off the record?

4 MR. WISNIA: Yes.

5 THE VIDEOGRAPHER: We're going to go off the
6 record. The time is 10:06 a.m.

7 (WHEREUPON, the deposition was
8 recessed from 10:06 to 10:10 a.m.)

9 THE VIDEOGRAPHER: We are back on the record.
10 The time is 10:10 a.m.

11 BY MR. WISNIA:

12 Q. All right. Sir --

13 MR. WISNIA: Would the reporter read back the
14 last question, please?

15 (WHEREUPON, discussion was had off
16 the record.)

17 BY MR. WISNIA:

18 Q. All right. And so I think right before
19 you froze, I'd asked you to shut your phone off,
20 which obviously you turned it back on to call us
21 during the break, but if you can shut that off
22 again, I'd appreciate it.

23 A. Okay.

24 Q. And then on your computer, just keep the



1 Zoom open and shut other programs that you have
2 off.

3 A. Yeah. Okay, finished.

4 Q. All right. So now the only electronic
5 device you have open is your computer and the only
6 application you have open is Zoom, is that correct?

7 A. Yes.

8 Q. All right. So obviously we're giving
9 testimony under oath today, so it's as if you're
10 testifying before a judge and jury or before the
11 administrative panel in this case, so it's
12 important that we try to recreate those conditions
13 as much as possible, so I'd ask you not to
14 communicate with anybody else except during -- on
15 the record about this case for the rest of the day
16 or at least until we conclude the deposition.

17 Now, during the break, you may be able
18 to talk to other people about anything you want to
19 talk about except things related to this case, so
20 nothing about -- that could be used or relates to
21 this case during breaks, okay?

22 A. Okay.

23 Q. The exception may be if there's some
24 question about privilege, your lawyer may want to

1 talk to you about privilege, so besides that.

2 All right, sir. Have you ever given
3 testimony of any kind to a court or administrative
4 panel before this case?

5 A. Yes. One time.

6 Q. Okay. And what were the circumstances
7 of that?

8 A. It was a divorce proceeding from a
9 former officer of my company.

10 Q. All right. And you were a witness, or
11 what happened in that case? Just generally. I
12 don't need the details.

13 A. I was a -- a witness giving testimony
14 related to the company and the gentleman's position
15 with the company.

16 Q. And was that a deposition or was that
17 a -- a court proceeding?

18 A. A deposition.

19 Q. Besides that, any other experience
20 giving testimony in a court or administrative
21 proceeding?

22 A. No.

23 Q. You've submitted a couple declarations
24 in this case.



1 Besides the two declarations you've
2 submitted in this case, have you ever submitted a
3 written declaration or written testimony to any
4 administrative agency or court before?

5 A. This just froze on me.

6 Q. We can hear you.

7 A. Okay. You can hear me.

8 Could you please repeat the question?
9 It froze on me.

10 Q. Sure. In this case you've submitted two
11 declarations, your original and your supplemental
12 declaration.

13 Besides those two documents, have you
14 ever submitted testimony in written form or a
15 declaration to a court or administrative agency?

16 A. No.

17 Q. Okay. As you can see, we're taking the
18 deposition today. There's a reporter here taking
19 down everything that you and I are saying, there's
20 a videographer videotaping your testimony.

21 To try to provide the cleanest record
22 that we can, it's important that only one of us try to
23 speak at a time. I'll do my best to try not to
24 speak on top of you. I would just ask you to do



1 the same and try not to speak on top of me, okay?

2 A. Okay.

3 Q. By the same token, to have a clean
4 written record, it's important that we speak in
5 full words as opposed to "uh-huhs" or "uh-uhs" or
6 head shakes or head nods, so please try to use full
7 words such as yeses or nos, okay?

8 A. Yes.

9 Q. Is there any reason why you can't give
10 us your best and most accurate testimony today?

11 A. No.

12 Q. Now, sir, I understand that you have
13 some sort of back injury that is bothering you, is
14 that right?

15 A. That's correct.

16 Q. Okay. Are you taking any sort of
17 medication that -- in connection with that?

18 A. No. Only Advil.

19 Q. Okay. And we'll do our best today to
20 try to take a break about every hour; however, if
21 you need a break during the day at any other time,
22 just let me know, and once we get to a convenient
23 spot, if you've finished your answer or a question
24 or two, we'll try to make sure we take a break.

1 Fair enough?

2 A. Fair enough.

3 Q. All right. Sir, where did you grow up?

4 A. I grew up in Mt. Prospect, Illinois.

5 Q. And did you attend college?

6 A. I did.

7 Q. Where did you go to school?

8 A. I went to University of Illinois at
9 Chicago.

10 Q. Did you obtain a degree?

11 A. I did.

12 Q. In what?

13 A. A bachelor's in communications.

14 Q. And what year was that?

15 A. I believe I graduated in 1990.

16 Q. All right. And you formed Metrom in
17 what year?

18 A. Late 2010.

19 Q. So I want to talk a little bit about
20 your professional experience after graduating
21 college up to Metrom, and so what did you do when
22 you graduated from school?

23 A. I had various sales positions with
24 different companies and then migrated into some

1 marketing and some operations positions with --
2 with companies before then becoming an entrepreneur
3 and starting some of my own businesses.

4 Q. Okay. When did you form your own
5 business, the first one?

6 A. Approximately 2000, 2001.

7 Q. And so when you were in these -- when
8 you were employed in this period from 1990 to early
9 2000s, what industries were you working in?

10 A. I worked in various industries. I
11 worked in an industry -- I -- the printing
12 industry. I worked for a company called Reynolds &
13 Reynolds. I worked for the Rand McNally
14 Corporation based here out of Chicago for a
15 division called DocuSystems.

16 Those were primarily the two companies
17 that I worked the longest for.

18 Q. Okay. Did you have any experience in
19 transportation or railroad?

20 A. No.

21 Q. And when is the first time you had any
22 experience in the transportation or railroad
23 industry?

24 A. With Metrom Rail.

1 Q. And so I think you mentioned that you
2 became an entrepreneur sometime in the early 2000s.

3 How many different companies have you
4 formed?

5 A. I don't know the exact number, but
6 it's -- it's quite -- quite a few, and some of them
7 are holding companies to own ownership in other
8 companies.

9 Q. Okay. I mean, could you give us an
10 order of magnitude?

11 A. I would say between five and seven.

12 Q. All right. And so Metrom -- is there a
13 Metrom and a Metrom Rail or is there just one
14 Metrom?

15 A. There isn't currently a Metrom and a
16 Metrom Rail. There --

17 Q. Okay. What is there now?

18 A. Metrom Rail. I'm not -- I was not a --
19 a part of a company called Metrom.

20 Q. Oh, okay, all right. So you had --
21 you've been involved in Metrom Rail.

22 What are the other companies that you've
23 had or been involved with?

24 A. A company called Encoder Devices, and

1 that was a company that I founded and sold. A
2 company called Marjim Enterprises, a company I
3 founded and sold.

4 Q. Can you say -- can you say that name
5 again?

6 A. Sure. Marjim Enterprises.

7 Q. Can you spell it, please?

8 A. Sure. M-a-r-j-i-m --

9 Q. Okay.

10 A. -- Enterprises.

11 Q. Okay. Any other ones?

12 A. A company called Columbia Sports
13 Ventures LLC.

14 Q. All right.

15 A. Those would be the primary ones.

16 Q. Okay. So Encoder and Marjim you said
17 you founded and sold.

18 What about Columbia Sports Ventures?

19 A. The same.

20 Q. Okay. So is the only active company
21 that you have currently Metrom?

22 A. No. I have another company called
23 MRT Holdings.

24 Q. And what does MRT Holdings do?

1 A. MRT Holdings is an auxiliary company
2 that works alongside Metrom Rail to provide it with
3 some services and products that Metrom Rail doesn't
4 procure on its own.

5 Q. Okay. But it's affiliated in some --
6 its business is affiliated with -- with
7 Metrom Rail?

8 A. That's correct.

9 Q. Any other ones?

10 A. No.

11 Q. Okay. What was the business of Encoder
12 Devices?

13 A. Encoder Devices was an engineering
14 company that manufactured -- designed and
15 manufactured pulsar rotary encoders. It was in
16 transportation but not the rail market.

17 Q. Okay. What -- what area of
18 transportation was it in?

19 A. Gas pump manufacturers.

20 Q. All right. And when did you form that
21 company and when did you sell that company?

22 A. I don't recall the exact dates. Early
23 2000s, and then I believe somewhere in the 2003
24 approximate range is when it was sold.

1 Q. Okay. And what about -- there was some
2 testimony from Mr. Gunther about him working on
3 a -- on a gas metering business.

4 Was that related somehow to this Encoder
5 Devices company?

6 A. No, it was not. I -- I don't -- I'm not
7 sure exactly what he's referring to, but it was not
8 Encoder Devices.

9 Q. All right. But did Encoder Devices have
10 anything to do with Metrom, the --

11 A. Nothing to do with it.

12 Q. Okay. What was Marjim Enterprises?

13 A. Marjim Enterprises was a consulting
14 company that I founded.

15 Q. Okay. And what was the -- what was the
16 business -- what sort of services -- what specific
17 type of services were you guys offering?

18 A. We were offering consulting services for
19 youth sports organizations.

20 Q. Okay. And when did you form that and
21 when did you sell it?

22 A. I don't recall the formation, it was
23 over ten years ago, but I just sold it in 2022.

24 Q. What about Columbia Sports Ventures?



1 A. Columbia Sports Ventures is a company
2 that owned a junior hockey franchise in the United
3 States Hockey League, and that franchise was sold
4 back to the league approximately five or six years
5 ago.

6 Q. What was the name of the company -- the
7 name of the team? I'm sorry.

8 A. There was no team. It was an expansion
9 team that we were looking to put into a market.

10 Q. Okay, all right. How did you get
11 involved in Metrom Rail? What -- what is the
12 genesis story?

13 A. I had an introduction to an executive at
14 Canadian National Railway, and utilizing some prior
15 experience that I had at Encoder Devices and the
16 team that I had at Encoder Devices decided to found
17 Metrom Rail based on the antiquated technology
18 being provided for safety systems in the rail
19 space.

20 Q. Who was the owner of Metrom, not
21 Metrom Rail?

22 A. I'm not sure. I -- I know some of the
23 individuals who were involved with it, but I don't
24 know the ownership structure.

1 Q. Okay. Is there any relationship or was
2 there ever any relationship between Metrom and
3 Metrom Rail?

4 A. There were some shared engineering
5 resources very early on.

6 Q. Okay. And I assume, then, that -- I'm
7 sorry. Go ahead. I didn't hear you.

8 A. That was -- that was it.

9 Q. All right. Besides yourself, who
10 founded Metrom Rail?

11 A. A gentleman named Rick Carlson.

12 Q. Anyone else?

13 A. No.

14 Q. I understand that there's a father/son
15 Rick Carlson that's involved in Metrom Rail.

16 I assume you're talking about the
17 senior?

18 A. Yes.

19 Q. Okay. And was Mr. Carlson involved in
20 the Metrom company?

21 A. Yes, he was.

22 Q. Okay. So what was the name of the
23 person that you were introduced to at the -- at
24 Canadian National Railroad -- Canadian Railroad?

1 A. His name was Keith Creel.

2 Q. C-r-e-e-l?

3 A. Correct.

4 Q. And during that introduction -- well,
5 just -- just explain to me: What -- what is the
6 problem or the opportunity that you saw based
7 on that -- on that discussion?

8 A. We had a discussion related to some
9 previous business dealings, our own business
10 dealings, and he had understood I had a company
11 called Encoder Devices, which was an engineering
12 company, and he disclosed to me that their safety
13 systems were antiquated, that they didn't have --
14 that was the -- his words, not mine, that the
15 industry technology forgot about, so I proceeded to
16 have more discussions with him and decided to found
17 a company to try to provide solutions with newer,
18 innovative technology.

19 Q. Okay. And at that time did you already
20 know Mr. Carlson?

21 A. Yes.

22 Q. Did you guys kind of go into that
23 meeting together or with the idea that you guys
24 were going to pitch this together?

1 A. Not at first.

2 Q. Okay, all right. Do -- do you know what
3 year this meeting was with Mr. Creel?

4 A. It was either 2008 or 2009. I'm not a
5 hundred percent sure.

6 Q. All right. And how -- how long after
7 this meeting did you form what became Metrom Rail?

8 A. There were subsequent discussions, then
9 there were meetings where I included Mr. Carlson.
10 The formation of Metrom Rail came after in I
11 believe December of 2010.

12 Q. All right. Was Mr. Carlson an owner of
13 Metrom, or you don't know?

14 A. I have no idea.

15 Q. All right. And so what was the mission
16 or mission statement of -- of Metrom when you guys
17 first formed it?

18 A. It was to bring innovation to an
19 industry that didn't have it by providing safety
20 solutions with the latest technologies.

21 Q. And that industry being the railroad
22 industry?

23 A. That's correct.

24 Q. Okay. Was there a specific foc- -- was

1 there a specific focus on maintenance of way or MOW
2 systems?

3 A. There was after identifying from the
4 potential customer or the future customer that they
5 had issues with MOW veh- -- MOW vehicles colliding
6 with one another.

7 Q. And what is your understanding of what
8 MOW vehicles are as it relates to this technology?

9 A. I'm not sure I understand the question.
10 Could you repeat it?

11 Q. Just generally, what are maintenance of
12 way or MOW vehicles as they relate to the railroad
13 industry?

14 A. Sure. They're various forms and types
15 of maintenance equipment that fix the ballast and
16 the tracks, et cetera, of the -- of the territory
17 for freight railroads.

18 Q. And the problem that you understood from
19 Mr. Creel in your meetings with Canadian Railroad
20 was that there were accidents related to these MOW
21 vehicles, is that right?

22 A. Yes. Accidents and no technology
23 onboard the vehicles.

24 Q. And were the accidents that MOW vehicles

1 were hitting other MOW vehicles or hitting
2 something else, or what -- what were the problems?

3 A. I think both from what I -- from what I
4 understand.

5 Q. Okay. So they were hitting each other
6 and they were hitting what? Like the actual trains
7 themselves?

8 A. No, they -- they could derail like a
9 train and they could hit a piling or a bridge or
10 things of that nature.

11 Q. So it wasn't so much that the MOW
12 devices were hitting each other; they were hitting
13 obstructions or they were derailling? Is that what
14 you're saying?

15 A. No, I'm saying --

16 MR. SCHODDE: Objection to form.

17 BY THE WITNESS:

18 A. That's not what I'm saying. I said it
19 was both, but primarily the -- the accidents that
20 were occurring and our focus was MOW unit to MOW
21 unit.

22 BY MR. WISNIA:

23 Q. All right. So from Mr. Gunther's
24 deposition, I understand there was a separate

1 project -- which may or may not still exist, I
2 don't recall -- that had to do with improving like
3 pulse signals; in other words, improving
4 communication with -- I know I'm going to use the
5 wrong term here, but the gates that go down at --
6 at a railroad crossing.

7 Am I getting that right?

8 A. I'm not sure -- if you could phrase --
9 or if you could put that in a question form, I'd be
10 happy to answer it.

11 Q. Sure. What -- what I'm -- well, let me
12 ask you some terminology first.

13 What do you call the systems that drop
14 the gates in a railroad so that somebody doesn't
15 drive across the railroad when a train is coming?

16 A. The legacy equipment is called a GCP
17 system, grade crossing predictor system.

18 Q. Okay. And is there just -- are those
19 things just called generally signals or --

20 A. I don't -- I'm not sure I understand
21 that question to give you an answer.

22 Q. Okay. Besides the MOW project that
23 relates to what eventually became the AURA product,
24 was there a different project that you guys worked

1 on at Metrom Rail?

2 A. Yes.

3 Q. What was that?

4 A. That was the crossing warning
5 enhancement program. The acronym was CWE.

6 Q. And was that your first project for
7 Metrom Rail?

8 A. It was. It was slightly before the AURA
9 CAS project.

10 Q. And what was the -- what was the
11 technology as it related to the CWE?

12 A. It was a radio frequency technology that
13 could lower the gates in case the legacy system
14 failed.

15 Q. Is that a product that you guys still
16 support?

17 A. Not currently.

18 Q. All right. Besides the AURA product,
19 are there any other products that Metrom sells?

20 A. There are.

21 Q. Do they relate to AURA or do they relate
22 to something else?

23 A. They relate to something else.

24 Q. Okay. What are those products?

1 A. We have an Ice and Snow Breaker product
2 that we sell to freight railroads.

3 Q. Anything else?

4 A. Currently or --

5 Q. Let's start currently and then we can go
6 back.

7 A. No, those are the only two, MOW CAS and
8 Ice and Snow Breaker.

9 Q. The -- I'm sorry. Give me the -- did
10 you list three things?

11 A. No. The MOW CAS is one thing and the
12 Ice and Snow Breaker is the second.

13 Q. And in the past you had the CWE product,
14 right?

15 A. Correct.

16 Q. Anything else?

17 A. We had a product called the SenTrack
18 system.

19 Q. What was that?

20 A. That was remote electronics designed to
21 detect rail derailments or dragging equipment.

22 Q. What -- did you ever sell that product?

23 A. We sold proof of concept units but never
24 got into full production.

1 Q. And what is the timeframe that you were
2 involved with that product?

3 A. That product, somewhere in the timeframe
4 of 2012 to 2015.

5 Q. All right. Before your involvement with
6 Metrom Rail, had you any involvement related to
7 UWB?

8 A. No.

9 Q. By "UWB," I mean ultra-wideband.

10 A. No, I have not.

11 Q. All right. Were you involved in the
12 technical development of any of the technology
13 related to the AURA system or any sort of other
14 signalling program?

15 A. No, I was not involved in the technical
16 piece of it.

17 Q. How would you describe your role
18 generally in Metrom Rail?

19 A. I manage and direct the operations.

20 Q. And is it fair to say that Mr. Carlson,
21 Sr. and Mr. Gunther led the technical development
22 of the AURA system?

23 A. Yeah, I would -- that would be correct.

24 Q. And are you familiar with the two

1 patents that are at issue in this proceeding?

2 A. Yes.

3 Q. And those two gentlemen led the
4 technical development that led to those patents,
5 correct?

6 A. That's correct.

7 Q. When you first got involved in forming
8 Metrom Rail, what sort of analysis, if any, did you
9 do as to what other solutions were already out
10 there as it might relate to maintenance of way
11 safety?

12 A. The analysis was done by accumulating
13 information from prospective customers at the time,
14 Canadian National Railway and Canadian Pacific
15 Railway. We performed our analysis based on the
16 feedback given from them.

17 Q. Okay. When you say "we," who -- who is
18 that?

19 A. Myself, my co-founder, Rick Carlson,
20 Kurt Gunther, who happened to be the first employee
21 that we employed at Metrom Rail.

22 Q. And did you do that analysis? Did
23 Mr. Gunther do that analysis? Did Mr. Carlson do
24 that analysis? Did somebody else do the analysis?

1 A. It depends what type of analysis that
2 you're asking.

3 Q. I'm talking about -- fair enough. What
4 I mean is the technical analysis to figure out what
5 the technical solutions were.

6 A. That would be Rick Carlson and Kurt
7 Gunther.

8 Q. So your initial potential customer in
9 these businesses was Canadian National and then I
10 think you mentioned Canadian Pacific?

11 A. That's correct.

12 Q. Okay. Were they related entities?

13 A. No, they're not related entities.

14 Q. Okay. So how did you get the
15 introduction to Canadian Pacific?

16 A. From Canadian National Railway.

17 Q. And did you start working with Canadian
18 Pacific right away or only after some period of
19 time from working with Canadian National?

20 A. Only after a certain period of time of
21 working with Canadian National.

22 Q. So do you have a timeframe about when
23 you first started working with Canadian Pacific?

24 A. The discussions began I believe in 2013

1 or 2014.

2 Q. Okay. When did you first deliver not a
3 proof of concept but a commercial production of the
4 MOW safety system?

5 A. It was in 2012. I'm not sure of the
6 exact date.

7 Q. And is that the AURA system?

8 A. Yes.

9 Q. Do you know how the AURA system has
10 changed, if at all, since then to present from a
11 technical standpoint?

12 A. No, I do not.

13 Q. Do you know if it's changed?

14 A. I couldn't say for sure. We make
15 modifications on products, but I wouldn't know that
16 answer.

17 Q. Mr. Gunther talked about some
18 interactions with -- with Time Domain.

19 Are you familiar with that?

20 A. Yes, I am.

21 Q. Were you involved in that relationship
22 with Time Domain?

23 A. I was involved at the commercial level,
24 yes.



1 Q. Okay. And so what was your involvement?
2 Like negotiating commercial terms like pricing and
3 delivery dates and things of that nature?

4 A. That's correct.

5 Q. Okay. Were -- were you involved in the
6 technical spec'g of the product at all?

7 A. Not at all.

8 Q. Do you know -- do you know what I mean?
9 In other words, like, you know, figuring out
10 specifically how the product was going to be -- you
11 know, the capabilities and functionality of the
12 product?

13 A. I was not -- I was not involved in any
14 of the technical discussions.

15 Q. Okay. That would be Mr. Carlson or
16 Mr. Gunther?

17 A. Correct.

18 Q. Okay. Was it Mr. Carlson or was it only
19 Mr. Gunther?

20 A. No, it was both.

21 Q. Okay. I'm going to put into the chat
22 here what was previously marked as Exhibit 2008.
23 Tell me when you have that.

24 A. Okay.

1 Q. What is Exhibit 2008?

2 A. May I open it here first?

3 Q. Oh, sure, please.

4 A. Thank you.

5 (WHEREUPON, there was a short
6 interruption.)

7 BY THE WITNESS:

8 A. That's my declaration.

9 BY MR. WISNIA:

10 Q. Okay. And this is dated September 14,
11 2023, correct?

12 A. That's correct.

13 Q. All right. And this was true and
14 accurate when you signed it on that date?

15 A. Yes.

16 Q. Do you have any sort of changes or
17 revisions to this declaration?

18 A. Not at this time.

19 Q. All right. So take a look, if you
20 would, at Paragraph 11.

21 A. I have a hard copy. Is it okay if I
22 refer to that instead of --

23 Q. Yes, sir, that's fine.

24 A. Could you repeat that paragraph, please?



1 Q. 11, please.

2 A. Okay. I have it in front of me.

3 Q. All right. This reads, "Metrom was
4 founded in 2010 with the goal of developing
5 innovative products and solutions to advance safety
6 in the railroad industry," correct?

7 A. Correct.

8 Q. And the Metrom that you're talking
9 about in this paragraph and throughout your
10 declaration is Metrom Rail and not this Metrom
11 company that Mr. Carlson was involved in prior to
12 the formation of Metrom Rail, correct?

13 A. That is correct.

14 Q. All right. In Paragraph 12 you say,
15 "Since 2012, Metrom has made, offered for sale, and
16 sold a variety of products used to reduce
17 collisions between equipment operating on railroad
18 tracks, including products that assist the
19 collision avoidance between maintenance of way
20 (MOW) equipment," correct?

21 A. That's correct.

22 Q. So when you say that you sold a variety
23 of products used to reduce collisions between
24 equipment operating on railroad tracks, that's the

1 AURA system, correct?

2 A. Correct.

3 Q. And is it the CWE system or something
4 else?

5 A. CWE would be -- would be a system, yes.

6 Q. All right. Any other ones?

7 A. The SenTrack system.

8 Q. All right. Anything else?

9 A. Not that I can recall. We had other
10 products that we were in discussions but none that
11 we had prototyped and did proof of concepts on that
12 I can recall at this time.

13 Q. Okay. The -- the ice and snow breaker,
14 what is that product line called? Does it have a
15 name?

16 A. Ice and Snow Breaker.

17 Q. Fair enough. All right. In Paragraph
18 13 you say, "I have over twelve years of experience
19 in the sales and marketing of Metrom's railroad
20 collision avoidance products," correct?

21 A. That's correct.

22 Q. How many different customers do you
23 think you've called on, order of magnitude, with
24 respect to the AURA products?

1 A. I would probably say between 10 and 15.

2 Q. And how many have you gotten an order
3 from?

4 A. Actually, I'd like to amend that last
5 answer, if I could. I would say it's probably
6 between 15 to 20.

7 Q. All right. And of those 15 to 20, how
8 many have you received an order from?

9 A. Approximately 10.

10 Q. Okay. And so of the 15 to 20 that
11 you've called on, what -- can we categorize them?
12 I know some them may be contractors, some of them
13 may be railways. Maybe there's something else. I
14 don't know. Can you -- can you categorize them for
15 me?

16 A. Sure. The Class 1 freight railroads
17 would be one categorization, rail contractors who
18 work with freight railroads would be the second,
19 and then transit agencies further on down the line.

20 Q. Okay. So just as a matter of
21 nomenclature that I'm not all that familiar with,
22 obviously, for example, you know, in New York you
23 have subways and then you also have let's say
24 commuter trains that go out to Long Island and then

1 you also have trains that -- I think like the Acela
2 or something that Amtrak runs from New York to
3 Washington and then you have trains that run
4 from -- passenger trains that run from like
5 New York to Florida.

6 Are those all within transit industries
7 or is that something else?

8 A. Yes, all transit.

9 Q. Okay. So transit -- I just want to make
10 sure when we talk about "transit," we're talking
11 about subways and we're talking about other
12 passenger trains.

13 A. Understood.

14 Q. All right. Of the customers that you've
15 had that actually made orders, have they been in
16 each of these categories that you've given me?

17 A. They have.

18 Q. All right. Do you currently have
19 customers that are in the rail contractor industry?

20 A. Yes, we do.

21 Q. All right. Who are they?

22 A. The one we do most business with is a
23 company called Loram, L-o-r-a-m, and I'd have to
24 get you a list of the others. There are others.

1 Q. Okay. What about transit?

2 A. Not currently.

3 Q. And what about -- well, you say "not
4 currently."

5 Who in the past have you had as a
6 customer in transit?

7 A. How do you define a customer?

8 Q. Well, I mean, how -- how would you
9 define it? Let's try -- I'm not trying to be a
10 trick question here.

11 A. Sure. Well, I'll tell you who has paid
12 for our services in the past.

13 Q. Yeah, fair enough.

14 A. Is that fair? The MBTA in Boston and
15 the MTA in New York City Transit.

16 Q. Okay.

17 A. And we've bid on various other projects
18 but not had other customers in other transit
19 agencies.

20 Q. All right. And then -- you've bid on
21 other projects.

22 In other words, you've pitched other
23 work but you haven't gotten paid for it? Is that
24 what that means?

1 A. That's correct.

2 Q. All right. And the MBTA, was that a
3 proof of concept or something?

4 A. Yes, it was a proof of concept.

5 Q. All right. And what year is that we're
6 talking about?

7 A. I don't recall the exact year. It was
8 approximately 2017 or 2018.

9 Q. Okay. And the one with New York is the
10 one that's the subject of the -- the lawsuit,
11 right?

12 A. That's correct.

13 Q. In the MBTA work, did you partner with
14 anybody?

15 A. Yes, we did.

16 Q. Who did you partner with?

17 A. We partnered with Parsons Corporation.

18 Q. Anyone else?

19 A. No.

20 Q. Okay. And in the New York project, did
21 you partner with anybody else?

22 A. We did. We partnered with Hitachi.

23 Q. Okay. Have you submitted -- well,
24 anybody else? Did you partner with anybody else in

1 New York?

2 A. There may have been another contractor
3 in our proposal, but I'm not -- I can't recall the
4 name of the company.

5 Q. All right. And have you partnered with
6 other companies in other pitches to other transit
7 agencies?

8 A. We have been in a teaming agreement with
9 Hitachi for other programs outside the MTA.

10 Q. Anybody else?

11 A. That's it.

12 Q. Did you partner with Thales at one
13 point?

14 A. We did not partner with Thales. We did
15 a proof of concept with Thales based on the mandate
16 from the MTA and New York City Transit. I guess
17 you could -- maybe you could consider that a
18 partnering. It was a collaborative effort.

19 Q. All right. Any other such collaborative
20 efforts with other companies?

21 A. Not that I'm aware of.

22 Q. All right. So when you go to pitch for
23 transit, is that typically a multi-bid arrangement?

24 A. Meaning the customer requires bids from

1 multiple suppliers?

2 Q. That is what I mean.

3 A. Yes, that's typical.

4 Q. Okay. And so in those arrangements, is
5 there some sort of requirements document or
6 specification that's provided by the transit agency
7 as to what they want you to bid on?

8 A. Yes.

9 Q. What -- what do you call that?

10 A. RFP, request for proposal.

11 Q. And -- and in the RFP, does the transit
12 agency list out the features that they think are
13 important for them?

14 A. I would say yes.

15 Q. And then I assume that there are some
16 things that are left open; in other words, you
17 know, you as the bidder have to fill in the gaps as
18 to what features and things you're going to provide
19 in the system.

20 Is that fair?

21 A. That's fair.

22 Q. Okay. Are you aware of any of these
23 transit RFPs requiring the use of UWB?

24 A. I'm aware of the ones that we were

1 involved in, engaged in. Those are the only ones
2 that I'm aware of.

3 Q. Okay. So which -- which of the ones
4 that you were involved with required the use of UWB
5 as opposed to you just filling in the gaps and
6 saying, "We're going to provide UWB"?

7 A. I believe the pilot that we had a joint
8 pitch with with Hitachi required UWB.

9 Q. That's the New York one you're talking
10 about?

11 A. New York City Transit, correct.

12 Q. Okay. Any other ones?

13 A. Not that I'm aware of.

14 Q. Do you believe Metrom Rail to be the
15 first company to use UWB in the railroad industry?

16 A. I do. That's my belief.

17 Q. Before you guys implementing UWB, were
18 you aware that other people had written about and
19 discussed using UWB in the railroad industry?

20 A. No, I'm not aware of that.

21 Q. Are you aware now that Time Domain, your
22 supplier, had patents related to using UWB in the
23 railroad industry prior to the formation of
24 Metrom Rail?

1 A. I don't know the timing of that. I'm
2 not -- I'm not aware of the detail.

3 Q. Okay. But are you aware that Time
4 Domain had patents relating to using UWB in
5 railroad -- railroad?

6 A. No, I was not aware of that. I was
7 aware of their patents, but not necessarily
8 specific to the railroad.

9 Q. Okay. Do you know the names of any of
10 the folks that you dealt with at Time Domain?

11 A. I do. Primarily I -- I had discussions
12 and then meetings with Rachel Reinhardt, who was
13 the CEO. It was customary for us to have meetings.

14 Q. Okay. Anyone else?

15 A. A gentleman named Tony, and I can't
16 remember his last name. I believe it was their
17 CFO. I had meetings with him and Rachel Reinhardt.

18 Q. Do you know who William or Bill Grisham
19 is?

20 A. I do not.

21 Q. How about Mark Roberts?

22 A. No.

23 Q. All right. So in Paragraph 14 of your
24 declaration, you write, "As a result of this, I am

1 familiar with the railroad industry and
2 specifically the evolution of collision avoidance
3 in the railroad industry."

4 Do you see that?

5 A. I see it.

6 Q. Okay. Can you tell me about the
7 evolution of collision avoidance in the railroad
8 industry?

9 A. No, I can't.

10 Q. Okay. What did you mean by that you
11 were familiar with it, then?

12 A. I was familiar with the dealings that I
13 had with the customers that told me they either had
14 products that they tried and didn't work or that
15 they didn't have any technology at all for
16 collision avoidance. That's where my knowledge
17 base comes from.

18 Q. Understood. And that's the folks from
19 Canadian National?

20 A. And other Class 1 freight railroads, as
21 well.

22 Q. Okay. So Canadian Pacific?

23 A. And others.

24 Q. Who else?



1 A. CSX, Union Pacific, BNSF, Norfolk
2 Southern.

3 Q. All right. Any other ones?

4 A. No, that would be it.

5 Q. While you were speaking, the -- the
6 video clipped a little bit. I just want to make
7 sure the reporter got down everything that you
8 said.

9 MR. WISNIA: Did you hear everything?

10 BY MR. WISNIA:

11 Q. All right. What systems did they tell
12 you -- your customers tell you that they had tried
13 related to collision avoidance that did not work?

14 A. I don't -- I don't recall specific
15 customer -- or suppliers' product names, if you
16 will, but I do recall that they had suggested that
17 they hadn't found anything that had an approach
18 like our approach and they were either using manual
19 regulation procedures or not adopting any
20 technology whatsoever.

21 Q. Okay. I understand you can't remember
22 or you don't know if they even told you specific
23 suppliers, but do you have an understanding of what
24 sort of technical approach that these other

1 companies had tried?

2 A. There was a company called Harsco and
3 Protran. I believe Harsco purchased Protran. I
4 believe Protran had a radio frequency narrow band
5 type of technology in their product -- I don't
6 recall the name of it -- that they were trying to
7 utilize for collision avoidance, and we were told
8 by freight railroads who had tried their products
9 that it wasn't -- it wasn't successful.

10 Q. Can you just spell the -- the name of
11 the first company you mentioned?

12 A. Harsco, H-a-r-s-c-o.

13 Q. All right. And do you recall who
14 told -- who told you about that?

15 A. The vice president of engineering from
16 Canadian National Railway.

17 Q. Is that this Mr. Creel we mentioned
18 earlier?

19 A. No. That would have been a gentleman
20 named David Ferryman.

21 Q. So in Paragraph 15 you write, "Early in
22 our history, we recognized that existing solutions
23 for avoiding collisions between railroad vehicles
24 were either unreliable, extraordinarily expensive,

1 or both. We set out to develop and deploy better
2 solutions, but quickly found the railroad industry
3 resists innovation, technical risk, and change."

4 Do you see that?

5 A. I do.

6 Q. All right. So the first part of that
7 sentence talks about existing solutions for
8 avoiding collisions, and the ones that you were
9 avail- -- you were familiar with were, I guess from
10 what you're telling me, either not having any
11 solution, having some sort of like work rules, or
12 three, this -- this Harsco technology, is that
13 right?

14 A. That's correct.

15 Q. Any other ones?

16 A. Not that I can recall the names of at
17 this point.

18 Q. Okay. Even if it wasn't the name, just
19 the different approach? Are you familiar with the
20 different approach?

21 A. No, I'm not familiar with the different
22 approach.

23 Q. Okay. And the work rules, that's
24 just -- my understanding from Mr. Gunther is the

1 work rules are when you are in a maintenance mode,
2 you can go this fast, and when you're in a travel
3 mode, you can go some other speed, is that right?

4 A. Yeah. Federal -- federal regulations,
5 yes.

6 Q. Okay. So basically just speed limits?

7 A. Speed limits, eyeballs and judgment.

8 Q. Okay, all right. So some were
9 unreliable from Paragraph 15, which I assume would
10 be -- I mean, for example, not having any rule I
11 would assume would be an unreliable one, and kind
12 of these rules that we talked about, maybe they're
13 not reliable ones.

14 Is that fair?

15 A. That's fair.

16 Q. And then this Harsco one that you're
17 talking about, is that -- was that unreliable? Was
18 it something else?

19 A. From our understanding from the
20 customer, it was unreliable and extremely
21 expensive.

22 Q. All right, okay, all right. You say
23 that you found the railroad industry resists
24 innovation, technical risk and change.

1 Do you see that?

2 A. I do.

3 Q. All right. So, you know, prior to
4 forming your own companies, it sounds like you had
5 a decade or so in sales, is that right?

6 A. That's about -- that's about right, yes.

7 Q. Okay. And what you're telling me is you
8 approached about 15 to 20 customers and you sold to
9 about 10 of them, is that right?

10 A. About right.

11 Q. Okay. So that's like a 50 to 70%
12 success rate, is that right?

13 A. Well, it depends how you define
14 "success." Some customers bought more than others.
15 Some didn't.

16 Q. Sure, fair enough, but, I mean, you sold
17 to about 50 to 70% of the people that you
18 prospected?

19 A. We sold something to 50 to 70% of the
20 people we prospected.

21 Q. Okay. As far as the success rate, how
22 does that compare to most sales?

23 A. I'm not sure I understand that question.

24 Q. Sure. I would imagine in your ten years

1 of -- of working in sales, if you had a 50 to 70%
2 success rate cold-calling customers and getting
3 something sold, that would be pretty good?

4 MR. SCHODDE: Objection, foundation, form.

5 BY THE WITNESS:

6 A. The markets weren't comparable. I
7 called on far more customers in different market
8 spaces than I did in the rail space. This is --
9 this is a space where you didn't call on as many
10 customers.

11 BY MR. WISNIA:

12 Q. Sure.

13 A. They were targeted.

14 Q. Fair enough, but do you find that 50 to
15 70% success rate to be low, average, high?

16 MR. SCHODDE: Objection, form and foundation.

17 BY THE WITNESS:

18 A. The amount of sales -- the substantive
19 sales or product launches that we launched, I would
20 say that the percentage of customers is low based
21 on the customers that buy reoccurring equipment
22 from us.

23 BY MR. WISNIA:

24 Q. Okay. So of the ten or so that bought

1 something from you, how many became recurrent
2 customers?

3 A. Probably four or five.

4 Q. Okay. And how many do you currently
5 have that are recurrent customers?

6 A. About the same.

7 Q. All right. So, you know, give me to the
8 extent you can your entire basis for suggesting
9 that the railroad industry resists innovation,
10 technical risk and change.

11 A. Sure. As an example, there's seven
12 Class 1 freight railroads. We had meetings,
13 discussions and presentations with all of them.
14 Only two of the seven did a full production launch
15 and outfitted their MOW assets with our equipment,
16 and buying reoccurring equipment from us in the
17 same -- same vein, only two.

18 Q. And the other five did nothing or they
19 bought from somebody else?

20 A. That I don't know.

21 Q. Okay. Anything else?

22 A. We had some of those same customers that
23 tried our equipment, did some testing but didn't
24 end up outfitting their assets with our equipment.

1 Q. All right. Anything else?

2 A. No.

3 Q. All right. We've been going for about
4 an hour. Should we take a short break?

5 A. Sure, that would be great.

6 MR. WISNIA: Off the record.

7 THE VIDEOGRAPHER: We are now off the record.
8 The time is 11:05 a.m.

9 (WHEREUPON, the deposition was
10 recessed from 11:05 to 11:16 a.m.)

11 THE VIDEOGRAPHER: We are back on the record.
12 The time is 11:16 a.m.

13 BY MR. WISNIA:

14 Q. Sir, you understand you're still under
15 oath?

16 A. Yes.

17 Q. All right. Did you speak with anybody
18 during the break?

19 A. I did not.

20 Q. All right. Of the ten orders that
21 you've received or ten -- let me strike that. You
22 received orders from ten customers, about, in
23 total.

24 How many of those were proof of concept



1 orders?

2 A. Several for sure. I don't know the
3 exact number.

4 Q. Okay, all right. So let's take a look
5 at Paragraph 16, please, of your -- of your
6 declaration.

7 A. Okay.

8 Q. You say, "Equipment supplied to the
9 railroad industry has been dominated by large
10 multi-national corporations like Siemens and
11 Thales, the Petitioners in these proceedings. They
12 have dominated the market for decades, but none of
13 these corporations had developed an acceptable
14 solution for collision avoidance between MOW
15 vehicles, while their solutions for passenger and
16 freight rail applications continue to rely on
17 technology and operating principles that date back
18 decades."

19 Do you see that?

20 A. Yes.

21 Q. All right. So how would you
22 characterize like the approach of these dominant
23 large multinational corporations?

24 A. Can you be more specific with that



1 question? Approach to whom?

2 Q. Well, the technical approach. Like in
3 other words, what -- how was their -- what I'm
4 trying to understand is what was their approach,
5 what was your approach and what was the difference
6 between the approaches.

7 A. Okay. My understanding of their
8 approach, their CBTC systems, that they utilize
9 technology that is decades old and our approach
10 utilizes off-the-shelf later or latest technologies
11 that's different than the -- than the technology
12 approach that those legacy companies use.

13 Q. All right. So let's focus in for a
14 moment on -- on Metrom Rail's approach.

15 So one aspect you said was they used
16 newer technology, right?

17 A. Correct.

18 Q. And off-the-shelf technology, so off --
19 by "off the shelf," you mean the technology you got
20 from Time Domain -- Time Domain?

21 A. Amongst others.

22 Q. So what other off-the-shelf technology
23 besides what you got from Time Domain are you
24 referring to?

1 A. Well, this is not my expertise, but GPS,
2 some other circuit board circuitry, some -- some of
3 the other technologies involved in -- in the CAS
4 product that we're speaking of today are -- are
5 off-the-shelf products that we purchase and then
6 integrate or package in our own engineering
7 department.

8 Q. Okay. And the technology and operating
9 principles of these preexisting large multinational
10 corporations that you refer to, what were they
11 doing?

12 A. I would defer to our engineers to answer
13 that question. I know they have CBTC equip- --
14 equipment and I know that the customers that have
15 purchased their equipment have given feedback that
16 that technology is decades old.

17 Q. Okay. What is CBTC?

18 A. Communication-based train control.

19 Q. All right. And what does that term mean
20 in the railroad industry?

21 A. It means train control for commuter or
22 passenger trains. It's similar to positive train
23 control but not on the freight market space side.

24 Q. And so by "train control," is that the

1 idea that you have something akin to like an air
2 traffic controller who's keeping track of the
3 various trains and the spacing from -- between each
4 other?

5 MR. SCHODDE: Objection, foundation.

6 BY THE WITNESS:

7 A. Yeah, I don't know. I wouldn't know how
8 to answer that question.

9 BY MR. WISNIA:

10 Q. Well, can you expand on what you mean by
11 "CBTC"? If you had to explain to somebody what
12 CBTC is aside from what the words mean, what --
13 what the letters stands for, what --

14 A. Right. I have a very high-level
15 understanding. Like again, I -- my -- my role is
16 not to be the engineer or engineering department in
17 our company.

18 So it's communication-based train
19 control which provides technologies that gives data
20 and potentially stops or propels, propulses a train
21 when an operator cannot.

22 Q. All right. And you used the term
23 "positive train control" before.

24 What's that?

1 A. Positive train control is a similar but
2 different technology that is utilized for freight
3 railroads and heavy rail, and it's mandated by the
4 federal government.

5 Q. Okay. And do you provide -- Metrom Rail
6 provide CBTC solutions or positive train control
7 solutions?

8 A. We believe we incorporate in our
9 technology approach functions that do both.

10 Q. Okay. And that's the AURA system is it
11 that you're referring to?

12 A. Yeah, it's the AURA, or we -- we have
13 another acronym we use called PTCS-2, positive
14 train control system second version.

15 Q. Okay. So if we take a look at Paragraph
16 18 -- it's a long paragraph, I'm not going to read
17 all of it out loud, but feel free to review it
18 yourself -- you write, "Under my direction, the
19 team at Metrom worked on the development of
20 complete train control systems, culminating in what
21 we called PTCS-2, a primary train safety system
22 which was demonstrated for the New York City
23 Transit/Metropolitan Transit Authority (MTA) on the
24 Culver Test Track in September and October of

1 2018."

2 Do you see that?

3 A. I do.

4 Q. What are the various components of the
5 PT- -- of your PTCS-2 system?

6 A. Sure. Collision avoidance being a
7 primary one, speed enforcement, signal enforcement.
8 Those would be the three key areas for safety
9 mandates in a train control system.

10 Q. Okay. So you've got collision
11 avoidance, speed enforcement, and I apologize, what
12 was the third one?

13 A. Speed enforcement and signal -- signal
14 compliance.

15 Q. Signal compliance. Okay.

16 Does the AURA system relate to speed
17 enforcement or signal compliance?

18 A. It does all three.

19 Q. It does all three. Okay.

20 What -- what does "speed enforcement"
21 mean?

22 A. It means if an operator has a rule for a
23 specific territory on a track that requires a
24 certain speed and that operator doesn't adhere to

1 that requirement, the technology has the ability to
2 brake or propel the train to that speed
3 requirement.

4 Q. Okay. What about "signal compliance"?

5 A. Signal compliance, a similar fashion,
6 some of these systems have like streetcar signal
7 systems where a train operator has a yellow, a
8 green or a red light, and if they don't adhere to
9 the signal aspect, our technology has the ability
10 to override and bring the train back into
11 compliance.

12 Q. So if the operator isn't going to stop
13 at the red light, your system can make the train
14 stop at the red light?

15 A. That's correct.

16 Q. Okay. Does that relate at all to the
17 CWE technology you were talking about earlier?

18 A. No, it does not.

19 Q. Okay. So is speed enforcement a feature
20 that your customers care about?

21 A. Absolutely.

22 Q. Okay. So when you go to sell the AURA
23 system, I mean, that's -- that's something that
24 drives the sales? It's not like just a nice

1 feature like a cupholder in your car or something?

2 MR. SCHODDE: Objection to form and
3 foundation.

4 BY THE WITNESS:

5 A. Collision avoidance, speed compliance
6 and signal compliance are all interrelated --
7 interrelated and they're all very important to all
8 of our customers.

9 BY MR. WISNIA:

10 Q. Okay. And so if you tried to sell a
11 collision avoidance system that was UWB based that
12 didn't have speed enforcement or signal compliance,
13 would your customers buy it?

14 MR. SCHODDE: Objection to form and
15 foundation.

16 BY THE WITNESS:

17 A. Signal compliance may not be relevant
18 for an MOW application, but collision avoidance and
19 speed have to go hand in hand because operating
20 rules require pieces of equipment to move at
21 speeds.

22 BY MR. WISNIA:

23 Q. Okay. You had -- without getting too
24 much into the weeds of the technology, how do you

1 do the speed enforcement?

2 A. I'm not the -- I'm not the right person
3 to answer that question. It's utilizing our -- our
4 proprietary technologies, but I couldn't give you
5 an -- an explanation -- an intelligent explanation
6 as to exactly how that works.

7 Q. Okay. But -- fair enough, but let me --
8 let me ask you this: Is it that you actually take
9 control of the train or are you just kind of
10 providing a signal to the operator, and so what I
11 mean by that is -- you know, sometimes you use the
12 GPS on your phone while you're driving and the
13 speed flashes if you go faster than you're supposed
14 to be going and then there would be an idea I guess
15 of some sort of -- but your phone's not taking over
16 control of the car or pressing on the brake or
17 stepping on the gas.

18 What does your system do?

19 A. It can do both. It --

20 MR. SCHODDE: Objection, foundation and form.

21 BY MR. WISNIA:

22 Q. You may answer.

23 A. Yeah, our -- our system can give a
24 warning or it can -- it can be fully integrated and



1 engaged with the vehicle, and then being -- being
2 engaged means being engaged with propulsion or
3 braking relays.

4 Q. Okay. Who was present at this Culver
5 Test Track demonstration you referred to?

6 A. There were lots of different people from
7 different organizations that were attending it.

8 Q. Okay. What organ- -- what organizations
9 attended?

10 A. Well, obviously the New York City
11 Transit, the MTA from New York, Parsons
12 Corporation, Hitachi, Metrom Rail. There were
13 allowances for some of the other corporations like
14 Siemens and Thales and Piper and Humatics to be
15 able to witness some of the demonstrations. There
16 were also third-party consultants that I can't
17 recall the names of that were also there to witness
18 demonstrations.

19 Q. Were -- were these representatives
20 allowed to like take your UWB component apart and
21 look at it?

22 A. Not that I'm aware of, but I don't know
23 that answer for sure.

24 Q. Okay. What about like the user

1 equipment like the -- the display? Were they
2 allowed to like take it apart and look at it and
3 look at the software?

4 A. I don't know that answer.

5 Q. Were you present at these
6 demonstrations?

7 A. I was present during the demonstrations
8 but not necessarily the setup and some of the --
9 the testing prior to the executive demonstrations.
10 I was available and present for all of the
11 executive demonstrations.

12 Q. And how many -- how many took place,
13 about?

14 A. About three.

15 Q. And was it -- over what timeframe? I
16 know you're saying September to October, but was it
17 like a week, was it a few weeks?

18 A. I would say it was within a couple-month
19 timeframe. We had to redo one executive test
20 because one of the executives from New York City
21 Transit wasn't available to -- to attend the first
22 one that we did. I believe that span was
23 approximately four to six weeks apart.

24 Q. Okay. And what functionalities or

1 features or capabilities did you demonstrate at the
2 Culver City Test Track [sic]?

3 A. I'm not sure I'm capable of giving you
4 all of them, but I know speed compliance, speed
5 determination, train determination, collision
6 avoidance, precision berthing, which is like signal
7 compliance. Those were -- platform intrusion to
8 see if there was anything on the platform and we
9 could detect it.

10 Those were -- those were -- those
11 were the criteria that I was aware of in our
12 demonstrations.

13 Q. Okay. And in the RFP for the -- for the
14 New York Transit MTA proposal, was pier-to-pier
15 collision avoidance required?

16 A. I don't have that specification in front
17 of me. I -- I couldn't answer that question.

18 Q. Okay. Do you know what I mean by that,
19 though?

20 A. You mean -- you're talking about pier --
21 train-to-train collision avoidance?

22 Q. Yeah, that's what I mean.

23 A. It's my belief that collision avoidance
24 was a dem- -- was -- our collision avoidance

1 technology was demonstrated, if that's the question
2 you're asking.

3 Q. Okay. Who is Robert James?

4 A. I believe Robert James is an academic
5 that did some research on UWB and made a
6 presentation on an approach for the Genius
7 Challenge, but I -- I don't know much else about
8 him.

9 Q. Okay. And from that answer I assume
10 that the answer to the following question is you
11 guys didn't work together; in other words,
12 Metrom Rail did not work with -- with Robert James
13 in the development of any sort of technology, is
14 that right?

15 A. That's -- that's correct.

16 Q. And so is it your belief that Robert
17 James stole the idea of using UWB in the railroad
18 industry from you guys?

19 A. I have no idea what Robert James did
20 with UWB, to be honest. I -- I don't know what he
21 did. I just know he made some presentation to the
22 MTA, and I was told he was an academic but wasn't
23 even necessarily involved with a corporation that
24 was giving a -- a pitch or a presentation.

1 Q. Okay. Have you ever met Mr. James?

2 A. I believe briefly at the Genius
3 Challenge award ceremony.

4 Q. All right. Is it your understanding
5 that he proposed to MTA, New York Transit, that
6 they use a UWB collision avoidance system?

7 A. I'm not aware of what he proposed. I --
8 I'm not privy to it.

9 Q. Okay. Well, you're aware that he got a
10 Genius Award, right?

11 A. Yes, I am.

12 Q. And you all got a Genius Award, as well,
13 right?

14 A. Correct.

15 Q. And you got it for the same thing,
16 right?

17 MR. SCHODDE: Objection, foundation.

18 BY THE WITNESS:

19 A. We all -- we weren't privy to anyone
20 else's presentation or proposal. We only know what
21 our proposal was and that we were awarded based on
22 our proposal. So I'm not sure what Robert James
23 proposed.

24 BY MR. WISNIA:



1 Q. Okay. So you say, "That system --" I'm
2 going back to your Paragraph 18. You say, "That
3 system included AURA CAS, described below, and our
4 prior demonstration of the capabilities of that
5 system was a major factor in our subsequent success
6 with the MTA."

7 Do you see that?

8 A. I do.

9 Q. What do you mean by your subsequent
10 success?

11 A. Well, I'll go back a sentence and tie
12 that to the prior demonstrations.

13 We were the only company that had prior
14 UWB equipment installed in the rail space, to our
15 knowledge, and had a track record of success with
16 collision avoidance using a UWB technology
17 approach. We believe that was subsequent to our
18 successes in a POC to the MTA.

19 Q. Okay. So the success you're talking
20 about is -- is the POC? Is that what you're
21 saying?

22 A. Can you rephrase the question? I'm not
23 sure I understand.

24 Q. I apologize. I didn't quite understand

1 your answer.

2 So -- so in this paragraph you're saying
3 you gave this demon- -- demonstration on the Culver
4 Test Track in September and October of 2018 and you
5 say, "That system included AURA CAS, described
6 below, and our prior demonstration of the
7 capabilities of that system was a major factor in
8 our subsequent success with the MTA."

9 So my question is: What do you mean by
10 your prior demonstration of the capabilities of
11 that system?

12 A. Well, our prior demonstrations -- what I
13 mean by that is the prior demonstrations in the --
14 in the rail space where we've actually demonstrated
15 collision avoidance utilizing UWB, and we weren't
16 aware of anyone else who was, so we had an install
17 base and we had successes based on the feedback we
18 got from our customers.

19 Q. All right. So when you say "prior
20 demonstrations," you don't mean a demo; you mean
21 like the fact that you actually delivered product
22 to other customers?

23 A. No, I mean both. We -- we did
24 demonstrations also for the MBTA and the MTA.

1 Q. All right. So in this sentence, what
2 are you referring to specifically?

3 A. Well, I just think in general I'm
4 suggesting that we had prior demonstrations of our
5 capabilities utilizing that product. It could have
6 come from a number of different demonstrations and
7 installs that we've done with collision avoidance
8 product.

9 Q. Okay. And the subsequent success that
10 you're referring to with MTA is what?

11 A. Is the results of the POCs.

12 Q. The results of the POCs.

13 Is the Culver Test Track a POC or
14 something else?

15 A. That was -- that was a proof of concept.

16 Q. Okay. So you had success with the
17 Culver City proof of concept -- I'm sorry, not
18 Culver City -- Culver Test Track proof of concept.

19 Was there a different proof of concept,
20 as well?

21 A. Well, as I'd mentioned earlier, we
22 did -- I believe we did three proof of concepts.
23 We did -- we did two on the Culver Test Track.

24 Q. Okay.

1 A. We demon- -- we demonstrated different
2 things during different POCs, collision avoidance,
3 signal compliance, speed determination and speed
4 compliance. We also did a collaborative POC
5 separate from those two with the Thales
6 Corporation.

7 Q. Okay. And so when you're talking about
8 the subsequent success, are you talking about POCs
9 that took place outside of the September to October
10 2018 timeframe or are you talking about those ones?

11 A. I'm talking about these.

12 Q. Okay, all right. You say, "The MTA
13 awarded Metrom a 'genius' prize for our approach to
14 solving the MTA's problems with high cost,
15 unreliable, conventional signalling." Let me
16 put -- I'm going to put Exhibit 2015 into the chat,
17 if it will let me.

18 Please tell me when you have Exhibit
19 2015 open.

20 A. All right.

21 (WHEREUPON, there was a short
22 interruption.)

23 BY THE WITNESS:

24 A. I don't know why it won't open here for



1 me. I'll just dump it in my folders here. I don't
2 know why -- one second.

3 (WHEREUPON, there was a short
4 interruption.)

5 BY THE WITNESS:

6 A. I have to go in my folders to get it.

7 BY MR. WISNIA:

8 Q. Okay. Tell me when you have it.

9 A. All right.

10 (WHEREUPON, there was a short
11 interruption.)

12 BY THE WITNESS:

13 A. Okay. I have it open.

14 BY MR. WISNIA:

15 Q. Okay. So this is a press release
16 related to the Genius Award you're referring to in
17 your declaration, right?

18 A. Yes.

19 Q. And, first of all, my understanding is
20 that the Genius Challenge selected eight different
21 winners.

22 Is that your understanding?

23 A. I'll have to take your word for that.

24 I -- I'm not sure off the top of my head or I -- I



1 don't remember how many it was, but...

2 Q. Okay. And that four of these winners
3 were selected for their submission of ideas for
4 modernizing the MTA signalling technology, is that
5 right?

6 A. That's right.

7 Q. And that those included your submission
8 from Metrom Rail, Robert James's submission and a
9 submission from Thales, as well, right?

10 A. Yes.

11 Q. How did your solution differ, if at all,
12 from Robert James's solution?

13 A. Again, I don't know what his solution
14 was. I can read the paragraph just like you can
15 here, but I -- I'm not privy. I've not seen his --
16 his presentation or his proposal, so I don't know
17 what his proposed solution was.

18 Q. Okay. Was your submission -- the AURA
19 system, is that what you submitted, or was it
20 something else?

21 A. We use "AURA" as a way to describe
22 several of our products. So, yes -- the answer is
23 yes, it was the AURA system, but it was the AURA
24 PTCS system.

1 Q. How does the AURA PTCS system differ
2 from the AURA system in general?

3 A. Well, it -- it includes different
4 modules. So, for instance, it includes the
5 collision avoidance system.

6 So we use that moniker "AURA" as our --
7 as our genesis of our technology, but we had
8 different products or different modules, and in the
9 PTCS, we had those modules integrated or linked
10 together to create a positive train control system.

11 Q. Okay. And those mod- -- what would
12 those modules be?

13 A. Collision avoidance, speed compliance,
14 signal compliance, speed determination.

15 Q. Okay.

16 A. Can I close this exhibit out?

17 Q. I'm going to ask you a couple other
18 questions. Is it taking up space on your screen or
19 something?

20 A. Yeah, it's okay. I -- I just -- I have
21 it all -- it -- it's encompassing my whole screen,
22 so just tell me when you're done, and I'll close it
23 out.

24 Q. We'll -- we'll be done with it soon

1 enough.

2 A. Sure.

3 Q. So -- so if I look at the discussion
4 specifically of Metrom Rail in this Exhibit 2015,
5 it says, "Metrom Rail and transportation engineer
6 Robert James separately submitted proposals using
7 ultra-wideband wireless technology, a
8 next-generation technology that eliminates
9 expensive, cumbersome equipment for signalling
10 systems and provides accuracy for subway car
11 locations down to centimeters."

12 Do you see that?

13 A. I do.

14 Q. All right. So signalling is different
15 from collision avoidance, is it not?

16 A. "Signalling" is a broad term.
17 "Signalling system" or "signalling department"
18 encompasses collision avoidance, speed compliance,
19 lots of difference things.

20 Q. Okay. But the submission that you made
21 was specific for collision avoidance, is that
22 right?

23 A. It was a train control system proposal
24 which included as one of the features that's --

1 collision avoidance.

2 Q. Understood. Okay. Let's -- we can put
3 2015 away for now.

4 A. All right.

5 Q. Let's come back to Paragraph 18 of your
6 declaration.

7 A. I'm trying to find where you guys are
8 here. I don't -- I've got some weird screen up
9 here. Hold on. Bear with me.

10 (WHEREUPON, there was a short
11 interruption.)

12 BY THE WITNESS:

13 A. Okay. I'm back.

14 BY MR. WISNIA:

15 Q. Okay. So we're in Paragraph 18 of your
16 declaration, Exhibit 2008.

17 A. Okay.

18 Q. All right. And you say towards the end
19 of that paragraph, "Much of this work was directly
20 observed by representatives from Petitioners Thales
21 Ground -- Ground Transportation and Siemens, who
22 were seeking to retain the largest single customer
23 for transit rail safety equipment in the United
24 States using their legacy systems."



1 Do you see that?

2 A. I do.

3 Q. And who specifically are you referring
4 to there?

5 A. Are you looking for individual names?

6 Q. Yes.

7 A. I can't give you who -- I can give you
8 one. I know for sure there was a gentleman named
9 Bill Conis from Siemens who attended and witnessed
10 one of our POC demonstrations. I believe there was
11 a gentleman named Walter Kinio from Thales who was
12 afforded the same opportunity and was also a
13 gentleman that we collaborated with when we did a
14 separate POC in corroboration or collaboration
15 with -- with the Thales Corporation.

16 Other than that, I -- there could be
17 more, but I don't recall what -- who they might be,
18 what their names are.

19 Q. Okay. Can you spell Bill's last name?

20 A. Conis? I believe it's C-o-n-i-s.

21 Q. And what about Walter's last name?

22 A. I -- I couldn't.

23 Q. Take your best guess.

24 A. Kinio. I have to spell it phonetically.



1 I believe it's K-i-n-e-a-u maybe. I'm sure I'm not
2 getting it right, but Kinio I believe is his name.

3 Q. Okay, all right. And what -- while you
4 were there, what sort of access, if any, was Bill
5 or Walter provided with to your technology?

6 A. They certainly were afforded the
7 ability to ride on the trains when we did our
8 demonstrations. They were able to walk on the
9 trains pre and post to see our displays or see our
10 equipment.

11 Other than that, I'm not sure what they
12 were privy to.

13 Q. Okay, all right. Let's take a look at
14 Paragraph 20 of your declaration.

15 A. Okay.

16 Q. Do you see, "The AURA CAS used UWB radio
17 technology to provide an accurate time-of-flight
18 ranging system"?

19 Do you see that?

20 A. I do.

21 Q. All right. Do you know what that means,
22 a time-of-flight ranging system?

23 A. At a -- at a very general level. I know
24 it's -- it's determin- -- yeah, it's doing

1 calculations to provide speed and separation --
2 distance separation.

3 Q. Okay. Do you know how the AURA CAS
4 system uses time of flight?

5 A. No. Again, that wouldn't be in my
6 bailiwick.

7 Q. What does "ranging" mean in this
8 context?

9 A. Ranging? The distance between objects,
10 pier-to-pier objects.

11 Q. Okay. You say, "The system offered the
12 flexibility of operator-defined detection and alarm
13 criteria, with integrated, expandable hardware
14 options and the ability to function in all
15 environments and terrain -- terrain - even
16 tunnels."

17 Do you see that?

18 A. I do.

19 Q. What -- what did you mean by
20 "operator-defined detection and alarm criteria"?

21 A. It means that we programmed the alarm
22 criteria based on their rules, based on their
23 requirements.

24 As an example, in travel mode, train --

1 or MOW equipment travels faster and longer
2 distances from place to place. That required a
3 different rule than it did in work mode when they
4 crawled closer together at slower speeds.

5 Q. Is that something that customers cared
6 about?

7 A. Absolutely.

8 Q. Why?

9 A. Because they had their own rules, they
10 had federal rules and they had accidents.

11 Q. And so if you didn't provide that
12 flexibility of the operator-defined detection and
13 alarm criteria, would that matter to your
14 customers?

15 A. I believe so.

16 Q. Would they have bought the system
17 without that?

18 A. I don't believe so.

19 Q. What did you mean by "integrated,
20 expandable hardware options"?

21 A. One example is we have contractors that
22 utilize the same AURA CAS system that require us to
23 engage in their braking relays. That's an
24 expandable function. Canadian Pacific Railway and

1 Canadian National do not, so they have that option
2 available to them, but they don't utilize it.

3 Q. Okay. So I think what you're saying
4 is -- and tell me if I'm wrong -- the contractors
5 may use the feature of allowing your system to
6 actually control the braking. While Canadian
7 National does not use that feature, it only allows
8 the operator to be alerted, but they alert -- but
9 the operator himself would have to do the braking?

10 A. That's correct.

11 Q. Okay. And so this -- this automatic
12 braking feature is like one of the expandable
13 hardware options?

14 A. That's one of them.

15 Q. All right. What other ones would there
16 be?

17 A. I'd have to consult with our engineers,
18 somebody like Kurt Gunther, and get back to you on
19 that. That's changed over time, but that's the one
20 that I know has been utilized the most.

21 Q. Okay. Are you familiar with the Piper
22 product at all?

23 A. I'm only familiar with what my engineers
24 who are more capable at assessing technology than I

1 am have told me and I have seen some of their
2 marketing materials.

3 Q. Okay. Do you know if Piper has these
4 features?

5 A. I do not know.

6 Q. All right. In Paragraph 21 you write in
7 the second sentence, "Each AURA CAS uses the time
8 of flight measurement technique together with GPS
9 data to determine a separation distance between the
10 MOW vehicles."

11 Do you see that?

12 A. I do.

13 Q. How does it use GPS in combination with
14 time of flight?

15 A. GPS is used as a timestamp and utilized
16 in areas sometimes where ultra-wideband may -- may
17 have a slight issue, so it's more of a redundant
18 technology. It's used in -- it's accretive. It's
19 used in -- in conjunction with the -- the
20 ultra-wideband time of flight.

21 Q. All right. So sometimes in railroad
22 systems, you have multiple tracks that are parallel
23 to each other, correct?

24 A. Correct.

1 Q. And if you have a system that says, you
2 know, you're getting very close to another train,
3 you know, 800 meters away, let's say, that could be
4 a concern if you're on the same track but maybe
5 it's not a concern if you're on different tracks,
6 right?

7 A. Sure.

8 Q. Is the GPS used to determine what track
9 you're on as opposed to used to distance from one
10 train to another?

11 A. I'm not a hundred percent sure. I can't
12 give you that answer. I know each one of the --
13 each one of the units has an ID, and ID
14 pier-to-pier communication is -- is vital.

15 Q. And how does that relate to time of
16 flight or GPS?

17 A. Again, I -- I would -- I would defer to
18 our engineers on that question.

19 Q. Okay. Let's take a look at Paragraph
20 22. You say, "The AURA CAS has eliminated nearly
21 all collisions between equipped MOW railroad
22 vehicles in railroad networks that have installed
23 the AURA CAS."

24 Do you see that?

1 A. I do.

2 Q. All right. First of all, what are the
3 railroad networks that have installed the AURA CAS?

4 A. Primarily Canadian National Railway and
5 Canadian Pacific Railway. They encompass a lot of
6 the -- the business.

7 Q. All right. And how many collisions were
8 they having prior to installation of your product?
9 I don't know how they measured it. By year, by
10 month, however they measured it.

11 A. They measured it by year. Each -- the
12 feedback that we received is each one of them had
13 roughly around 30 to 35 what they called events,
14 significant collisions per year prior to the
15 installation of this technology.

16 Q. Okay. And what do they have now?

17 A. Virtually zero. When I say "virtually,"
18 it's because there are times where operators try to
19 detach or try to damage the technology because they
20 don't -- they don't like it as a babysitting tool,
21 and then we have some forensic research and we go
22 in and find out why they had an accident, but to
23 our knowledge and the feedback we're getting from
24 the customers, it's eliminated their accidents

1 altogether.

2 Q. Okay, all right. In Paragraph 23 you
3 say, "When the AURA CAS was being developed, there
4 were no comparable systems being offered for sale,"
5 correct?

6 A. Correct.

7 Q. And based on our discussion earlier,
8 your knowledge as to what was out there in the
9 market was based on feedback you had gotten from
10 your customers, correct?

11 A. That's correct.

12 Q. All right. You didn't do your own study
13 of trade literature, patents, other technical
14 literature to decide what was out there, correct?

15 A. Well, I'm sure our engineering -- our
16 engineering team did, but I didn't specifically.
17 I -- I received feedback -- the primary value for
18 me was to get feedback from our -- from our
19 customers or our potential customers.

20 Q. Did anybody in your engineering
21 department tell you that they did -- did those
22 things?

23 A. I would say -- I -- I know we had --
24 yes. I would say that we had engineers that said

1 that they were looking into technologies in the
2 marketplace from time to time, but I don't remember
3 anything specifically coming to my -- to my desk.

4 Q. You say, "Metrom --" I'm now in
5 Paragraph 24. "Metrom employees, including myself,
6 spent many hours convincing railroad executives
7 about the value of our novel AURA CAS system."

8 Do you see that?

9 A. I do.

10 Q. Okay. Who besides yourself were you
11 referring to here?

12 A. All the key -- all the key players
13 in our -- in our company, our engineering team,
14 myself, we -- we've had salespeople that were
15 employed with the company that would also attend
16 meetings with me. So our engineering team, our
17 executive team and our sales team.

18 Q. So -- and the engineering team, I assume
19 that's Mr. Gunther and Carlson, Sr.

20 Anyone else?

21 A. Oh, there are many. We just don't have
22 them employed anymore.

23 Q. Okay. So who specifically are you
24 referring to there?

1 A. I'd have to get an employee roster in
2 front of me, but I -- there -- again, there are --
3 there are times we had 12 to 15 other engineers
4 that would be involved in technical meetings with
5 customers.

6 Q. Okay, all right. Let's take a look at
7 Paragraph 25. You say, "In 2013, Metrom's effort
8 bore fruit, when Metrom secured its first order for
9 the AURA CAS from Canadian National Railway. The
10 value of this order was approximately \$4,000,000.
11 Metrom successfully installed the AURA CAS in
12 approximately 900 MOW vehicles. That system
13 continues to be used today."

14 Do you see that?

15 A. I do.

16 Q. So in 2013 did you -- did you do an
17 install for 900 vehicles?

18 A. In 2013 we received a contract for at
19 least 900 vehicles in which over the course of two
20 years we installed incrementally.

21 Q. And how many in total do you have
22 installed now for Canadian National?

23 A. Over 1500, I believe.

24 Q. 1500. All right.



1 So then in the next paragraph you say,
2 "The table below sets forth the sales by year for
3 the AURA CAS."

4 Do you see that?

5 A. I do.

6 Q. Okay. And then in Paragraph -- I'm
7 sorry, in the row related to 2018, you have a
8 footnote, and you say, "The AURA CAS enabled
9 approximately \$4,000,000 of proof of concept
10 activity with the New York MTA which is included in
11 this table."

12 All right. I don't know what that
13 means.

14 A. It means that that -- that feature set
15 was included in our positive train control system,
16 and we would not have secured that business without
17 it.

18 Q. So what you're saying -- well, first of
19 all, are you saying that New York MTA paid you
20 about \$4 million in total?

21 A. That's correct.

22 Q. All right. And that was for the
23 delivery of what?

24 A. That was for the delivery of several

1 POCs.

2 Q. The ones we talked about before?

3 A. Yes.

4 Q. And some of that was the AURA system and
5 some of it was what?

6 A. Well, it was all the AURA system. The
7 AURA system has different features and
8 functionality, one of which is the collision
9 avoidance system.

10 Q. Okay. And how much of it related to the
11 other features of the -- of the \$4 million you're
12 talking about here?

13 A. I couldn't put a number to it, but the
14 system was demonstrated as a whole system and it
15 wasn't demonstrated in pieces as it -- as it
16 relates to revenue.

17 Q. But when you bid on it, right, you bid
18 on it -- and you -- you priced out the different
19 features, is that right?

20 A. No. We priced out the different POCs
21 where we demonstrated different things at different
22 times.

23 Q. Okay.

24 A. We didn't price out separate features

1 like you could strip them out à la carte.

2 Q. All right. And were you -- the
3 different POCs, some of them were for I assume
4 speed enforcement?

5 A. Some of them were for speed enforcement
6 and train positioning.

7 Q. And what does "train positioning" mean?
8 Is that -- is that precise berthing?

9 A. Correct. Or knowing where the train is
10 at any given time in the system, as well. It's
11 both.

12 Q. And is that the -- well, when you say
13 "knowing where the train is," who knowing where the
14 train is?

15 A. New York City Transit, the operators.
16 That's a big problem with legacy equipment. They
17 don't necessarily know where the trains are at all
18 times in their system when they're moving through
19 the system.

20 Q. All right. And so how much of that
21 \$4 million related to this speed enforcement
22 concept?

23 A. I don't have that answer. I'm not
24 sure --

1 MR. SCHODDE: Objection, asked and answered.

2 BY THE WITNESS:

3 A. I'm not sure it's broken down like that.

4 BY MR. WISNIA:

5 Q. Okay. What about for the proof of
6 concept related to signal compliance?

7 A. The same.

8 Q. All right. And so for each of these
9 entries that you relate with respect to revenue in
10 this table, that also includes sales related to the
11 non-collision avoidance features of the AURA
12 system, correct?

13 A. What -- what -- it includes -- I'm not
14 sure I -- be more specific with that question.

15 Q. Okay. It was a poorly worded question.
16 Let me try again.

17 So, for example, in 2016 you say you had
18 about 3.28 million in revenue related to AURA,
19 correct?

20 A. Correct.

21 Q. All right. But the 3.28 that you
22 delivered didn't -- wasn't limited solely to
23 collision avoidance, right? It also had the speed
24 enforcement and signal compliance features, right?

1 A. No, that's not correct.

2 Q. Oh, what did it have?

3 A. That's why we footnoted 2018 because
4 2018 was for the POCs, which was a train control
5 system that included collision avoidance as part of
6 the train control system. The rest of these
7 revenue numbers are specific to the AURA CAS.

8 Q. Okay. So are the only sales that you've
9 had related to the train control system this proof
10 of concept stuff with New York?

11 A. And we had a proof of concept with the
12 MBTA prior to that.

13 Q. Okay. And so is that -- is the money
14 from Boston included in any of these entries?

15 A. I believe it is, yes.

16 Q. What year would that be?

17 A. I believe that's in 2016, but I'm not a
18 hundred percent sure. I could get that answer for
19 you.

20 Q. Okay. So, I mean, whatever year it
21 should be, the entry for MBTA, should we have a
22 similar footnote like we have for New York
23 associated with it?

24 A. I can tell you right now it's a very

1 small number. It was \$250,000.

2 Q. Okay.

3 A. That's it.

4 Q. Okay. The sales that you have for
5 Canadian National, are those for sales for use in
6 the United States or for use in Canada?

7 A. Both.

8 Q. Are you able to distinguish between the
9 US and non-US sales?

10 A. Yes.

11 Q. Okay. Can you give me your best
12 estimate as to what portion of this is US sales,
13 "this" being what we're seeing in this table in
14 Paragraph 26?

15 A. I really couldn't. I'd have to get a
16 breakdown for you. I really couldn't.

17 Q. Okay, all right. So under the table in
18 Paragraph 26 you write, "Altogether, we estimate
19 that the Aura CAS system protects all Canadian
20 National and Canadian Pacific Railroad -- Rail- --
21 Railways MOW assets, in addition to systems at MOW
22 contractors and CA- -- CSX, comprising roughly 33%
23 of mainline freight MOW equipment in the United
24 States."

1 Do you see that?

2 A. I do.

3 Q. All right. What does "CIX" stand for?
4 CSX.

5 A. CSX?

6 Q. Yes. I'm sorry.

7 A. I'm -- I know I -- I forgot the -- the
8 acronym. It's one of the major Class 1 freight
9 railroads. I knew you were going to ask that
10 question, and I can't remember it. I'm sorry. We
11 could probably all Google it, but I don't remember
12 it. I just know them as CSX. They're one of the
13 major six Class 1 freight rail organizations now.

14 Q. Okay. Then you write, "Until Petitioner
15 Piper entered the space in about 2022, Metrom had
16 virtually 100% of the installed market for a radio
17 based collision avoidance system between MOW
18 vehicles."

19 Do you see that?

20 A. I do.

21 Q. What percentage of the market do you
22 have now?

23 A. I don't know.

24 Q. Do you have any reason to believe it's

1 less than a hundred percent?

2 A. I'm not sure what Piper has sold or if
3 there are any other companies that have
4 subsequently sold into this marketplace at this
5 point. I don't have that answer.

6 Q. Okay. Have your sales in that
7 particular market gone down?

8 A. They went down in the pandemic for sure.
9 If you'll look at the chart that I gave you, you
10 can see where they went down.

11 Q. But have they recovered post pandemic?

12 A. Significantly from the pandemic, yes.
13 In 2022 and 2023, our revenues are up over a
14 million dollars and prior to that they were a third
15 or 40%.

16 Q. All right. In 2- -- Paragraph 27, you
17 write, "In 2017, Metrom began gaining traction with
18 transit agencies, in direct competition with
19 Petitioner's Siemens and Thales."

20 Do you see that?

21 A. I do.

22 Q. And the transit agencies you're
23 referring to are MBTA and the New York project, is
24 that right?

1 A. Yeah. We also had inquiries from other
2 transit agencies like LA Metro. We were -- we were
3 in discussions with companies like Hitachi and --
4 and some other corporations to potentially partner
5 on RFPs that either didn't materialize or someone
6 else potentially won. But we had discussions with
7 multiple transit agencies around that timeframe.

8 Q. Okay. But how were you gaining traction
9 with LA Metro, for example?

10 A. We were in discussions and we were being
11 considered for programs for proof of concepts, we
12 were being encouraged to partner with Hitachi on a
13 probe to put an RFP out on the street for and we
14 did in fact team with Hitachi and present.

15 So we were engaged with LA Metro in a
16 teaming arrangement with Hitachi, and that program
17 got squashed during the pandemic.

18 Q. Okay. Did you lose traction with
19 LA Metro or other transits because of the
20 petitioners in this case?

21 A. Most definitely.

22 Q. With which ones?

23 A. All of them.

24 Q. So you lost traction with LA Metro

1 because of the petitioners in this case or due to
2 the pandemic?

3 A. I don't know. I can't give you that
4 answer for sure, but I can tell you we've lost
5 traction with all of them.

6 Q. Do you know why?

7 A. I don't know why. I have my opinions,
8 but I don't know why.

9 Q. All right. You say, "Petitioner Piper
10 was also involved in attempting to develop novel
11 signalling solutions for transit agencies, and
12 worked with the same consulting engineers as Metrom
13 in that work, which to -- which to our knowledge
14 was the first time that Piper had attempted to
15 enter the railroad space."

16 What are you referring to there?

17 A. The first time I ever had an
18 introduction to Piper was in New York City Transit
19 POC work. That was the first time I was aware of
20 who they were, excuse me, and they were also
21 invited to demonstrate whatever their technology
22 approach was at that time separate from ours.

23 Q. So was that the Culver Test Track you
24 were talking about?

1 A. The Culver Test Track? Yes.

2 Q. Is that -- I mean, is that the first
3 time you were introduced to Piper? Is that what
4 you're talking about?

5 A. Our Culver Test Track was the first time
6 I was introduced to the -- to the fact that they
7 were involved and were going to be doing some
8 testing.

9 Q. Okay. And who were the consulting
10 engineers that you both worked with?

11 A. We worked with the Parsons Corporation.
12 They were the -- the consultant hired by New York
13 City Transit and the MTA to oversee the POCs.

14 Q. Okay. So in the New York Transit
15 project, Parsons was working on behalf of the
16 transit agencies; it wasn't acting on behalf of any
17 of the bidders, correct?

18 A. That's correct.

19 Q. So it wasn't working on your behalf and
20 it wasn't working on behalf of Piper or Siemens or
21 Thales or anybody else?

22 A. That's correct.

23 Q. And so were they providing consulting
24 services to you?

1 A. Not in that project.

2 Q. Okay. And to your knowledge, were they
3 providing consulting services to Piper in that
4 project?

5 A. I have no knowledge either way.

6 Q. Why did you feel it important to list
7 that you and Piper both worked with the same
8 consulting engineers?

9 A. I'm not sure I understand that question.

10 Q. I mean, why did you put it in your
11 declaration? Why is it there?

12 A. That was just an introduction to our
13 introduction to Piper. It's the first time we were
14 introduced to them, and I didn't have any prior
15 knowledge of them being in the industry prior to
16 that. That's the -- that's the -- the genesis of
17 it.

18 I've never -- I wasn't aware of them
19 being in -- in the rail industry providing
20 solutions to anyone prior to that introduction.

21 Q. Okay. So next you write, "Metrom's
22 efforts to bring its patented technology to the
23 New York Metropolitan Transit Agency resulted in
24 Metrom receiving a 'genius' award from the

1 MTA...and an invitation to bid on the MTA's 'pilot'
2 project to demonstrate the technology after
3 multiple 'proof of concept' small scale
4 demonstrations that were attended by the
5 Petitioners."

6 Do you see that?

7 A. Yes.

8 Q. All right. So the Genius Award you're
9 referring to is the same one we already talked
10 about, right?

11 A. Yes.

12 Q. And what does it mean to be invited to
13 bid? Was it an open bid or was it a closed bid?

14 A. I don't know that answer. I know we
15 were invited to bid and we were a participant in
16 pre-bid meetings, but I don't know if it was a
17 closed bid. I don't recall.

18 Q. Okay. Who invited you to bid on it?

19 A. The MTA and New York City Transit.

20 Q. I mean, is -- how did they do it? Did
21 they -- did somebody tell you that or did they send
22 you a letter? Like what -- how were you invited?

23 A. We were involved in many meetings out
24 there when they were de- -- when they were

1 designing the specifications for the RFP.

2 Q. So was it kind of implied that you
3 should bid or -- what I'm trying to figure out is:
4 What was the invitation? Did somebody say to you
5 specifically, "Metrom Rail should bill on this"?
6 Did you get a letter or an e-mail saying, "We
7 invite you to bid on this," or you just kind of
8 knew that this was going on, you were showing up at
9 meetings and were received at the meetings and made
10 your bid?

11 A. We were recruited to help them with the
12 specifications for the very program and we were
13 invited by them.

14 Q. Okay. So who recruited you?

15 A. The MTA and New York City Transit.

16 Q. Who in particular?

17 A. The leaders of the MTA, Pat Foye, who
18 was the chairman, Phil Eng, who was the -- either
19 the president or the vice president at the time.

20 Q. And they reached out to you or to
21 somebody else at Metrom?

22 A. They -- I was involved in meetings with
23 them, specifically myself.

24 Q. Okay. And what did they ask you to do

1 specifically as far as submitting the
2 specification?

3 A. They asked me to have my team of
4 engineers work through Christmas Eve and help their
5 team at New York City Transit with specifications
6 for the RFP.

7 Q. Okay. Christmas of what year?

8 A. 2018.

9 Q. And so was it your understanding that
10 your engineers helped them write a bid that could
11 only be met by Metrom's patented technology or it
12 could be met by other bidders?

13 A. I can't answer that. I could just tell
14 you that we were invited to help them participate
15 in writing the bid specifications.

16 Q. Okay. And did they adopt your bid spec?

17 A. They adopted a lot of it.

18 Q. So in this sentence you also say, "after
19 multiple 'proof of concept' small scale
20 demonstrations that were attended by the
21 Petitioners."

22 Is that the proof of concepts that we
23 were just talking about earlier on the Culver Test
24 Track?

1 A. Yes.

2 Q. All right. Are there other ones that
3 you're referring to there?

4 A. No.

5 Q. All right. You say, "Unfortunately --"

6 A. Oh, I'm sorry, can I -- can I amend that
7 answer?

8 Q. Sure, please.

9 A. There weren't any official paid ones,
10 but there were multiple tests and small
11 demonstrations that -- that we did perform prior to
12 the official POCs.

13 Q. Okay. And where did you do those?

14 A. On the Culver Test Track.

15 Q. And were petitioners present for those?

16 A. I'm not sure.

17 Q. Okay. Your next sentence says,
18 "Unfortunately, Metrom ultimately lost the
19 project -- that project to the Petitioners, as
20 described in the lawsuit between Metrom and the
21 Petitioners shown by," the exhibit.

22 Do you see that?

23 A. Yes.

24 Q. All right. And -- all right. In



1 addition to losing the bid, you guys filed a
2 protest against that loss, correct?

3 A. Correct.

4 Q. And what was the result of that protest?

5 A. New York City Transit rejected our
6 protest.

7 Q. And is it your view that petitioners
8 used your technology improperly to obtain the
9 contract that we're referring to here?

10 A. I -- I'm not privy to their proposals,
11 but it is my view that they complied with the
12 specifications to provide a proposal that would in
13 fact utilize technologies that comes from our
14 system.

15 Q. Okay. In Paragraph 28 you say, "In
16 addition to the Pilot Project, Piper's network --
17 Piper Networks has further sought to capitalize on
18 Metrom's pioneering technology by copying Metrom's
19 AURA CAS for Piper's own MOW collision avoidance
20 system."

21 Do you see that?

22 A. Yes.

23 Q. Okay. Have you yourself done any sort
24 of comparison between Piper's system and your

1 system and come to a conclusion there's been
2 copying?

3 A. I've utilized my engineers' comparison
4 and their expertise to come up with that opinion.

5 Q. Okay. We've been going for about an
6 hour again. Would you like to take a break?

7 A. I'm okay to keep going if you all are.
8 I'm fine.

9 Q. Okay. Let's go for a little bit.

10 So with respect to this question, what
11 I'm trying to understand is -- I -- I know that
12 other people in this case have -- have done some
13 sort of exhibits and comparison charts and offered
14 opinions on -- on whether or not there's been
15 copying. I'm just trying to determine if you did
16 any sort of independent work, or are you just
17 saying, "Hey, they work for me and I rely on them"?

18 A. My charts are my people. So I rely on
19 the experts that I hire to have expertise in those
20 fields.

21 Q. Okay.

22 A. Those are my charts.

23 Q. If we go back to Paragraph 26 for a
24 minute, what is your understanding, if any, as to

1 why there were such sales fluctuations pre and post
2 pandemic?

3 A. Could you be more specific with an
4 example?

5 Q. Well, I mean, 2016, 2017 you had three
6 \$2 million -- 3 million, you've got 2 million in
7 sales, in 2018 you have a big number, but 4 million
8 of it is this New York POC work, so you've got
9 about 2 million of other work, I assume.

10 A. Right.

11 Q. And then in 2018 you drop under a
12 million, in 2020 you're at 400,000, in 2021 you're
13 at 300,000.

14 A. You mean 2019, not 2018.

15 Q. I misspoke. I apologize. And then in
16 2022 you -- you jump up, but you're not at your
17 pre-pandemic numbers.

18 What's the reason?

19 A. It's the nature of the business. Supply
20 contracts for initial asset installations and a
21 lifecycle of products means that we don't replace
22 them every single year, and so we -- we supply
23 reoccurring parts or -- or spare units on an
24 ongoing, reoccurring basis, but our supply

1 agreements for an entire CP or CSX MOW asset base
2 is an entire asset base, so we can't sell that
3 asset base every single year.

4 Q. Okay. And, you know, as you mentioned
5 earlier, a significant portion or some portion of
6 the sales relates to Canada as opposed to the US.

7 Did you guys also apply for Canadian
8 patents?

9 A. We did not.

10 Q. All right. If we look at Paragraph 29,
11 you write, "We are unaware -- unaware of any
12 attempt by Piper to introduction a MOW collision
13 avoidance system until Piper launched its 'Helix'
14 system sometime in late 2021 or early 2022."

15 Do you see that?

16 A. Yes.

17 Q. All right. What sort of monitoring, if
18 any, were you doing of Piper and its Helix system
19 prior to 2021?

20 A. We were monitoring our customers, and
21 Piper would have shown up if they were involved in
22 proposing or demonstrating any products to our
23 customers, and I was not aware of that being the
24 case until they launched their Helix product in

1 2021.

2 Q. Okay. And how did you become aware of
3 it then?

4 A. I think one of my engineers alerted me
5 to it.

6 Q. How so?

7 A. I don't know. Verbally or they showed
8 me a marketing material or they grabbed some press
9 release from a rail conference. I'm not a hundred
10 percent sure, I don't remember how, but I was aware
11 of it.

12 Q. And what is your understanding as to
13 what difference there is between what Piper was
14 offering in 2021 and what you knew they were
15 offering in New York?

16 MR. SCHODDE: Objection to foundation.

17 BY THE WITNESS:

18 A. I don't have the proposal of what they
19 presented to New York in 2022, so I can't give you
20 an answer for that. I just know the data sheets
21 and I know the information that I've gotten from my
22 engineers to say what the Helix products may or may
23 not be as compared to our product.

24 BY MR. WISNIA:



1 Q. But you were aware of Piper let's say
2 from this MTA project that you guys were both
3 bidding on, right?

4 A. I was aware they were there. Like I
5 said, that's the first time I was introduced to
6 them.

7 Q. Yeah, and did you have any information
8 about what -- how their system related to the MTA
9 was going to work?

10 A. None. I had no information.

11 Q. Okay, all right. You say, "The data
12 sheets for Helix show that Piper Networks
13 incorporated all the desirable and patented
14 features of Metrom's AURA CAS," right?

15 A. Yes.

16 Q. What are the specific desired and
17 patented features you're referring to?

18 A. I -- I would defer to Kurt Gunther, but
19 I will tell you that I sat with him and Rick
20 Carlson and we went through the data sheets and
21 went through our product and had a discussion about
22 how uncanny their technology approach was as
23 compared to ours, but I can't give you the
24 specifics right here.

1 Q. Okay. So, now, Mr. Gunther submitted a
2 declaration in this case, but if you're relying on
3 Mr. Carlson, why didn't Mr. Carlson submit a
4 declaration in this case?

5 A. Because he would have been privy to the
6 exact same information and -- and the same
7 involvement and engagement that Kurt Gunther was.
8 Kurt Gunther is our director of engineering, and
9 he -- he was the most involved in what we're
10 describing and discussing today.

11 Q. But the -- really the only basis that
12 you have for this sentence of, quote, "The data
13 sheets for Helix show that Piper Networks
14 incorporated all the desirable and patented
15 features of Metrom's AURA CAS," end quote, is what
16 Mr. Carlson and Mr. Gunther told you, right?

17 MR. SCHODDE: Objection --
18 BY THE WITNESS:

19 A. My --

20 MR. SCHODDE: -- to form, foundation,
21 argumentative.

22 BY MR. WISNIA:

23 Q. I'm not trying to argue with you.
24 Fair?



1 A. As I said earlier, I rely on technical
2 experts in my company, Kurt Gunther and Rick
3 Carlson being two of them as primaries, to give me
4 a comparison or to give me information related to
5 technology, and it's my opinion, like I stated in
6 my declaration, based on our interactions together.

7 Q. So all the information that you have
8 with respect to this sentence you obtained from
9 Mr. Carlson or Mr. Gunther, correct?

10 A. No, not correct. I've seen the
11 marketing materials myself and have a -- have a
12 high-level understanding of what our system is and
13 I can -- I can see their marketing materials and
14 draw some conclusions as to what it looks like.

15 I don't have the detail. I can't dive
16 into the weeds with you, but I've seen their
17 materials.

18 Q. Okay. Can you identify for me all the
19 desirable and patented features of the Metrom AURA
20 CAS system?

21 A. No, I cannot.

22 MR. WISNIA: All right. Why don't we take a
23 break.

24 MR. SCHODDE: It's about time for lunch. Do

1 you want to go off the record?

2 MR. WISNIA: Yeah, let's go off the record.

3 THE VIDEOGRAPHER: We are now off the record.

4 The time is 12:27 p.m.

5 (WHEREUPON, the deposition was
6 recessed for lunch from 12:27 to
7 1:01 p.m.)

8 THE VIDEOGRAPHER: Back on the record. The
9 time is 1:01 p.m.

10 BY MR. WISNIA:

11 Q. All right. Sir, you understand you're
12 still under oath?

13 A. Yes.

14 Q. Let's turn back to Exhibit 2008, your
15 declaration, and I want you to turn up to Paragraph
16 16.

17 A. Okay. Got it.

18 Q. Okay. You're talking about the large
19 multinational corporations like Siemens and Thales.
20 You say, "They have dominated the market for
21 decades, but none of these corporations had
22 developed an acceptable solution for collision
23 avoidance between MOW vehicles, while their
24 solutions for passenger and freight rail

1 applications continue to rely on technology and
2 operating principles that date back decades."

3 Are you familiar with their collision
4 avoidance for non-MOW vehicles?

5 A. I'm not familiar with any collision
6 avoidance systems that they have. I'm just talking
7 generally about their solutions, not necessarily
8 collision avoidance.

9 Q. Okay. So when you talk -- when you say
10 they haven't developed an acceptable solution for
11 collision avoidance between MOW vehicles while
12 their solutions for passenger and freight rail
13 applications continue to rely on technology and
14 operating principles that date back decades, when
15 you're talking about these non-MOW solutions, you
16 don't mean collision avoidance? You mean something
17 else?

18 A. I'm not sure I understand that question.
19 If you could rephrase it, I'd appreciate it.

20 Q. Sure. I understand this sentence in
21 your declaration in Paragraph 16 to say, "Look,
22 these companies didn't have anything for MOW
23 vehicles and the ones that they had for passenger
24 and freight rail relied on old technology." That's

1 how I read that.

2 Am I reading it correctly?

3 A. Yes.

4 Q. Okay. So what is the solutions that
5 they offered for collision avoidance for passenger
6 and freight rail applications? What specific ones
7 are you talking about?

8 A. For freight rail, they either didn't
9 offer one for collision avoidance systems or -- I
10 can't recall, but there may have been discussions
11 where those corporations offered or proposed
12 solutions that were not applicable or cost
13 prohibitive or just didn't work. I don't have
14 specific examples.

15 Q. Okay. And what about for passenger
16 applications?

17 A. Passenger applications, it's their CBTC
18 product -- product that we were always comparing
19 and contrasting our -- our technology approach to.

20 Q. Okay. So, I mean, are you familiar with
21 what technology they were using to avoid collision
22 between trains as opposed to MOW vehicles?

23 A. Not specifically.

24 Q. Okay. So if we take a look at Paragraph

1 26 again --

2 A. Okay.

3 Q. -- you have your chart of revenue.

4 What constitutes a sale? Like how are
5 you booking a sale?

6 A. POs, invoices and customer cash
7 receipts.

8 Q. And what is the margin -- or the profit
9 margin for these sales, roughly?

10 A. Roughly, gross margins are between 45
11 and 55 points.

12 Q. So in the paragraph you have some
13 numbers. You state that AURA products protect
14 roughly 33% of mainline freight MOW equipment, but
15 then you also say that up until 2022 you had
16 virtually a hundred percent of the installed
17 market, so what does that mean? I mean, do you
18 mean basically like 67% of the market didn't have
19 anything? Is that --

20 A. Yeah, that's -- that's accurate. I
21 would -- 33% accounts for two of the six Class 1
22 freights. There was consolidation. There used to
23 be seven, now there's six.

24 Q. Okay.



1 A. We have -- we have installed on an
2 entire asset basis for two of the six, and to my
3 knowledge, there weren't any other suppliers that
4 were supplying to the others or to those -- to
5 those two specifically.

6 Q. All right. In Paragraph 29, take a look
7 there, you state, "we --"

8 A. Okay.

9 Q. -- you state, "we learned that Piper had
10 made what appears to be a substantial sale of what
11 appears to be -- what appears at its core to be our
12 patented system to Amtrak."

13 Do you see that?

14 A. Yes.

15 Q. Okay. What is the -- what is the core
16 of your patented system? What -- what do you mean
17 by that?

18 MR. SCHODDE: Objection to form, foundation.

19 BY THE WITNESS:

20 A. Are you asking me what the core is to
21 our technology?

22 BY MR. WISNIA:

23 Q. Well, I mean, when you --

24 A. Is that the question --



1 Q. -- when you say, "at its core," are you
2 saying the core of the Piper system or are you
3 saying the core of your patented system?

4 A. I'm saying it's our belief that the core
5 of their system closely replicates our AURA
6 collision avoidance system technology.

7 Q. Okay. So, I mean, is the core of
8 Metrom's patented system the use of UWB that you're
9 referring to in the next sentence?

10 A. It's more than that. It's a whole
11 system. It doesn't just use a UWB radio, but it is
12 dependent upon the UWB technology, yes.

13 Q. When you say that -- well, first of all,
14 is -- let me strike that and ask a new question.

15 Is PTCS-2 a decentralized system?

16 A. I'm not sure what your definition of
17 "decentralized" is for me to be able to answer that
18 question. Could you expound on that?

19 Q. I thought it was a term that you used.
20 Let's see. I could be wrong.

21 Well, I guess I'd ask you this: My
22 understanding is CBTC is centralized control,
23 right?

24 A. Yes.

1 Q. So is -- PTCS-2, is it centralized or is
2 it not centralized, as you -- as you would think --

3 MR. SCHODDE: Objection to form.

4 BY MR. WISNIA:

5 Q. -- as you would think of it as it
6 relates to CBTC?

7 A. It's different in that it is a
8 stand-alone system. So if that's how you define
9 "decentralized," then it would be decentralized.

10 Q. Okay. Take a look at Paragraph 20. We
11 talked a little bit about this before, but you
12 said -- we talked about the time-of-flight ranging
13 system.

14 A. Okay.

15 Q. Do you -- are you talking about one-way
16 or two-way ranging, if you know?

17 A. Ranging from one object to the next.

18 Q. Okay.

19 A. That ranging could be from train to
20 train, train to station.

21 Q. Do you -- do you know how the -- the
22 Siemens and Thales systems actually work for the
23 MTA system?

24 A. I specifically do not. I'd have to rely

1 on my engineers to give me that answer.

2 Q. Do you know whether or not they
3 calculate separation distance between trains
4 onboard?

5 A. What I know is that the -- the
6 customers' feedback was that they had a hard time
7 calculating distances and knowing exactly where the
8 trains were at any time in real time in the system
9 when traveling.

10 Q. Okay. I'm sorry. I didn't quite catch
11 it. Could you just repeat it?

12 A. The feedback I received from customers
13 was that they had a hard time calculating train
14 distance and exact locations of trains while they
15 were traveling through the system.

16 Q. You -- you're talking about customers of
17 Siemens and Thales or are you --

18 A. Oh, no, "customers" meaning transit
19 agency feedback.

20 Q. Okay. But my -- my question is: Do you
21 know how the Siemens and Thales systems work?

22 A. Right. My answer is I only have
23 customer feedback. I don't have specific knowledge
24 of their systems that I could give you that answer

1 to.

2 Q. Okay. Maybe I'm catching on.

3 So you got some feedback from the
4 transit agencies about issues that they were having
5 with the Siemens and Thales systems? Is that what
6 you're saying?

7 A. Yeah, sure. It was the very reason we
8 were there in the first place.

9 Q. Okay. Did the MTA contract require MOW
10 vehicles or collision avoidance systems for MOW?

11 A. Not for the POCs.

12 Q. Okay. I mean, so in response to the
13 RFP, was there a requirement to -- to include in
14 that -- in that bid collision avoidance for MOW
15 vehicles?

16 A. Not for MOW but -- but to provide that
17 collision avoidance system feature and
18 functionality for proof of concept.

19 Q. Did you get any feedback from -- from
20 MTA or New York Transit as to why Metrom did not
21 win the bid?

22 A. I received feedback from the MTA at the
23 highest level that they were delighted with our
24 test results. I received that tangibly. I did not

1 receive anything except a formal letter saying we
2 were being discluded or eliminated from the pilot
3 at a certain stage of the procurement from the
4 procurement department.

5 Q. Okay. So, I mean, do you have any
6 knowledge as to why you lost the bid?

7 A. Only what was submitted to us, which was
8 a procurement letter thanking us for our
9 participation and saying that we were not going to
10 be moving forward. I don't have any specific
11 information as to why we were discluded.

12 Q. Okay. I mean, whether it was formal --
13 formal or informal, did you receive any MTA
14 criticism or feedback on your system or your
15 proposal?

16 A. No. In fact, the opposite.

17 Q. Okay. And I think you mentioned that
18 Hitachi was your partner in this proposal, is that
19 right?

20 A. They were. We were the primary, they
21 were a subcontractor in our proposal.

22 Q. Okay. And what would Hitachi's role
23 have been in the proposal?

24 A. Interlockings on the system. They

1 were -- they had a solution which is a feature or a
2 product that would -- would be integrated into our
3 PTCS system for interlockings, so they were our
4 partner to provide that -- that piece.

5 Q. Did you guys receive any feedback as to
6 the portion that Hitachi was going to provide under
7 the proposal?

8 A. We didn't receive unbundled or separated
9 feedback, no.

10 Q. So when you did your proof of concept
11 for collision avoidance for the MTC, what -- how
12 did it work?

13 A. When we did the proof -- I'm sorry.
14 Could you repeat that question?

15 Q. How did your proof of concept for CAS
16 for the MTC work?

17 A. Well, there was a criteria that was
18 agreed upon by all parties and there were different
19 stages of tests in the POCs.

20 Our teams would go to New York City on
21 the Culver Test Track. We would install equipment,
22 we would get the opportunity to calibrate and do
23 some unofficial testing, and then a -- an executive
24 demonstration would -- would be scheduled and would

1 occur as agreeable to all the parties.

2 Q. And did you do some sort of
3 demonstration where you had two trains come close
4 to each other to like demonstrate the CAS or the
5 collision avoidance system?

6 A. I don't have -- I don't know that
7 answer. I don't know -- the unofficial testing, I
8 don't -- I was only present personally for the
9 executive tests.

10 Q. Okay. And describe those tests, then,
11 please.

12 A. Those tests demonstrated proficiency in
13 our system for the three different feature sets
14 that I described earlier, speed compliance, train
15 positioning, signal compliance, those being the
16 same, and collision avoidance.

17 Q. Okay. And so let's focus on the
18 collision avoidance portion of the -- of the
19 demonstration or testing.

20 What -- what was shown or what was --

21 A. Ranging between objects, getting close
22 to an object, changing speeds, getting alerts on
23 the -- on the display inside the cab where people
24 were witnessing the tests.

1 Q. And was the test like live with an
2 actual train approaching a different object or was
3 it done in some other way?

4 A. No, it was -- it was -- we were testing
5 on an actual train on the test track.

6 Q. All right. In Paragraph 4 of your
7 declaration, you say, "My compensation is not
8 dependent on the outcome of these proceedings, and
9 I am not receiving any compensation for submitting
10 this declaration beyond the normal compensation
11 from my job."

12 Do you see that?

13 A. I do.

14 Q. Okay. And do you own a hundred percent
15 of the company?

16 A. No, I do not.

17 Q. Okay. Do you -- do you own a majority
18 of the company?

19 A. Not a majority, no.

20 Q. I mean, as CEO of the company, I assume
21 that -- and as a shareholder, you earn some sort of
22 share of the profits of the company, is that right?

23 A. That's correct.

24 Q. So if the patents in this case happen to



1 get invalidated and you don't win any damages in
2 your lawsuit, I assume that would lower the revenue
3 for the company.

4 A. It could.

5 Q. So, I mean, is it fair to say that you
6 have no economic interest in this case?

7 A. It -- I'm not sure I understand that
8 question as it relates to the previous one.

9 Q. Sure. Let me -- let me ask a different
10 question.

11 You would agree with me that you have an
12 economic interest in this case personally.

13 A. Yes.

14 Q. Okay. If the patents are upheld and you
15 win a lawsuit and you guys get money, that's money
16 in your pocket versus not having money in your
17 pocket if the patent is invalidated, correct?

18 A. That's correct.

19 MR. WISNIA: Okay. I think I may be done.
20 Let me -- let's take a five-minute break. I just
21 want to confer with my colleagues. Let's go off
22 the record.

23 MR. SCHODDE: Sure, off the record.

24 MR. WISNIA: Thank you.

1 THE VIDEOGRAPHER: We're going off the record.
2 The time is 1:19 p.m.

3 (WHEREUPON, the deposition was
4 recessed from 1:19 to 1:25 p.m.)

5 THE VIDEOGRAPHER: We are back on the record.
6 The time is 1:25 p.m.

7 BY MR. WISNIA:

8 Q. All right. Sir, you understand you're
9 still under -- you understand you're still under
10 oath?

11 A. Yes.

12 Q. All right. Take a look at Exhibit 2016
13 that I've just put in the chat. Tell me when you
14 have that open, please.

15 (WHEREUPON, there was a short
16 interruption.)

17 BY THE WITNESS:

18 A. Okay. I have it open.

19 BY MR. WISNIA:

20 Q. What is Exhibit 2016?

21 A. It's an AURA CAS marketing material.

22 Q. Okay. Are you familiar with this
23 document?

24 A. I've seen it, yes.



1 MR. WISNIA: I'm sorry. Give me one second.

2 (WHEREUPON, there was a short
3 interruption.)

4 BY MR. WISNIA:

5 Q. All right. So this document is
6 something that's used to market your product,
7 correct?

8 A. Yes.

9 Q. If you look on the first page, there's a
10 heading that says, "AURA Collision Avoidance
11 System," and it says, "The system offers the
12 flexibility of operator-defined detection and alarm
13 criteria, with integrated, expandable hardware
14 options and the ability to function in all
15 environments and terrain - even tunnels," right?

16 A. Yes.

17 Q. We talked about that language earlier,
18 correct?

19 A. Correct.

20 Q. And those are features that are
21 important to your customers?

22 A. Yes.

23 Q. Okay. They're part of the reason why
24 customers may buy the AURA collision avoidance

1 system?

2 A. I believe so.

3 Q. You say, "AURA also offers several
4 productivity tool options, such as: location
5 tracking, key machine function monitoring, and
6 remote data recording (spreadsheet or custom
7 database) capabilities."

8 Do you see that?

9 A. I do.

10 Q. What is location tracking?

11 A. Location of the specific MOW equipment
12 so they can track where the equipment is and then
13 potentially another function like how many cycles
14 that piece of equipment went through.

15 Q. So this is let's say what a foreman or
16 a -- or a dispatcher may use to see where his crews
17 are?

18 A. That's correct. It's an efficiency
19 tool.

20 Q. All right. Is that important to
21 customers?

22 A. Some yes and some no.

23 Q. I think I spoke on top of you.

24 Some yes, some no, and then you said

1 something else.

2 A. That's it. That's all I said.

3 Q. Okay. And what is key machine function
4 monitoring?

5 A. That could vary from organization to
6 organization, but tracking gas consumption on a
7 piece of equipment, how many cycles a spike or a
8 tamper provided in a course of one workday. Those
9 are examples.

10 Q. And are those features that are
11 important to customers?

12 A. They're becoming more important. We're
13 engaged in those discussions right now with
14 customers.

15 Q. And what do you mean by "remote data
16 recording"?

17 A. The current CAS system allows for
18 somebody to put a jump drive in the unit itself on
19 an MOW piece of equipment and extract information
20 about vehicle speed, warnings, et cetera.

21 "Remote" means remote. It means that we
22 would have the ability to provide them software
23 where they would actually be able to tap into that
24 information remotely and not specifically into the

1 machine.

2 Q. Okay. And is that feature important to
3 customers?

4 A. I think it's becoming more important.

5 Q. If you'd take a look, there's a heading
6 that says, "Individual Components," and the first
7 one listed is "User Interface."

8 Do you see that?

9 A. Yes.

10 Q. It says, "Features a 2 x 16 alpha
11 numeric display for messages and programming,
12 numeric displays of following distances both front
13 and rear, variable audio feedback for alarms,
14 indicator lights for alarm conditions, tactile
15 feedback control panel, contained within an
16 aluminum housing."

17 Do you see that?

18 A. Yes.

19 Q. Okay. Are those features important to
20 customers?

21 A. They are. That -- that specific user
22 interface was designed as a customizable user
23 interface based on customer feedback.

24 Q. All right. So let's say, for example,

1 that you can program it.

2 Is that something that customers care
3 about?

4 A. Yes.

5 Q. And was that important in your marketing
6 of the product?

7 A. Yes.

8 Q. All right. If we go to the next page,
9 there's a heading that says, "Control Electronics
10 Module."

11 Do you see that?

12 A. I do.

13 Q. Do you see it says the module contains
14 expansion ports for connection to work vehicle
15 sensor inputs which can be utilized for
16 productivity measurements?

17 A. Yes.

18 Q. What does that mean?

19 A. It means what I had said prior. It
20 allows for the expansion to have productivity
21 measurements of gas consumption, work equipment
22 cycle times and amounts per workday. It allows for
23 that productivity expansion.

24 Q. Okay. Let's take a look at the next

1 box. It says, "Transmitter/Sensor Module."

2 Do you see that?

3 A. Yes.

4 Q. It says, "Constructed of aluminum and
5 specific molded Radome materials."

6 Am I saying that word right?

7 A. Radome, yes.

8 Q. What is -- what is Radome?

9 A. Radome is -- I don't know specifically
10 what that material is constructed out of. It's the
11 term that is used to encapsulate the top or package
12 the top of this specific TSM.

13 Q. Is this -- is that construction
14 important for -- for customers?

15 MR. SCHODDE: Objection form.

16 BY THE WITNESS:

17 A. Well, I would say yes because it was
18 designed for the customers as a custom
19 construction.

20 BY MR. WISNIA:

21 Q. Okay, all right. Now, if you'd take a
22 look at the following pages of 2016, I believe they
23 are identical to Exhibit 2019, which I'm going to
24 put into the chat here now.

1 So my first question is: Do you agree
2 with me?

3 A. I don't have that up, but I can get it
4 up.

5 (WHEREUPON, there was a short
6 interruption.)

7 BY THE WITNESS:

8 A. That one didn't open for me. It said,
9 "file not found."

10 BY MR. WISNIA:

11 Q. Do you see -- did it show up in the
12 chat?

13 A. It did and I clicked on it, and it --
14 it's saying the file wasn't found. It doesn't
15 open.

16 MR. WISNIA: Greg, are you having the same
17 issue?

18 MR. SCHODDE: I think if you try right-click
19 or save it to a file location and then you can
20 right-click the icon and open it. That has been
21 working for me.

22 THE WITNESS: I did save it. I was able to
23 open the last one the same way. I'll -- I'll try
24 this again, but for some reason this one didn't

1 seem to want to open. Let me try it again.

2 BY MR. WISNIA:

3 Q. I'm just dropping it in the chat again
4 to see if it works.

5 A. I think I just opened it. I did. Okay.
6 Yes, I have it.

7 Q. Okay. So first, do you agree with me
8 that 2019 is identical to Pages 3 through 6 --

9 A. Yes.

10 Q. -- of 2016 -- of 2016?

11 Okay. The answer is yes? Is that what
12 you said?

13 A. Yes.

14 Q. Okay. Let's look at 2019.

15 This is a piece of marketing literature
16 that you provided to customers for the purpose of
17 selling the AURA system, correct?

18 A. Correct.

19 Q. And if we look on Page 2 of the
20 document, you have a bullet that says on the far
21 right, "Monitored equipment activity is available
22 through a web-based utility called AURA
23 ACCESS. ACCESS allows users to monitor key
24 equipment-specific functions, location, assign work

1 gangs, and establish control points at the push of
2 a button."

3 Do you see that?

4 A. I do.

5 Q. Okay. Is that a feature that's
6 important to customers?

7 MR. SCHODDE: Objection, foundation.

8 BY THE WITNESS:

9 A. It's one that's been identified by
10 customers and it could become important, but it's
11 not one that we currently are utilizing with a lot
12 of customers based on their bandwidth or desire at
13 this point.

14 BY MR. WISNIA:

15 Q. Okay, all right. So now a little bit
16 below that you have a heading that says, "AURA
17 Maintenance of Way Utility Core Technologies."

18 Do you see that?

19 A. On the same -- are we on the same page?

20 Q. We are, just below it.

21 A. Yes.

22 Q. All right. And it lists three core
23 technologies, "Ultra-Wide Band RF, Productivity
24 Sensors," and, "Advanced GPS Technologies,"

1 correct?

2 A. That's correct.

3 Q. If we look under "Productivity Sensors,"
4 it says, "Derivatives of sensors used in
5 automotive, aerospace, defense, and other
6 heavy-industry applications."

7 Do you see that?

8 A. I do.

9 Q. What sensors in spec- -- what sensors
10 specifically are you talking about?

11 A. I can't answer that question for you.
12 I'd have to have an engineer answer it. We had
13 engineers from different market spaces that were
14 designed to bring different ideas, new innovative
15 ideas to the -- to the rail market from other
16 industries. It's a general statement. I don't --
17 I can't give you a specific.

18 Q. Okay. The next bullet says, "Introduce
19 cost-effective and easily integrated options for
20 analyzing equipment functionality."

21 Do you see that?

22 A. I do.

23 Q. Okay. Is that the feature that you were
24 talking about before about cycles of use or --

1 A. Yes. It's the -- it's the same
2 principle.

3 Q. Okay. And is that important to
4 customers?

5 MR. SCHODDE: Objection, foundation.

6 BY THE WITNESS:

7 A. We're in discussions and I think it
8 could become important to them, but we haven't had
9 customers that have required it to this point.

10 BY MR. WISNIA:

11 Q. All right. Then there's a heading that
12 says, "Advanced GPS Technologies."

13 Do you see that?

14 A. Yes.

15 Q. And if you scroll to the next page, the
16 list continues, and it says -- oh, I'm sorry.
17 Maybe not.

18 The next page has a heading that says,
19 "Maintenance of Way Utility Summary," so it's
20 not --

21 A. Okay.

22 Q. -- a continuation of that previous list,
23 right?

24 A. Right.



1 Q. And one of the bullets under this
2 maintenance of way utility summary is, "Introduces
3 adaptive spacing limits governed by equipment speed
4 in three modes - Travel, Work, and Crawl - specific
5 to the operating rules of each railway."

6 Do you see that?

7 A. Yes.

8 Q. All right. I know we've talked about
9 travel and work earlier.

10 What's crawl?

11 A. Crawl mode is like a work mode. It's
12 just more specific and it depends on how many
13 pieces of equipment are in one particular place.
14 That's a term that -- that was given to us by the
15 railroads; it's not a term that we -- that we
16 created. It was just -- it's basically three
17 different speeds at which they would like warnings
18 at, travel being the -- the fastest, work being the
19 second fastest and crawl being the slowest.

20 Q. And these features were required by your
21 customer and important to them, correct?

22 A. That's correct.

23 Q. Take a look at the next bullet. It
24 says, "Utilizes an integrated data recorder with an

1 internal accelerometer that automatically records
2 data when a high g-force event is detected. Stored
3 information includes machine/vehicle speed,
4 direction, location, and behavior before & after
5 the event."

6 That's a crash detector of some sort,
7 right?

8 A. That's correct. It's like a black box.

9 Q. All right. And is that important to
10 your customers to have such a thing?

11 A. Yes.

12 MR. SCHODDE: Objection, foundation.

13 BY MR. WISNIA:

14 Q. The next one says, "MU is available for
15 permanent installation (Standard System) or
16 temporary applications (Mobile System)."

17 What does that mean?

18 A. You know, I actually don't -- I don't
19 know. I'm not aware of that or I forgot it. I
20 don't know what "MU" stands for. I don't know.

21 Q. Okay, all right. So if we look at the
22 next section with the heading "AURA Maintenance of
23 Way Utility Modules," do you see that?

24 A. Yes.



1 Q. All right. And there's a module -- I'm
2 sorry, I'm sorry, there's a box on the bottom right
3 that says, "Productivity Sensors." It says, "cycle
4 counts, distance, fuel consumption, and other
5 customer-specific factors."

6 Do you see that?

7 A. No, I'm sorry, I don't. Where -- where
8 are we looking again?

9 Q. I'm on the bottom of Page 3, and there's
10 a -- there's a picture there of a -- of a train
11 line with two trains on the -- on the line.

12 A. I'm not sure I have the same page up.
13 Oh, now I -- okay. Yeah, I have it. I'm sorry.

14 Q. Okay. So you see there's a box that
15 says, "Productivity Sensors"?

16 A. Yes.

17 Q. It says, "Heavy industrial sensors
18 adapted for use with equipment to identify key
19 functions such as cycle counts, distance, fuel
20 consumption, and other customer-specific factors."

21 Do you see that?

22 A. Yes.

23 Q. What is a cycle count?

24 A. A cycle count is how many different

1 cycles a -- a specific piece of MOW equipment or a
2 train or a piece of equipment actually completes or
3 performs.

4 Q. Okay. And is that -- in having a sensor
5 and keeping track of cycle counts, is that
6 important to the customer?

7 MR. SCHODDE: Objection, foundation.

8 BY THE WITNESS:

9 A. For some customers it could be, for some
10 it's not.

11 BY MR. WISNIA:

12 Q. And "distance" I assume means how far
13 the train has traveled like an odometer on a car?
14 Is that what that means?

15 A. I'm reading it. Just give me one second
16 to answer that question.

17 Q. Sure.

18 (WHEREUPON, there was a short
19 interruption.)

20 BY THE WITNESS:

21 A. I would say yes.

22 BY MR. WISNIA:

23 Q. All right. Fuel consumption is like a
24 gas gauge or fuel gauge, right?

1 A. That's correct.

2 Q. All right. What other customer-specific
3 sensors have you guys been offering, if any?

4 A. The -- the one we had discussed earlier,
5 the remote data capability, providing data remotely
6 instead of having to tap into the specific units on
7 each MOW asset.

8 Q. Is it fair to say that the patents at
9 issue in this case have never been licensed to
10 anyone?

11 A. Yes, that's fair.

12 MR. WISNIA: Thank you very much. I have no
13 further questions. I pass the witness.

14 MR. SCHODDE: All right. Let's go off the
15 record.

16 THE VIDEOGRAPHER: We are now off the record.
17 The time is 1:45 p.m.

18 (WHEREUPON, the deposition was
19 recessed from 1:45 to 2:05 p.m.)

20 THE VIDEOGRAPHER: We are back on the record.
21 The time is 2:05 p.m.

22 EXAMINATION

23 BY MR. SCHODDE:

24 Q. Good afternoon, Mr. Marchi. I'm going

1 to follow up on some of the things that Mr. Wisnia
2 was asking you about.

3 You mentioned Class 1 railroads earlier
4 in your testimony. Do you recall that?

5 A. I do.

6 Q. And at the time you introduced your AURA
7 CAS product, how many Class 1 railroads --
8 railroads were there at that time?

9 A. At that time there were seven.

10 Q. And how many are there today?

11 A. I believe six.

12 Q. And Mr. Wisnia asked you some questions
13 about how many of them ultimately became, for lack
14 of a better word, recurring or full-scale
15 customers, how many -- and that was two, if I
16 recall correctly, is that right?

17 A. That's correct.

18 Q. But you have approached at one time or
19 another all of them, correct?

20 A. Yes.

21 Q. Why didn't the others adopt your
22 technology at scale?

23 MR. WISNIA: Objection, asked and answered.

24 BY THE WITNESS:



1 A. My -- my perception and my interactions
2 were that they didn't adopt it because they didn't
3 want to associate funding to capital projects for
4 innovation and that they relied on manual processes
5 that they had had in place for decades.

6 BY MR. SCHODDE:

7 Q. You were asked some questions about the
8 sources for your components of your technology.

9 Do you recall that?

10 A. Yes.

11 Q. And so you don't --

12 MR. WISNIA: Your video just went out.

13 MR. SCHODDE: I'm sorry?

14 MR. WISNIA: Your video went out.

15 MR. SCHODDE: I don't know what happened
16 there.

17 MR. WISNIA: Okay.

18 MR. SCHODDE: Can everybody see me now?

19 MR. WISNIA: Yes.

20 MR. SCHODDE: Very good.

21 BY MR. SCHODDE:

22 Q. It is true that you do not manufacture
23 from scratch every nut, bolt, resistor and
24 transistor of your product.

1 Is that fair?

2 A. That's fair.

3 Q. Can you describe the work that you did
4 to integrate the parts that you do buy over and
5 above assembling purchased components?

6 A. Yeah, we -- we spent years and millions
7 of dollars on software development and developing
8 circuit boards aside from the components that we
9 are procuring from suppliers in order to be able to
10 write that code and -- and integrate all the
11 components and come up with a -- a complete product
12 package.

13 Q. And how many engineers did you have
14 working on the product before you made your first
15 sale?

16 A. That's -- I -- I don't have an exact
17 number, but I would say that it was in the
18 magnitude of six to eight before we made our first
19 sale, somewhere in that -- that range.

20 Q. And what was your overall timeline from
21 first concepts to first production sale in time?

22 A. We weren't really read- -- yeah, we
23 weren't really ready to launch into production
24 until 2012. We spent a better part of almost two

1 years in design and development and testing.

2 Q. And rough order of magnitude, how many
3 dollars did you spend on development before you got
4 your first dollar of revenue?

5 MR. WISNIA: Objection, scope.

6 BY THE WITNESS:

7 A. \$10 million plus.

8 BY MR. SCHODDE:

9 Q. You were asked some questions about
10 Paragraph 20 in your declaration.

11 A. All right. Let me --

12 Q. Do you have that in front of you?

13 A. I'm going to get it right now. Okay.

14 Q. Specifically you were asked about the
15 flexibility of operator-defined detection and alarm
16 criteria and the importance of that to customers.

17 Do you recall that?

18 A. I do.

19 Q. How does the operator input detection
20 and alarm criteria into your device?

21 MR. WISNIA: Objection, scope.

22 BY THE WITNESS:

23 A. Can you repeat that question? I'm
24 sorry.



1 BY MR. SCHODDE:

2 Q. Sure. In your AURA CAS system, how does
3 the operator program the device?

4 MR. WISNIA: Same objection.

5 BY THE WITNESS:

6 A. Through the user interface.

7 BY MR. SCHODDE:

8 Q. And where is that user interface?

9 A. It's in the cab of the equipment.

10 Q. Okay. And that's shown in your
11 brochure?

12 A. Yes.

13 Q. In -- in your brochure, Mr. Wisnia
14 directed you to a whole series of features that you
15 advertise.

16 Do you recall that?

17 A. I do.

18 Q. Out of all those features, what are the
19 most important ones?

20 MR. WISNIA: Objection, scope.

21 BY THE WITNESS:

22 A. Well, the core UWB collision avoidance
23 technology is -- is the absolute key. Some of the
24 features that I was asked questions on are -- are

1 just expandable feature sets that some customers
2 haven't even utilized or haven't given us any
3 orders for. It's just us marketing the whole
4 expandability feature set of the product. But it's
5 the core UWB avoiding accidents, collision
6 avoidance technology that is paramount.

7 BY MR. SCHODDE:

8 Q. And did you do any work prior to today
9 to determine which features are -- that you have
10 patent coverage for are demanded by customers?

11 A. I -- I have had conversations with --
12 with Dr. Cooklev, who I believe submitted a
13 declaration, and certainly Kurt Gunther, who
14 submitted a declaration, and I have consulted with
15 them and had discussions with them about this,
16 and -- and it's our claimed features that are --
17 are really what's germane to our core customers as
18 it relates to us being able to market and sell that
19 product.

20 Q. And is that conclusion memorialized in
21 your declaration of October 6, 2023?

22 A. Yes.

23 MR. WISNIA: Outside the scope.

24 BY MR. SCHODDE:



1 Q. And do you -- we have marked that
2 previously as Exhibit 2028.

3 Do you have that in front of you?

4 A. Let me grab it. I have it.

5 Q. Have you had a chance to review that?

6 A. Yes.

7 Q. And has anything Mr. Wisnia asked you
8 today or on reflection as you reviewed all these
9 materials caused you to change your conclusion --

10 MR. WISNIA: Objection, outside the scope.

11 BY MR. SCHODDE:

12 Q. -- in Paragraph 12 --

13 MR. WISNIA: Same objection.

14 BY MR. SCHODDE:

15 Q. -- that the features claimed by the
16 asserted patents are the very features that have
17 made the AURA CAS commercially successful?

18 MR. WISNIA: Same objection.

19 BY THE WITNESS:

20 A. Yes, I would agree with that.

21 BY MR. SCHODDE:

22 Q. Do you recall Mr. Wisnia asking you some
23 questions about your table with respect to Canadian
24 sales? This would be Paragraph 26 of your

1 declaration.

2 Do you recall those questions?

3 A. I do, and I'm pulling it up again.

4 Okay. I have it.

5 Q. So with respect to equipment sold to
6 Canadian National and Canadian Pacific, where is
7 that equipment ultimately used?

8 A. It's used all through North America. As
9 one example, Canadian -- there -- there were some
10 purchases from other railroads. Canadian National
11 purchased Illinois Central. Illinois Central has a
12 lot of equipment in the United States.

13 All the OEM equipment that we install
14 our CAS system on or our CAS system on is the same
15 equipment all throughout North America, and they
16 mix and match that equipment and move it all across
17 their territory lines in Canada and in the United
18 States.

19 Q. Is there any difference between
20 equipment you sell to Canadian National or Canadian
21 Pacific Railways that is initially installed on a
22 maintenance of way unit in Canada versus one that's
23 installed in the US?

24 A. No, it's the same.

1 Q. Does equipment that Canadian National
2 only can use in Canada have any utility for them?

3 A. No.

4 Q. Where is the bulk of Canadian National
5 and Canadian Pacific Railways' mileage?

6 MR. WISNIA: Objection, outside the scope.

7 BY THE WITNESS:

8 A. It's all through North America.

9 BY MR. SCHODDE:

10 Q. Including the US?

11 A. That's correct.

12 Q. You were asked some questions by
13 Mr. Wisnia regarding Parsons Consulting -- is it
14 Parsons Engineering or Parsons Consulting?

15 A. I'm not a hundred percent sure. I
16 believe in our teaming agreement it was Parsons
17 Corporation, but I -- I don't know the exact name.

18 Q. Regarding Parsons, do you recall the
19 questions regarding what Parsons' role was in the
20 New York project?

21 A. Yes.

22 Q. And did you also work with Parsons on
23 the Boston project?

24 A. Yes.

1 Q. And what was Parsons' role with you in
2 the Boston project?

3 MR. WISNIA: Objection to scope.

4 BY THE WITNESS:

5 A. It was -- their role was a teaming
6 partner in a proposal to the customer at the time,
7 which was the MBTA. We were teaming partners.

8 BY MR. SCHODDE:

9 Q. Did Parsons have any personnel in common
10 with respect to their relationship with Metrom
11 between the Boston work and the New York work?

12 MR. WISNIA: Objection to scope.

13 BY THE WITNESS:

14 A. Yes, yes, they did.

15 BY MR. SCHODDE:

16 Q. Who were those people or person?

17 A. The two that I know for sure would be
18 Himanshu Patel, who was their -- who was their
19 directional leader -- I forget his exact title --
20 and the other was David Garcia, who was a project
21 manager. They were on both teams.

22 Q. And how much exposure did David Garcia
23 have to your company in the course of his work with
24 you on the Boston and the New York project?

1 A. He had --

2 MR. WISNIA: Objection to form and scope.

3 BY THE WITNESS:

4 A. -- complete exposure to our technology,
5 to our staff, facilities, all of it.

6 BY MR. SCHODDE:

7 Q. What level of trust did you have in
8 Mr. Garcia?

9 MR. WISNIA: Objection to scope.

10 BY THE WITNESS:

11 A. We all had a level of trust. As a
12 teaming partner, we allowed and afforded him the
13 ability to -- to understand all of our technology,
14 to meet with all of our people. He met with
15 executives, he met with technical staff members.
16 He was in our facility, in our industrial space
17 and -- and in our business meetings, et cetera.

18 BY MR. SCHODDE:

19 Q. Did you meet with him personally?

20 A. I did. I -- I even offered him a job.

21 Q. About when was that?

22 A. I would say it was shortly before he
23 accepted his position at Piper. I -- he had called
24 to inform me that he was going to decline the offer

1 and he was taking a position with Piper.

2 Q. Why did you offer him a job?

3 A. Because he had intimate knowledge of --
4 of our -- our culture and our technology and our
5 staff and was involved in a very substantial
6 teaming project that spanned a couple years with
7 our company, and we felt comfortable with him as a
8 person and as a -- as somebody who was capable
9 technically in understanding the technology we
10 wanted to deliver in the marketplace.

11 Q. Mr. Wisnia asked you some questions
12 about your familiarity with the Siemens and Thales
13 collision avoidance products.

14 Do you recall that?

15 A. Yes.

16 Q. And can you -- I think you said that you
17 didn't have specific knowledge of those products,
18 true?

19 A. True. When I was asked specifically if
20 I had knowledge of their collision avoidance
21 technology or products, I said I didn't have
22 knowledge of that. I do have knowledge that they
23 were marketing a CBTC train control system because
24 in all my meetings with the MTA and New York City

1 Transit, it was apparent that that was the
2 incumbent technology.

3 Q. And are you at least at a high level
4 familiar with CBTC?

5 A. I am.

6 Q. And how old is that technology?

7 A. From what I was told, 40- to 50-year old
8 technology.

9 MR. SCHODDE: I have no further questions.

10 BY MR. SCHODDE:

11 Q. Oh, wait. I'm sorry. One more. You
12 were asked questions about your compensation.

13 Do you recall that?

14 A. Yes.

15 Q. Is any part of your salary tied to this
16 case?

17 A. No.

18 Q. And do you have any interest in this
19 case as an owner that's any different than your
20 interest in the company as an owner? In other
21 words, is your interest in the outcome any
22 different than any other business interest that you
23 have with respect to the ultimate success or
24 failure of the company?

1 MR. WISNIA: Objection, form.

2 BY THE WITNESS:

3 A. No, no, it's not.

4 MR. SCHODDE: Thank you, Mr. Marchi.

5 THE WITNESS: Thank you.

6 MR. WISNIA: Just a -- a couple questions.

7 FURTHER EXAMINATION

8 BY MR. WISNIA:

9 Q. How many times have you met David
10 Garcia?

11 A. I don't know the exact number, but it
12 was many times.

13 Q. Okay. How many times was he at your
14 facility?

15 A. I don't know the exact number, but it
16 was multiple times.

17 Q. Okay. Is it your testimony under
18 oath -- well, let me ask you this: Are you as
19 confident in that answer, that he's been to your
20 location multiple times, as all the other testimony
21 that you've given in this case?

22 A. I would say yes. I interviewed him in
23 my own office.

24 Q. Okay. Well, you interviewed him in your



1 own office once, right?

2 How many times has he been in your
3 space?

4 A. Prior to that, at least another time or
5 two, so that's why multiple times.

6 Q. How many times did --

7 A. I don't know the exact time. I don't
8 know.

9 Q. Okay. How much time did you personally
10 spend with him?

11 A. I don't know how to quantify it, but I
12 spent time with him in Boston, I spent time with
13 him in New York, I spent time with him in Chicago.

14 Q. Okay. Let's quantify it in -- in
15 minutes and hours.

16 How much time did you -- how much time
17 did you spend with him?

18 A. I can't quantify that in hours. I
19 don't -- I don't keep a log of it.

20 Q. Okay. Well, let's -- let's do it
21 roughly.

22 Was it more than ten minutes?

23 A. Yes.

24 Q. Okay. How much was it?

1 A. I don't know.

2 Q. Okay. Could you give me any more
3 precision than it was more than ten minutes?

4 A. No. We had many, many meetings. Some
5 of them he was involved in, some of them he wasn't,
6 and all of them were for more than ten minutes, so
7 I can't give you a precise answer.

8 Q. And do you believe that Mr. Garcia is a
9 thief who stole your technology?

10 A. I don't know what David Garcia did with
11 our technology, but I know he had full access to
12 it.

13 Q. My question is: Do you believe him to
14 be a thief who stole your technology?

15 A. I don't know if he's a thief. I -- I
16 don't know how to answer that question other than
17 to say I don't know what he did when he left our
18 offices and when he went to work for Piper, but I
19 know he had a full under-the-hood look at
20 everything that we do.

21 Q. Okay. And how do you know that he had a
22 full under-the-hood look at everything that you do?

23 A. Because he was a project manager on the
24 MBTA teaming agreement that we have.

1 Q. And how much time do you think he spent
2 on that project with you?

3 A. As much time as any of the other people
4 on that team, which was a substantial amount of
5 time because I know how much time our people spent
6 on it.

7 Q. So I -- I want to be a hundred percent
8 clear here, sir, because this is a very, very
9 serious allegation you're making in this case. You
10 may not be personally making it, but I'm just
11 telling you right now your lawyers claim that
12 Mr. Garcia stole your technology, gave it to Piper
13 and they copied it, so I want to be very clear on
14 this, very, very clear, okay?

15 Did you personally see Mr. Garcia review
16 technical details of your system, yes or no?

17 A. I personally saw David Garcia in
18 meetings where we were going through our technology
19 and what would potentially be a proposal to the
20 MBTA. Yes, I did.

21 Q. Okay. And who else was in that meeting?

22 A. Multiple team members from Parsons and
23 from Metrom Rail.

24 Q. Okay. And this is for which -- this is



1 for which project, Boston or New York?

2 A. This is for the M- -- Boston, the MBTA
3 project.

4 Q. Okay. So your testimony is that David
5 Garcia was personally in meetings with you and
6 others related to the MTBA [sic] project, correct?

7 A. That's correct.

8 Q. Okay. And you're as sure about that as
9 everything else you've told me today?

10 A. I just looked at an e-mail today that
11 could suggest the same, yes.

12 Q. Okay. So I want to be clear: You are
13 positive that Mr. Garcia was involved with you in
14 the MTBA project multiple times, multiple meetings
15 unrelated to the New York project, correct?

16 A. I am a hundred percent sure --

17 MR. SCHODDE: Objection, foundation for
18 "unrelated."

19 BY THE WITNESS:

20 A. I'm confident that David Garcia was a
21 project manager in our teaming agreement from the
22 Parsons side on the MBTA project and he was also on
23 the consultant side for the MTA in New York City
24 Transit for Parsons. I am confident of that, yes.



1 BY MR. WISNIA:

2 Q. That's -- that's not my question,
3 though, sir. I'm not talking about his name
4 appearing in something, okay? I'm not talking
5 about you seeing his name listed somewhere --

6 A. Okay.

7 Q. -- okay? What I want to know is with
8 your eyes, with your ears, okay, did you see David
9 Garcia actively involved in the MBTA project, yes
10 or no?

11 A. Yes.

12 Q. Okay. Where?

13 A. Meetings in Boston, meetings in Chicago.

14 Q. Okay. So let's talk about the meetings
15 in Boston.

16 What is the date of these meetings?

17 A. I don't have the date.

18 Q. Okay. What is the year of these
19 meetings?

20 A. I would say it was 2017, 2018.

21 Q. And what was the -- and where was that
22 meeting?

23 A. Parsons' facility in Boston.

24 Q. Okay. What month was the meeting?



1 A. There were multiple meetings. It wasn't
2 only one.

3 Q. Okay. How many times do you think that
4 you met with David Garcia in person that you saw
5 with your eyes and you heard his voice with your
6 ears related to the MTBA project?

7 A. I don't have a specific answer. I
8 really don't.

9 Q. Okay. Was it at least two?

10 A. Yes.

11 Q. Okay. And so at least two times in
12 Boston?

13 A. I would say yes.

14 Q. Okay. How many times in Chicago?

15 A. I don't know.

16 Q. Where in Chicago did you meet with David
17 Garcia and you saw him with your eyes and heard him
18 with your ears related to the MTBA project?

19 A. There are two places that I could have
20 met with David Garcia or been involved in meetings
21 where David Garcia would have been in our facility.
22 That would have been in our conference room, our
23 main conference room, our executive conference
24 room, and also in my own office.

1 Q. And so when you say "Chicago," you mean
2 your location in Illinois?

3 A. Yeah. I'm sorry. It was in our Crystal
4 Lake facility.

5 Q. What specific features did David Garcia
6 in your view take from you and put in the Piper
7 system?

8 A. I can't answer that question. I know
9 that he had access to understanding all of our
10 technology because as a teaming partner, Parsons
11 was the prime contractor to the MBTA, and he was a
12 project manager. He would have had to know
13 everything about our technology to be able to
14 deliver the project.

15 Q. He would have had to know everything
16 about the project.

17 Did you know everything that Parsons was
18 doing on the project?

19 A. No. I wasn't the prime contractor.

20 Q. All right. Earlier today I think you
21 told me that speed enforcement was an important
22 feature for your customers, yes or no?

23 A. Yes.

24 Q. Okay. Either -- earlier today you told

1 me that signal compliance was an important feature
2 for your customers, yes or no?

3 A. Yes.

4 MR. WISNIA: I have no further questions.

5 MR. SCHODDE: I have nothing further. Thank
6 you, Mr. Marchi.

7 MR. WISNIA: All right. Thank you, sir.

8 THE WITNESS: Thank you. Appreciate it.

9 THE VIDEOGRAPHER: Sorry. Before we go off
10 the record, Mr. Schodde, how would you like the
11 video today?

12 MR. SCHODDE: I do not need a video --

13 THE VIDEOGRAPHER: Okay.

14 MR. SCHODDE: -- at this -- at this time.

15 THE VIDEOGRAPHER: And for the transcript?

16 MR. SCHODDE: Miss Court Reporter, what's
17 the -- what are your delivery windows here?

18 THE COURT REPORTER: Two weeks is regular.

19 MR. SCHODDE: I'll need it sooner than that.

20 THE COURT REPORTER: Okay. You just tell me
21 when.

22 MR. SCHODDE: Okay. I'd like it -- today is
23 Thursday. I'd like it Monday.

24 THE COURT REPORTER: Okay.



1 MR. SCHODDE: Does that work?

2 THE COURT REPORTER: Yes.

3 MR. SCHODDE: All right.

4 THE VIDEOGRAPHER: Okay. And, Mr. Nieberg,
5 would you like a copy of the video or transcript?

6 MR. NIEBERG: No, I don't require a copy of
7 the video. The transcript I'll -- I'll take along
8 with the other petitioners.

9 THE VIDEOGRAPHER: Okay. And, Mr. James,
10 would you like a copy of the video or transcript?

11 THE WITNESS: The transcript would be fine. I
12 don't need a copy of the video.

13 THE VIDEOGRAPHER: I'm sorry. I was talking
14 to Mr. Joshua James.

15 THE WITNESS: Oh, I'm sorry. Yeah, no
16 problem.

17 MR. JAMES: Yeah, the -- the transcript for
18 sure, and then for the -- the video, send me an
19 e-mail. I'll get -- I'll talk to my team.

20 THE VIDEOGRAPHER: Okay. Can you put your
21 e-mail address in the chat for me?

22 MR. JAMES: Absolutely.

23 THE VIDEOGRAPHER: Thank you. Do you have
24 anything else, Ms. Christiansen, before we go off

1 the record?

2 THE COURT REPORTER: No.

3 THE VIDEOGRAPHER: We are now off the record.

4 The time is 2:29 p.m.

5 FURTHER DEPONENT SAITH NOT.

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7 (TIME NOTED: 2:29 P.M.)
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REPORTER'S CERTIFICATE

I, VICTORIA C. CHRISTIANSEN, a Certified
Shorthand Reporter of the State of Illinois, do
hereby certify:

That previous to the commencement of the
examination of the witness, the witness was duly
sworn to testify the whole truth concerning the
matters herein;

That the foregoing deposition transcript
was reported stenographically by me, was thereafter
reduced to typewriting under my personal direction
and constitutes a true record of the testimony
given and the proceedings had;

That the said deposition was taken
before me at the time and place specified;

That I am not a relative or employee or
attorney or counsel, nor a relative or employee of
such attorney or counsel for any of the parties
hereto, nor interested directly or indirectly in
the outcome of this action.



1 The witness has requested a review
2 pursuant to Rule 30(e)(1).

3
4 IN WITNESS WHEREOF, I do hereunto set my
5 hand at Chicago, Illinois, this 4th day of
6 December, 2023.

7 

8 VICTORIA C. CHRISTIANSEN,
9 Certified Shorthand Reporter.

10
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12 C.S.R. Certificate No. 84-3192.

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I N D E X

WITNESS	EXAMINATION
JAMES MARCHI	
By Mr. Wisnia.....	5, 155
By Mr. Schodde.....	141

E X H I B I T S

NUMBER	FIRST REFERRED TO
Exhibit No. 2008	32
Exhibit No. 2015	70
Exhibit No. 2016	125
Exhibit No. 2019	131
Exhibit No. 2028	148

ORIGINAL EXHIBITS RETAINED BY ATTORNEYS

DEPOSITION ERRATA SHEET

Our Assignment Number: 10589840

Case Caption: Siemens Mobility, Inc., et al., vs.
Metrom Rail LLC

DECLARATION UNDER PENALTY OF PERJURY

I declare under penalty of perjury that
I have read the entire transcript of my Deposition
taken in the captioned matter or the same has been
read to me, and the same is true and accurate, save
and except for changes and/or corrections, if any,
as indicated by me on the DEPOSITION ERRATA SHEET
hereof, with the understanding that I offer these
changes as if still under oath.

Signed on the _____ day of
_____, 20____.

JAMES MARCHI

DEPOSITION ERRATA SHEET

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JAMES MARCHI



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METROM Exhibit 2038
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