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Transcript of Rajeev Surati, Ph.D.

Date: November 22, 2024

Case: Hanshow America Inc., et al. -v- Ses-Imagotag, Inc. (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

HANSHOW-Ex. 1012
Hanshow Am. Inc. v. SES-Imagotag Inc.
IPR2024-00189

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

- - - - -

HANSHOW AMERICA INC.,
HANSHOW TECHNOLOGY CO., LTD.,
Petitioners,
v.
SES-IMAGOTAG INC.
Patent Owner.

- - - - -

Case No.: IPR2024-00189
Patent No. 11,674,340

- - - - -

Deposition of RAJEEV SURATI, Ph.D.
Conducted virtually via Zoom
Friday, November 22, 2024
8:07 a.m. CST

Job No.: 560355
Pages: 1 - 136
Reported by: THERESA A. VORKAPIC,
CSR, RMR, CRR, RPR

1
2 Deposition of Rajeev Surati, Ph.D., conducted
3 virtually via zoom, pursuant to notice before
4 Theresa A. Vorkapic, a Certified Shorthand
5 Reporter, Registered Merit Reporter, Certified
6 Realtime Reporter, Registered Professional
7 Reporter and a Notary Public in and for the State
8 of Illinois.
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1 A P P E A R A N C E S

2 ON BEHALF OF THE PETITIONERS:

3 CHRISTOPHER J. ("CJ") FAHY, ESQUIRE

4 SHEN WANG, ESQUIRE

5 ARCH & LAKE LLP

6 203 North LaSalle Street

7 Suite 2100

8 Chicago, Illinois 60601

9 312-375-9408

10 Christopher@archlakelaw.com

11 ON BEHALF OF THE PATENT OWNER:

12 MATTHEW J. MOFFA, ESQUIRE

13 TYLER KNOX, ESQUIRE

14 PERKINS COIE LLP

15 1155 Avenue of the Americas

16 22nd Floor

17 New York, New York 10036-2711

18 212-261-6857

19 MMoffa@perkinscoie.com

20 ALSO PRESENT:

21 James Williams, Remote Tech, Planet

22 Depos

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1 P R O C E E D I N G S

2 THE REPORTER: Would you raise your right
3 hand, please.

4 (The witness was duly sworn.)

5 RAJEEV SURATI, Ph.D.,
6 called as a witness herein, having been first duly
7 sworn, was examined and testified as follows:

8 EXAMINATION

9 BY MR. FAHY:

10 Q Good morning, Dr. Surati.

11 A Good morning. What's your name,
12 counselor?

13 Q My name is Christopher Fahey. I'm with
14 the law firm of Arch & Lake and I represent the
15 petitioner Hanshow in this matter.

16 A Okay. Nice to meet you.

17 Q It's nice to meet you as well.

18 First of all, just because we're remote
19 here I want to make sure you can hear me okay.

20 A I can, sir.

21 Q If you could state your full name for the
22 record.

1 A It's R-a-j-e-e-v S-u-r-a-t-i.

2 Q Where are you physically located today?

3 A We are physically located in the MIT
4 Engine, which is a venture studio at 750 Main
5 Street in Cambridge, Massachusetts.

6 Q The only people in the room with you are
7 two counsel from Perkins Coie; is that right?

8 A Yes, sir.

9 Q Do you have any hard copy documents with
10 you?

11 A I do. These are binders, but I don't
12 actually intend on using them. They have the
13 compendium of documents that counsel sent me that
14 are unmodified or anything, just what they gave
15 me, and I have everything on my hard drive and
16 accessible if I need to.

17 MR. MOFFA: Counsel, I'll represent that
18 they are the same documents that you asked us to
19 have the witness available in electronic form, the
20 exhibits from the case. They're just in paper
21 form as well.

22 BY MR. FAHY:

1 Q Dr. Surati, both the hard copy and
2 electronic versions of the papers from the case
3 that you have, those are all clean copies, right?

4 A Yes, there's nothing modified on them.

5 Q No highlighting or notes or anything like
6 that?

7 A Not that I'm aware of.

8 Q You received both those hard copies and
9 electronic copies from counsel; is that right?

10 A I did.

11 Q Have you been deposed before?

12 A I have.

13 Q How many times about?

14 A Probably 30 by now.

15 Q So how many of those about are in IPR
16 proceedings like this?

17 A I'm guessing somewhere around 15.

18 Q So you know the drill, but I'm still going
19 to provide some instructions before we begin just
20 so we're on the same page. Is that okay?

21 A That sounds great.

22 Q So first please answer all questions

1 verbally, not with physical movements like a nod
2 or a shrug, so that the court reporter can record
3 your answer.

4 Do you understand that?

5 A I do.

6 Q Please wait until I've completed my
7 question before responding. That's especially
8 important over a remote deposition like this.

9 Do you understand that?

10 A I do.

11 Q Of course, please let me know if you don't
12 understand a question and if you need me to repeat
13 it. Is that okay?

14 A Sure.

15 Q Your counsel may object to my questions
16 from time to time, but unless he specifically
17 instructs you not to answer, you still need to
18 answer my question.

19 Do you understand that?

20 A I do.

21 Q And, of course let me know if you need a
22 break. Just note that if there's a question

1 pending, you have to answer the question before we
2 can go on a break.

3 Does that make sense?

4 A That does make sense.

5 Q Dr. Surati, is there any reason why you
6 cannot testify fully and truthfully today?

7 A Not that I'm aware of.

8 Q You've been deposed you said about 30
9 times before, 15 of those in IPRs.

10 Have you been deposed in any capacity
11 other than as an expert witness?

12 A No, I don't recall any such occasion.

13 Q What did you do to prepare to testify at
14 this deposition today?

15 A So I read through a number of documents,
16 those listed in my report and what was provided to
17 me related to this proceeding or I think it's the
18 '189 binder. So I read my declaration and
19 supporting documents related to this and I met
20 with counsel yesterday to discuss the '189
21 petition and I spent about I'd say an hour with
22 them.

1 Q Did you review any documents that were not
2 part of the publicly filed IPR file in this
3 matter?

4 A I may have looked at -- I don't recall
5 that, but I may have looked on the web at various
6 things during the discussions.

7 Q What would you have been looking for on
8 the web?

9 A Just things related to different kinds of
10 RF standards and things like that, but they're
11 probably in those documents also.

12 Q Do you remember anything specifically you
13 looked at on the web?

14 A I can't -- I think I looked up the word --
15 I looked up some word. I can't remember what it
16 was now off the top of my head, but that's it.

17 Q Do you know for certain one way or the
18 other whether what you looked up on the web is
19 part of the case file?

20 MR. MOFFA: Counsel, I'm going to instruct
21 the witness not to answer the questions about
22 documents that he may have looked at while he was

1 preparing with us for the deposition. He's given
2 you an answer about what he can recall.

3 BY MR. FAHY:

4 Q Dr. Surati, are you going to follow your
5 counsel's instruction not to answer?

6 A I mean, I can't -- I don't think it
7 substantively affects the case, but there's
8 nothing. I can't recall off the top of my head
9 what I looked at.

10 Q Yes, but my question was are you going to
11 follow your counsel's instruction not to answer my
12 question yes or no?

13 MR. MOFFA: I would give the instruction
14 for the witness not to answer a the question on
15 the basis of privilege.

16 BY THE WITNESS:

17 A Yeah, it's privileged so I won't answer.

18 BY MR. FAHY:

19 Q The substance of what you looked at
20 because I'm not asking for privileged information,
21 I just want to know was what you looked at in
22 preparation for your deposition -- was it anything

1 that you hadn't previously considered as part of
2 your declaration submitted in this matter?

3 A No, I don't think so.

4 Q Besides your attorneys, did you speak to
5 anyone else in preparing for this deposition?

6 A No, sir.

7 Q And besides meeting with your attorneys
8 and reviewing the documents that you mentioned,
9 did you do anything else to prepare for the
10 deposition?

11 A I don't believe so.

12 Q Dr. Surati, how did you become aware of
13 this IPR 2024-00189?

14 A I believe a search firm found me, but I'd
15 have to look up the letter to figure out who that
16 was, but it was within the last year and it wasn't
17 too far -- it was probably in the summertime.

18 Q So the first time you heard or became
19 aware of this proceeding, it was through a search
20 firm in summertime of 2024; is that right?

21 A I believe that's correct.

22 Q So were you engaged by a search firm or by

1 counsel at Perkins Coie or by the patent owner?

2 MR. MOFFA: I'm going to object to
3 relevance to this line of questioning.

4 BY MR. FAHY:

5 Q You may answer.

6 A Oh, I believe I'm sending the bills to a
7 search firm so I would have signed an agreement
8 with the search firm, but that's the best of my
9 recollection. I could look it up if you want.

10 Q No, that's okay.

11 Have you ever spoken with anyone from
12 patent owner?

13 A No, sir.

14 Q So when -- with whom did you first speak
15 at counsel about this matter?

16 A Tyler who's sitting across the table from
17 me.

18 Q Was that in that same timeframe of summer
19 of 2024?

20 A Yes, sir.

21 Q What did you discuss?

22 MR. MOFFA: Objection. Privilege. I'm

1 going to instruct the witness not to answer about
2 conversations with counsel.

3 BY MR. FAHY:

4 Q Dr. Surati, are you going to follow your
5 counsel's instruction not to answer?

6 A I am.

7 Q Did you have any knowledge about the
8 patent at issue in the '189 IPR which is patent
9 No. 10,674,340, which I will refer to as the '340
10 patent today, did you have any knowledge of the
11 patent before being contacted about this case?

12 MR. MOFFA: Objection to form.

13 BY THE WITNESS:

14 A I did not.

15 BY MR. FAHY:

16 Q How would you describe the technology
17 generally at issue in this IPR?

18 MR. MOFFA: Objection to form.

19 BY THE WITNESS:

20 A I would just say it has to do with
21 planograms. I mean, I have a report that
22 describes it in my first section as an

1 introduction, but it involves planograms, it
2 involves -- it involves planograms, it involves --
3 let me think, planograms, it involves
4 radiofrequency or wireless things, it involves
5 electronic shelf labels and ways of using them. I
6 could quote you from my report I suppose.

7 Q We'll get to your declaration in a bit.

8 A Okay.

9 Q Other than planograms, radiofrequency,
10 wireless and electronic shelf labels, is there any
11 other technology that you think generally is at
12 issue in this IPR?

13 A I mean, there's databases, there's IR
14 networking, there's -- I don't know IR networking
15 is in the patent itself, but there's a discussion
16 of it in the prior art.

17 Q Go ahead. Were you finished?

18 A Talking about ESLs, how you read them,
19 what they can -- and entering stuff about them
20 with respect to a planogram and helping you figure
21 out where things are based on those labels or
22 things like that. That's kind of the general gist

1 of it.

2 Q Were you familiar with patent owner before
3 being contacted about working as an expert in this
4 matter?

5 MR. MOFFA: Objection. Relevance.

6 BY THE WITNESS:

7 A I did not.

8 BY MR. FAHY:

9 Q Were you familiar with petitioner before
10 being engaged to work on this matter?

11 MR. MOFFA: Objection. Relevance.

12 BY THE WITNESS:

13 A Yeah, I was not.

14 BY MR. FAHY:

15 Q Have you spoken with anyone besides patent
16 owner's counsel about this IPR?

17 MR. MOFFA: Objection. Relevance.

18 BY THE WITNESS:

19 A I have not.

20 BY MR. FAHY:

21 Q For purposes of the deposition today,
22 we're going to refer to the documents as they were

1 filed in the IPR proceeding, so by their IPR
2 exhibit number since technically they're trial
3 exhibits rather than marking them with a different
4 number or a new number at the deposition.

5 A Okay.

6 MR. FAHY: If I could ask Mr. Williams to
7 bring up what's been be marked in the IPR as
8 SES-2002.

9 (A certain document was marked Surati
10 Deposition Exhibit 2002 for identification, as of
11 11/22/2024.)

12 BY MR. FAHY:

13 Q Dr. Surati, it may be easier, I know
14 you've got hard copies, you've got electronic
15 copies on your laptop in the room there with you,
16 whatever's easiest for you to look at.

17 A Okay.

18 Q Do you recognize Exhibit SES-2002?

19 A I do.

20 Q What is it?

21 A It's my curriculum vitae that I provided
22 for this proceeding.

1 Q Do you see the heading on the first page
2 of SES-2002, it states: Expert Experience?

3 A Yes.

4 Q Earlier you testified that you've been
5 deposed in about 30 cases, 15 of them roughly
6 IPRs; is that right?

7 A That's right.

8 Q About how many cases have you worked as an
9 expert on total?

10 A Somewhere around 30.

11 Q So you've been deposed in every case
12 you've been engaged as an expert witness on?

13 MR. MOFFA: Objection. Form.

14 BY THE WITNESS:

15 A No, but sometimes there's multiple
16 depositions for a case.

17 BY MR. FAHY:

18 Q Did any of these cases involve
19 specifically electronic shelf labels?

20 A Not specifically.

21 Q Did any of these cases involve
22 specifically planograms for retail stores?

1 A No, I don't believe so.

2 Q How many of these cases -- I guess let me
3 ask that again if that's okay.

4 A Okay.

5 Q How many of the roughly 30 cases where
6 you've been engaged as an expert are patent cases?

7 A I would say I've done four cases, maybe
8 five cases outside of patents.

9 Q What were those four or five cases outside
10 of patents generally about?

11 MR. MOFFA: Objection, objection.
12 Relevance. Objection, form.

13 BY THE WITNESS:

14 A Trade secrets and I think there was some
15 similar proceeding I was involved in.

16 BY MR. FAHY:

17 Q Of the patent cases where you've been
18 engaged as an expert, how many of those cases have
19 you testified for the patent owner?

20 MR. MOFFA: Objection. Form.

21 BY THE WITNESS:

22 A I don't know exactly, but it's probably

1 maybe 55 percent patent owner, 45 percent
2 defendant.

3 BY MR. FAHY:

4 Q In the cases where you were engaged by a
5 patent owner, were those cases involving
6 invalidity or validity?

7 MR. MOFFA: Objection. Form.

8 BY THE WITNESS:

9 A Well, typically the patent owner cases
10 have involved validity, and -- are you saying was
11 I only engaged for that purpose or are you saying
12 was I engaged for other types of analysis as well?

13 BY MR. FAHY:

14 Q Was validity an issue in all of those
15 cases?

16 MR. MOFFA: Objection. Form.

17 BY THE WITNESS:

18 A Not all of them. Sometimes I get hired to
19 do source code review for infringement or for
20 infringement only.

21 BY MR. FAHY:

22 Q Of the cases that you've been an expert on

1 that involved validity, was there ever a time
2 where you did not make a conclusion regarding the
3 validity of the patents at issue?

4 MR. MOFFA: Objection. Form.

5 BY THE WITNESS:

6 A I don't recall such a scenario.

7 BY MR. FAHY:

8 Q And in the cases where you did form a
9 conclusion about validity, when you were engaged
10 by the patent owner, did you ever conclude that
11 the patent was invalid?

12 MR. MOFFA: Objection. Form. Objection.
13 Relevance.

14 BY THE WITNESS:

15 A Yeah, I don't recall that I have ever
16 found a patent invalid for the patent owner, but I
17 could have. There are so many that I've been
18 involved in.

19 BY MR. FAHY:

20 Q But to your recollection, you always
21 concluded that the patent was not invalid when you
22 represented the patent owner?

1 MR. MOFFA: Objection. Form. Objection.
2 Relevance.

3 BY THE WITNESS:

4 A I think that's fair.

5 BY MR. FAHY:

6 Q In the past year, what percentage of your
7 income was from sources other than being an expert
8 witness roughly?

9 MR. MOFFA: Objection. Relevance.

10 BY THE WITNESS:

11 A I would say 40 percent.

12 BY MR. FAHY:

13 Q In the past five years what percentage of
14 your income roughly was from sources other than
15 being an expert witness?

16 MR. MOFFA: Objection. Relevance and
17 objection, form to this question and the prior
18 question.

19 BY THE WITNESS:

20 A I don't know. Maybe 40 percent also. I
21 would have to go look at all the bucks, but it's
22 not a majority of my income.

1 BY MR. FAHY:

2 Q To your knowledge, Dr. Surati, is all the
3 information in your CV, SES-2002, accurate?

4 A Let me just look at it to see.

5 MR. MOFFA: Objection. Form.

6 BY THE WITNESS:

7 A It's pretty comprehensive. There maybe
8 some patents that I -- is it accurate, there may
9 be some patents that I've been granted since I
10 wrote this that I haven't put on here or talks
11 that I've given, and I always have new things that
12 I'm doing, but it's accurate and correct as far as
13 I can recall. Let me just look at one more thing.
14 I think that it's fair.

15 BY MR. FAHY:

16 Q Do you recall specifically one way or the
17 other whether you have had additional patents that
18 are not listed in your CV SES-2002?

19 A I think I got granted a patent recently.
20 I have so many going on with the Scalable Display
21 Technologies people in the form of continuations.
22 So that's highly likely.

1 Q What is Scalable Display Technologies?

2 A It's a company that does computer vision
3 and works with displays and works with a variety
4 of clients like Procter & Gamble and folks that
5 are using large scale -- it's a commercialization
6 of my Ph.D. thesis where I made it so you could
7 use lots of projectors together to make a single
8 seamless image display, and it's actually it in
9 that regard that I got my initial experience with
10 planograms when I worked with Procter & Gamble and
11 built systems for them for simulated store life
12 size planogram implementations for their facility
13 in Cincinnati and doing things like eye tracking
14 and eye gaze related activities and reproducing a
15 virtual store for people to actually walk down
16 aisles and look at things and see what's going on.

17 Q When was the work with Procter & Gamble
18 that you just mentioned, what timeframe was that?

19 A That was 2008 probably through 2018.

20 Q 2008 to 2018?

21 A Yeah.

22 Q You said that your work for Procter &

1 Gamble involved a virtual store and a life sized
2 planogram; is that right?

3 MR. MOFFA: Objection. Form.

4 BY THE WITNESS:

5 A We worked on building stores with them
6 that were virtual in the sense that you could walk
7 around in them but the products could be changed
8 that were on the shelves using a technology that
9 we had because you could put a correct image of a
10 cereal box up and then 10 minutes later decide to
11 move it around without actually physically moving
12 the objects.

13 And they could skin the store because they
14 would have people like Wegmans or whoever is
15 buying their products come and visit and then they
16 reskin it to be their store and they say, oh, this
17 is what we think would be a good way for you to
18 lay out your store, here's what we think what
19 endcaps would look good to get more people to buy
20 things, so on and so forth.

21 Q For the record, what do you mean by
22 "skin"?

1 MR. MOFFA: Counsel, just a second.

2 Dr. Surati, I'm going to remind you to let
3 the questioning attorney finish his before
4 question before you answer because the court
5 reporter can't write both of your answers down at
6 the same time.

7 THE WITNESS: Okay. Sorry.

8 MR. MOFFA: No, no problem. Go ahead,
9 Mr. Fahey.

10 BY MR. FAHY:

11 Q Dr. Surati, what did you mean by "skin the
12 store"?

13 A So they would have a sign above it and,
14 you know, change colors to represent like if it
15 was Safway they would make it Safway and they
16 would reskin it if WalMart showed up to see what
17 they thought their grocery section should look
18 like just to give those executives a feel for what
19 that was and make it more close to what they would
20 be experiencing in their own stores.

21 Q You mentioned working with planograms
22 related to your work at Procter & Gamble; is that

1 right?

2 A That's right.

3 Q What do you mean by planogram?

4 A Well, in that context, you know, people
5 are trying to maximize their revenues and profits
6 from the sale of products, and a place like a
7 store, I discuss in my deposition, you know, what
8 planograms mean, but you kind of need to know
9 where products are, what they look like facing
10 you, how many products you're selling somewhere
11 and at what level, you know, and what are they
12 with respect to on what shelf, how high up it is,
13 how far to the left and right it is, what's next
14 to it, what's to the right of it, you know, and
15 other various kinds of information like what does
16 it -- what is the product, more information about
17 the product, things like that. So you're trying
18 to keep track of all that. So they had a system,
19 an inventory system and a database for driving the
20 displays in such a way that they could simulate
21 different kinds of setups of stores for the
22 purpose of maximizing profits.

1 Q When you say inventory system, what did
2 you mean by that?

3 A I just meant that like they knew what
4 products they had, not necessarily how many they
5 had.

6 Q Was that in a database?

7 A Yeah.

8 MR. MOFFA: Objection. Form to the
9 question.

10 BY MR. FAHY:

11 Q Was the inventory system database, was
12 that just a dataset or was there some visual
13 depiction component to it?

14 MR. MOFFA: Objection. Form.

15 BY THE WITNESS:

16 A Yeah. In order to make a, you know, a
17 relevant depiction of the system, they would have
18 the correct size of the products to be able to
19 show you, you know, what that looked like.

20 BY MR. FAHY:

21 Q So in the planogram -- strike that.

22 Did you personally design the planogram

1 that you've testified about for Procter & Gamble?

2 MR. MOFFA: Objection. Form.

3 BY THE WITNESS:

4 A I did not personally design their
5 database. They had a database, but I helped use
6 it.

7 BY MR. FAHY:

8 Q What information was included in the
9 database?

10 MR. MOFFA: Objection. Form. Objection.
11 Foundation. Objection. Relevance.

12 BY MR. FAHY:

13 Q So the question was what kind of
14 information was in the database; is that correct?

15 A Yes. So the database had products -- so
16 there's one table of what products there were,
17 what they looked like, what their sizes were, and
18 then that would then get placed into a table that
19 involved placement and so that then when a user
20 looked at the screen, they could see what the
21 store would be depicted like if they decided to
22 put up three rows of cereal boxes from a Procter &

1 Gamble source or dishwasher detergent, how much
2 space that would take up on the screen that
3 represented the shelves, whether they were
4 vertically placed or across multiple shelves in a
5 row. It would help you sort of figure out
6 horizontally and vertically where things were.

7 Q How was that information depicted?

8 MR. MOFFA: Objection. Form. Objection.
9 Foundation.

10 BY THE WITNESS:

11 A So it would be depicted on a seamless
12 large scale display, probably the size of a store
13 aisle that you would typically see, and there were
14 multiple aisles and it would be reprojected onto
15 that screen so that a user walking in front of it
16 would feel like they were walking down an aisle
17 with things on the left and righthand side and
18 then there were end caps that had a different kind
19 of style display on them, but the point was to try
20 to make it as seem as much like a store as much as
21 possible and that there were items on the shelves
22 that people could see.

1 BY MR. FAHY:

2 Q But in the planogram database, what was
3 the nature of the information that you just
4 described? Was it coordinates? Was it numbers?

5 MR. MOFFA: Objection. Form. Objection
6 foundation.

7 BY THE WITNESS:

8 A What I recall is that we were able to see
9 depictions of different products where we would
10 say, oh, there's three products of this type at
11 this level, you know, there would be X, Y
12 coordinates that would allow you to tell it where
13 to put the product and then the extent and display
14 of the size of the product box would be -- would
15 come from figuring out the extent of the display
16 based on how many inches it was wide, and how it
17 tall it was and then projecting it and
18 understanding that it needed to be real life size.

19 BY MR. FAHY:

20 Q Was there any other information included
21 in the planogram?

22 MR. MOFFA: Objection. Form. Objection.

1 Foundation.

2 BY THE WITNESS:

3 A Outside of products, what shelf they're
4 on, where they are on the shelf, how high the
5 shelf was up and the extent of the product so that
6 you could have an active depiction of the front of
7 the aisle. I don't recall more.

8 BY MR. FAHY:

9 Q Have you ever personally designed a
10 planogram for retail stores?

11 A So I've not designed a planogram for
12 retail stores, but I have designed several
13 electronic shopping websites and the databases
14 behind them.

15 Q So you've never personally designed a
16 planogram for a retail store?

17 A I don't believe so. Only just that I've
18 used them for Procter & Gamble and built real life
19 systems that provide a real life store experience
20 for people virtually as if they're walking down
21 the aisles of a real store.

22 Q But you've never personally designed a

1 planogram for a retail store; is that right?

2 MR. MOFFA: Counsel, objection. You've
3 asked the question twice and gotten an answer.

4 MR. FAHY: Counsel, I'm going to ask you
5 not to coach the witness on the record. The PTAB
6 Trial Practice & Rules are very clear on this
7 point. You may object to form and that is it.
8 BY MR. FAHY:

9 Q Mr. Surati or Dr. Surati, can you please
10 answer my question?

11 A Sure. I can -- I haven't -- I think I --
12 you asked that and I answered it, but to restate
13 what I said, I personally haven't designed a
14 planogram database. I've used one and I've built
15 systems using a planogram database that depict a
16 real life situation in a store virtually using
17 real life sized imaged products to seem like
18 you're in a store walking down the aisles.

19 Q And that was with your work for Procter &
20 Gamble?

21 A It was with my work for Scalable Display
22 Technologies which was providing the technology to

1 Procter & Gamble but yes.

2 Q Other than that work for scalable display
3 technologies for Procter & Gamble, have you ever
4 used planograms for retail stores?

5 A Let me think about that.

6 MR. MOFFA: Objection to form.

7 BY THE WITNESS:

8 A Yeah, I would just say between 2008 and
9 2018 I was working on these systems. I have so
10 many different clients that it's possible that I
11 did, but I can't recall. I think there was
12 another one that used the technology, but I can't
13 recall off the top of my head who that was. It
14 might have been Wegmans, but I'm not sure.

15 BY MR. FAHY:

16 Q So you don't know one way or the other?

17 A I'll just say that I think there was one
18 and I can't recall it and the only -- another
19 related matter was I was working for -- working
20 for a grocery chain whose name I recall in the
21 south, and I worked on pricing databases for them
22 but that had less to do with extent of front store

1 space because it had more to do with their pricing
2 databases and suggesting products to people.

3 Q Was that a planogram?

4 A That was not a planogram. It did not --
5 it was an electronic shopping website so in terms
6 of a planogram being related to a physical retail
7 space, it wouldn't qualify.

8 Q Just so the record is clear, other than
9 your work for Scalable Display Technologies for
10 Procter & Gamble, you've never personally used a
11 planogram for a retail store; is that right?

12 MR. MOFFA: Objection. Form.

13 BY THE WITNESS:

14 A So, like I said before, I worked with
15 Procter & Gamble using their planogram software
16 over the course of 10 years to provide a retail
17 presence for their virtual stores, and other than
18 that and what I mentioned before, possibly doing
19 something similar, I have not.

20 BY MR. FAHY:

21 Q Have you authored any publications on
22 planograms for retail stores?

1 A I don't believe I have.

2 Q Did any of your graduate studies
3 specifically address planograms for retail stores?

4 A I don't believe so.

5 Q Do any of the technology advisory boards
6 that you participate in do planograms for retail
7 stores?

8 MR. MOFFA: Objection. Foundation,
9 Objection. Form.

10 BY THE WITNESS:

11 A Yeah, I'm trying to remember. Some time
12 back I did work with a company on optimization
13 related to that, so using data about where to
14 place items on shelves and what people were
15 looking at, but it was some time ago so I can't
16 really recall the name off the top of my head.

17 BY MR. FAHY:

18 Q So you can't recall whether any of the
19 technology advisory boards you participate in deal
20 with planograms for retail stores?

21 MR. MOFFA: Objection. Form.

22 BY THE WITNESS:

1 A I would just say that I recall working on
2 something related to planograms and optimization
3 of pricing and product placement for a company,
4 but I don't recall what the name of the company
5 was is.

6 BY MR. FAHY:

7 Q Do you recall what specifically you worked
8 on?

9 A That I worked on.

10 Q For the company that you just mentioned
11 related to planograms and pricing optimization?

12 A Well, just taking in data and doing some
13 kind of optimization and recommending what sort of
14 linear programming optimization they might
15 consider.

16 Q What do you mean by linear programming
17 optimization?

18 A Just trying to find the best
19 suggestible -- the best suggestible placement or
20 price or what to show to a customer to try to get
21 them to buy it.

22 Q What kind of planogram were you working

1 with?

2 A Just the type of thing where you'd know
3 where on a set of shelves what things you could
4 display and where to display them and where users
5 were looking.

6 Q Do you recall what information was
7 included in that planogram?

8 A It was kind of X, Y, like in the patent,
9 and then what the products were and what extent
10 the products took up, and then there was
11 information about, you know, what product boxes
12 caught people's attention and things like that.

13 Q Do any of the awards you list in your CV,
14 Exhibit 2002, are they specific to planograms for
15 retail stores?

16 MR. MOFFA: Objection. Form.

17 BY THE WITNESS:

18 A I don't believe so.

19 BY MR. FAHY:

20 Q Do any of your patents listed in your CV,
21 SES-2002, specifically mention planograms for
22 retail stores?

1 A No. I would just say that the technology
2 that I described that Procter & Gamble was using
3 for displays is described in Patent No. 6,456,339,
4 but that's the display portion.

5 Q Do any of your publications listed in your
6 CV, SES-2002, specifically mention planograms for
7 retail stores?

8 MR. MOFFA: Objection. Foundation.
9 Objection. Relevance. And objection. Form.
10 BY THE WITNESS:

11 A I don't believe so.

12 BY MR. FAHY:

13 Q Do any of the invited talks listed in your
14 CV, SES-2002, specifically address planograms for
15 retail stores?

16 MR. MOFFA: Objection. Foundation.
17 Objection. Form. Objection. Relevance.
18 BY THE WITNESS:

19 A So the only thing I'd say is if you look
20 at the second publication or the presentation, I
21 probably -- I used this Nvidia GPU system to
22 implement the system that was at Procter & Gamble,

1 but outside of that I don't think so.

2 BY MR. FAHY:

3 Q In that talk, did you specifically mention
4 planograms for retail stores?

5 A I probably showed a display of it, but I
6 can't recall if I put a picture of that store in
7 there, but certainly the hardware and how it's
8 described to create a flat screen across a big
9 seamless area is there.

10 Q Have you taught any courses specifically
11 mentioning planograms for retail stores?

12 MR. MOFFA: Objection. Foundation.
13 Objection. Form.

14 BY THE WITNESS:

15 A I don't believe so.

16 BY MR. FAHY:

17 Q Have you ever personally designed
18 electronic shelf labels?

19 MR. MOFFA: Objection. Form.

20 BY THE WITNESS:

21 A I don't think so.

22 BY MR. FAHY:

1 Q Have you ever personally used electronic
2 shelf labels?

3 A So I've seen them at various trade shows
4 and in stores and because I'm in the display
5 industry, there's a lot of interest in using
6 E ink-based displays and so I have familiarity
7 from looking at different kinds of technologies to
8 display electronic store labels.

9 Q What E ink-based displays?

10 A So if you think about low power mechanisms
11 to display things, like an LCD, has a backlight
12 and the problem with that is you always have to
13 have power on and what you'd rather have is
14 something that gets stuck in a place and once it's
15 there it doesn't require more energy.

16 I'm not sure if E ink qualifies there, but
17 the basic idea is that E ink is a display like you
18 have probably seen the Amazon Kindle and the
19 Amazon Kindle uses an E ink display which has lots
20 of -- they have either -- the most primitive form
21 has white, little tiny white balls and black balls
22 and they can move them around with the capacity

1 of -- sorry, they have electrodes embedded in the
2 screen that let them move things around so then
3 you can configure the system to have black beads
4 where you'd like the type to show up and white
5 beads where the type shouldn't show up and when
6 you do that -- there may be a way to switch them.
7 I haven't looked this up.

8 So the point is you could get them into a
9 state where you can see a nice white thing and
10 black and I believe they have a large footprint in
11 the electronic shelf label business because their
12 technology is very good at high contrast but not
13 necessarily taking a lot of power.

14 Q Have you authored any publications on
15 electronic shelf labels?

16 A I have not.

17 Q Did any of your graduate studies
18 specifically address electronic shelf labels?

19 MR. MOFFA: Objection. Form.

20 BY THE WITNESS:

21 A I don't think so.

22

1 BY MR. FAHY:

2 Q Do any of the technology advisory boards
3 you participate in deal specifically with
4 electronic shelf labels?

5 A No, I don't think so.

6 Q Do any of the of the awards that you list
7 in your CV, SES-2002, are any of those awards
8 specific to electronic shelf labels?

9 A I don't think so.

10 Q Do any of your patents listed in your CV
11 specifically mention electronic shelf label?

12 MR. MOFFA: Objection. Foundation.

13 BY THE WITNESS:

14 A I don't think so.

15 BY MR. FAHY:

16 Q Do any of your publications listed in your
17 CV specifically mention electronic shelf labels?

18 MR. MOFFA: Objection. Foundation.

19 BY THE WITNESS:

20 A I don't think so.

21 BY MR. FAHY:

22 Q Do any of the invited talks listed in your

1 CV specifically address electronic shelf labels?

2 MR. MOFFA: Objection. Foundation.

3 BY THE WITNESS:

4 A I don't think so.

5 BY MR. FAHY:

6 Q Have you taught any courses specifically
7 mentioning electronic shelf labels?

8 MR. MOFFA: Objection. Form.

9 BY THE WITNESS:

10 A I don't think so.

11 BY MR. FAHY:

12 Q You'd agree with me that electronic shelf
13 labels or planograms are not mentioned
14 specifically anywhere in your CV, SES-2002?

15 MR. MOFFA: Objection. Form.

16 BY THE WITNESS:

17 A I have not expressly called out the words
18 planogram or electronic shelf labels; however, I
19 have given you some background on my experience
20 using those technologies and those words in
21 different scenarios.

22 BY MR. FAHY:

1 Q So why do you believe you are qualified to
2 provide expert testimony on electronic shelf
3 labels and planograms for retail stores?

4 MR. MOFFA: Objection. Form.
5 BY THE WITNESS:

6 A I think that there's a section of your
7 petition where Dr. Tenzeris' states as to what he
8 thinks a qualified POSITA would be to be able to
9 read the patent and determine what the claims mean
10 in the context of the -- sorry, what the words in
11 the claims mean and what the claims mean in the
12 context of claims, the patent specification in the
13 patent file history, and I believe I meet the
14 qualifications he has asked for to be qualified to
15 opine in this proceeding.

16 I'm kind of getting -- I need to go to the
17 restroom..

18 Q Sure, we can take -- how much time do you
19 want, 5 or 10 minutes?

20 THE WITNESS: 7 minutes or 8 -- 10 minutes
21 is fine.

22 MR. FAHY: We can take a break and go off

1 the record.

2 THE WITNESS: Okay. Thank you.

3 (A recess was had.)

4 BY MR. FAHY:

5 Q Dr. Surati, on the break, did you speak
6 with anyone regarding your deposition testimony?

7 A Not at all.

8 Q Dr. Surati, now electronic shelf labels
9 were known in 2012, right?

10 A I think that's fair.

11 Q And planograms for retail stores were
12 known in 2012?

13 A I think that's fair.

14 Q Are you familiar with the acronym NFC?

15 A I am.

16 Q What does that stand for?

17 A Near-field communication.

18 Q And near-field communication was known in
19 2012, right?

20 A I think that's fair.

21 Q In fact, near-field communication
22 technology was used in retail settings by 2012?

1 A I think that's fair. I think I talk about
2 that in my NFC section.

3 Q And you mentioned I believe RFID earlier
4 today.

5 Do you recall that?

6 A I did.

7 Q What is RFID?

8 A Radio frequency ID.

9 Q And RFID technology was widely known by
10 2012, correct?

11 MR. MOFFA: Objection. Form.

12 BY THE WITNESS:

13 A Sure. Generally speaking I would say that
14 all those concepts were known by 2012.

15 BY MR. FAHY:

16 Q And they were suitable for use in retail
17 settings by 2012, right?

18 MR. MOFFA: Objection to Form.

19 BY THE WITNESS:

20 A I think there were standard mechanisms for
21 using them for electronic shelf labels and things
22 like that, sure.

1 BY MR. FAHY:

2 Q Are you familiar with RFID UHF?

3 A I am.

4 Q What does that mean?

5 A UHF specifies a frequency range I think
6 from 300 to I don't know, something, but usually
7 it's 900MHz.

8 Q What does UHF stand for?

9 A Ultra high frequency.

10 Q So how does RFID UHF differ from just
11 RFID?

12 A It's using a different frequency, it's
13 using radiative coupling as opposed to like
14 inductive coupling.

15 Q What is radiative coupling?

16 A It just means that you can excite the
17 system, you know, going head on, and power is
18 being emanated whereas in inductive coupling is a
19 slightly different way of coupling into a system
20 where you have to be at a particular orientation
21 and things like that.

22 Q Particular orientation for what?

1 A For the magnetic field to couple into the
2 system.

3 Q How is that accomplished?

4 MR. MOFFA: Objection. Form, foundation.
5 BY THE WITNESS:

6 A So in inductively coupled systems, you'll
7 have one system coupling with the other through
8 coils typically, and those coils will generate a
9 magnetic field and that magnetic field when it
10 intersects a surface prescribed by the other coil
11 in such a way that the field is perpendicular to
12 it, then it would be coupling into that system.

13 BY MR. FAHY:

14 Q How is that different if at all to
15 radiative coupling?

16 A Radiative coupling means that the
17 radiative system is impinging on an antenna and
18 exciting the antenna.

19 Q How does it accomplish that?

20 MR. MOFFA: Objection. Form.

21 BY THE WITNESS:

22 A Through Maxwell's equations.

1 BY MR. FAHY:

2 Q Are there any other differences between
3 RFID UHF and RFID?

4 MR. MOFFA: Objection. Form.

5 BY THE WITNESS:

6 A RFID UHF is ultra high frequency. RFID is
7 a more general term.

8 BY MR. FAHY:

9 Q What about RFID HF, what does that mean?

10 A That is high frequency.

11 Q How does RFID HF differ if at all from
12 RFID UHF?

13 A I believe that the RFID passive systems
14 are more likely to be inductively coupled in the
15 passive sense, but definitely different
16 frequencies.

17 Q What do you mean by passive systems?

18 A Ones that aren't powered.

19 Q When you say passive systems are more
20 likely to be inductively coupled, why do you say
21 that?

22 A Just because --

1 MR. MOFFA: Objection, Objection. Form.

2 BY THE WITNESS:

3 A Oh, I think what's true is in the passive
4 use case things have to be closer because they're
5 not powered, and so generally when they're powered
6 there's always a component, a radiative and
7 inductive coupling in these systems, but the
8 majority of it would be inductive because the
9 power of the B fields go off so much faster in the
10 case of inductive coupling.

11 BY MR. FAHY:

12 Q So do you know a reactive component --

13 A In the reactive component but okay.

14 Q Sorry. Are you done?

15 A I think I am.

16 Q Are passive systems ever radiatively
17 coupled?

18 A I think they can be. If you look at
19 Maxwell's equations, you probably could get a
20 backscatter from a system, like for example, in a
21 UHF system, it's probably radiatively coupled.

22 Q What do you mean by backscatter?

1 A So backscatter would be the reflection of
2 a signal off an antenna.

3 Q Other than inductive coupling and
4 radiative coupling, are there any other forms of
5 coupling?

6 MR. MOFFA: Objection. Form. Objection.
7 Foundation.

8 BY THE WITNESS:

9 A I don't believe so but in terms of the
10 technologies here, those are the ones people tend
11 to care about.

12 BY MR. FAHY:

13 Q Are you familiar with RFID 13.56 MHz?

14 A I think that 13.56 MHz has to do with the
15 RFID HF technology.

16 Q Is NFC just a different name of RFID HF or
17 is it different from RFID HF in some way?

18 MR. MOFFA: Objection. Form.

19 BY THE WITNESS:

20 A I think I go into that in my declaration.
21 But, yeah, they're different.

22

1 BY MR. FAHY:

2 Q What are the major differences between
3 RFID HF?

4 A I think RFID HF readers can't necessarily
5 read NFC but NFC readers can read RFID HF signals.
6 I think that the typical distances over which
7 things work is less for NFC than RFID HF for
8 passive systems. I think, yeah, I think those are
9 reasonable limits to think about. I could go into
10 my report and look and see if there are any other
11 ones I discuss.

12 BY MR. FAHY:

13 Q Is NFC still using radio frequency
14 technology?

15 A Well, in terms of it's using 13.56MHz,
16 sure.

17 MR. MOFFA: Objection. Form to the prior
18 question.

19 BY MR. FAHY:

20 Q I think I asked you this before but I
21 can't quite remember.

22 So just for the record, are you or have

1 you in the past done any other work outside of
2 these proceedings for the patent owner?

3 A Oh, no. Yeah, so the only thing I have
4 done is worked on a different IPR. So as long as
5 you mean by the proceedings there's two different
6 IPRs, I've worked on, that's the only things I've
7 ever worked on for SESimagotag.

8 Q Thank you. When you were contacted by
9 counsel for this IPR, were you given an
10 assignment?

11 MR. MOFFA: Objection. I'm going to
12 instruct the witness not to answer on the basis of
13 privilege.

14 BY MR. FAHY:

15 Q Dr. Surati, are you going to follow your
16 counsel's instruction?

17 A I am.

18 MR. FAHY: Mr. Williams, if we could bring
19 up Exhibit 2001, SES 2001.

20 AV TECH WILLIAMS: Stand by.

21 (A certain document was marked Surati
22 Deposition Exhibit SES-2001 for identification, as

1 of 11/22/2024.)

2 BY MR. FAHY:

3 Q Dr. Surati, do you recognize SES 2001?

4 A Yes, this appears to be or is my
5 declaration in support of the patent owner's
6 response for IPR 2024-00189.

7 Q If we could turn to Paragraphs 4 and 5
8 which start on the bottom of Page 1?

9 A Yes, sir.

10 Q Do Paragraphs 4 and 5 identify the
11 materials you considered in evaluating whether the
12 asserted patent claims are valid?

13 MR. MOFFA: Objection. Form, and I'm
14 going to add objection, relevance.

15 BY THE WITNESS:

16 A What's the question? I'm sorry. You said
17 Documents 4 and 5 represent what again?

18 BY MR. FAHY:

19 Q My question was do Paragraphs 4 and 5 of
20 your declaration, SES-2001, do they identify the
21 materials you considered in evaluating whether the
22 asserted patent claims are valid?

1 MR. MOFFA: Objection. Form. Objection.
2 Relevance.

3 BY THE WITNESS:

4 A I think that's fair.

5 BY MR. FAHY:

6 Q Did you consider anything else besides the
7 information in Paragraphs 4 and 5 of SES-2001?

8 MR. MOFFA: Objection. Form.

9 BY THE WITNESS:

10 A If it's not in there, I believe I looked
11 at relevant standards and things in a people
12 consider normal ranges and things like that for
13 these technologies, but other than that, that's
14 what I would say and those usually are contained
15 in standards.

16 BY MR. FAHY:

17 Q What standard specifically?

18 A I think we talked about a standard you all
19 referred to 14443-2 as an example.

20 Q Is that an ISO standard?

21 A It is.

22 Q Other than the ISO standards and the

1 information listed in Paragraphs 4 and 5 of your
2 declaration, did you consider anything else in
3 forming your opinions?

4 MR. MOFFA: Objection. Form.

5 BY THE WITNESS:

6 A I would just say my own knowledge and
7 experience based on the field of software systems
8 described below as well as the following materials
9 or the prior following materials, sorry.

10 BY MR. FAHY:

11 Q Anything else?

12 A Nothing else unless it's mentioned in my
13 report but not in Paragraphs 4 and 5.

14 Q So you did not consider the deposition of
15 Dr. Tinzeris in forming your opinions?

16 A I don't believe so. I don't quote him.
17 Actually that's not fair. I guess I may have
18 missed that.

19 Q Missed that how?

20 A By not including that on this list.
21 Sorry.

22 Q Did you consider the deposition of

1 Dr. Tinzeris?

2 A I did.

3 Q But that's not disclosed anywhere in your
4 declaration, is it?

5 MR. MOFFA: Objection. Form.

6 BY THE WITNESS:

7 A I'd have to look.

8 BY MR. FAHY:

9 Q Did your counsel advise you --

10 MR. MOFFA: Counsel, were you finished
11 answering the question?

12 BY THE WITNESS:

13 A Oh, no. Sorry.

14 BY MR. FAHY:

15 Q Go ahead.

16 A So I don't believe -- just one second. I
17 don't mention it in here, but it's one of the
18 Exhibits 2024.

19 Q But you don't mention Dr. Tinzeris'
20 deposition anywhere in your declaration, right?

21 A Not that I see.

22 MR. MOFFA: Objection. Form.

1 BY MR. FAHY:

2 Q Did anyone advise you on how to evaluate
3 Hanshow's invalidity allegations?

4 MR. MOFFA: Objection. Form.

5 BY THE WITNESS:

6 A Well, I think there's a section called
7 Legal Standards, and that's advice that I got from
8 counsel on how to do this.

9 BY MR. FAHY:

10 Q What is your understanding of the
11 obviousness analysis?

12 MR. MOFFA: Objection. Form. Objection.
13 Relevance. Objection. Foundation.

14 BY THE WITNESS:

15 A So in my report under Section B: I have
16 been informed by counsel and I understand the
17 documents and materials that qualify as prior art
18 can render a patent claim unpatentable as obvious.

19 I've been informed by counsel and
20 understand that all prior art references are to be
21 looked at from the viewpoint of a person of
22 ordinary skill in the art at the time of the

1 invention and that this viewpoint prevents one
2 from using his or her own insight or hindsight in
3 deciding whether a claim is obvious.

4 I have been informed by counsel and
5 understand that a claim is unpatentable for
6 obviousness under 35 USC Subsection 103 in the AIA
7 form of that statute that applies to the '340
8 patent. If the differences between the claimed
9 invention and the prior art are such that the
10 claimed invention as a whole would have been
11 obvious before the effective filing date of the
12 claimed invention to a person having ordinary
13 skill in the art to which the claimed invention
14 pertains, I've been informed by counsel and
15 understand that obviousness can be based upon a
16 combination of references.

17 I've been informed by counsel and
18 understand that the combination of familiar
19 elements according to known methods is likely to
20 be obvious when it does no more than yield
21 predictable results. However, I'm informed by
22 counsel and understand that a patent claim

1 composed of several elements is not proved obvious
2 merely by demonstrating that each of its elements
3 was independently known in the prior art.

4 I've been informed by counsel and
5 understand that when a patented invention is a
6 combination of known elements, a court must
7 determine whether there was an apparent reason to
8 apply the known elements in the fashion claimed by
9 the patent at issue by considering the teachings
10 of prior art references the effects and demands
11 known to people working in the field are present
12 in the marketplace and the background knowledge
13 possessed by a person having ordinary skill in the
14 art.

15 I've been informed by counsel and
16 understand that a patent claim composed of several
17 limitations is not proved obvious merely by
18 demonstrating that each of its limitations was
19 independently known in the prior art.

20 I've been informed by counsel for the
21 petitioner and understand that identifying the
22 reason those elements would be combined would be

1 important because inventions in many instances
2 rely upon building blocks long since uncovered
3 claimed discoveries almost a necessity will be a
4 combination of what in some sense is already
5 known.

6 (Reporter clarification).

7 I'm informed by counsel and understand
8 that it is improper to use hindsight in an
9 obviousness analysis and the patent claims should
10 not be used as a roadmap.

11 I'm informed by counsel and understand
12 that an obviousness inquiry requires consideration
13 of the following factors, one, the scope and
14 content of the prior art; two, the differences
15 between the claim and the prior art; three, the
16 levels of ordinary skill in the pertinent art,
17 and, four, any objective indicia of nonobviousness
18 such as commercial success, long felt but
19 unresolved need, failure of others, industry
20 recognition, copying and unexpected results. I
21 understand that the foregoing factors are
22 sometimes referred to as the greyhound factors.

1 I've been informed by counsel and
2 understand that an obviousness evaluation can be
3 based on a combination of multiple prior art
4 reference prior art references. I understand that
5 the prior art references themselves may provide a
6 suggestion, motivation or reason to combine but
7 that the nexus linking two or more prior art
8 references is sometimes simple commonsense.

9 I've been informed by counsel and
10 understand the obviousness analysis recognizes
11 that market demand rather than scientific
12 literature often drives innovation and that a
13 motivation to combine references may be supplied
14 by the direction of the marketplace.

15 I've been informed by counsel and
16 understanding that if a technique has been used to
17 improve one device and a person of ordinary skill
18 at the time of the invention would have recognized
19 that it would improve similar devices in the same
20 way using the technique is obvious unless its
21 actual application is beyond his or her skill.

22 I've been informed by counsel and

1 understanding that practical and uncommon -- and
2 commonsense considerations should guide a proper
3 obviousness analysis.

4 Because familiar items may have obvious
5 uses beyond their primary purpose, I've been
6 informed by counsel and understand that a person
7 of ordinary skill looking to overcome a problem
8 will often be able to fit together the teachings
9 of multiple prior art references.

10 I've been informed by counsel and
11 understand that obviousness analysis, therefore,
12 take into account the inferences and creative
13 steps that a person of ordinary skill would have
14 employed at the time of the invention.

15 I've been informed by counsel and
16 understand that a proper obviousness analysis
17 focuses on what was known or obvious to a person
18 of ordinary skill at the time of the invention,
19 not just the patentee. Accordingly, I understand
20 that any need or problem known in the field of
21 endeavor at the time of invention and addressed by
22 the patent can provide a reason for combining the

1 elements in the manner claimed.

2 I've been informed by counsel and
3 understand that a claim can be obvious in light of
4 a single reference without the need to combine
5 references if the elements of the claim that are
6 not found explicitly or inherently in the
7 reference can be supplied by commonsense of when
8 one skilled in the art.

9 I've been informed by counsel and
10 understand that secondary indicia of
11 nonobviousness may include, one, a long felt but
12 unmet need in the prior art that was satisfied by
13 the invention of the patent; two, commercial
14 success or processes covered by the patent; three,
15 unexpected results achieved by the invention;
16 four, praise of the invention by others skilled in
17 the art; five, taking of licenses under the patent
18 by others; six, deliberate copying of the
19 invention; seven, failures of others to find a
20 solution to long felt need and skepticism by
21 experts.

22 I understand that evidence of secondary

1 indicia of nonobviousness if available should be
2 considered as part of the obviousness analysis.

3 I have been informed by counsel and
4 understand that there may be a relationship
5 between any such secondary consideration and the
6 invention and the contemporaneous and independent
7 invention by others as a secondary consideration
8 supporting an obviousness determination.

9 In sum, my understanding is that prior art
10 teachings are properly combined where one of
11 ordinary skill having the understanding and
12 knowledge reflected in the prior art and motivated
13 by the general problem facing the inventor would
14 have been led to make a combination of elements
15 recited in the claims.

16 Under this analysis, the prior art
17 references themselves or any need or problem known
18 in the field of endeavor at the time of the
19 invention can provide a reason for combining the
20 elements of multiple prior art references in the
21 claimed manner.

22 I have been informed by counsel and

1 understanding that the an inter partes review --
2 that in an inter partes review the petitioner
3 shall have the burden of proving the proposition
4 of unpatentability including a proposition of
5 obviousness by a preponderance of the evidence.

6 And that's what I've written about it.

7 Q So other than what you've written in your
8 declaration, did you have any other understanding
9 of how to evaluate obviousness?

10 A Let me just look at this for a second.

11 I think there's this notion of
12 anticipation under Section 102 of the rules,
13 that's there as well, and I think there's a
14 mention of that in my report.

15 Q But you're not providing any opinions on
16 anticipation, are you?

17 A I don't think I did, but I can take a
18 look.

19 Q You don't recall whether you provided
20 opinions on anticipation?

21 A In Paragraph 60, I say: I have been
22 informed by counsel that Fujiwara qualifies as

1 prior art under 102-B because it was published on
2 April 3rd, 2008 which more than one year before
3 the '340 patent's April 11, 2012 claimed priority
4 date, but, yeah, other than that I don't think
5 there's anything here.

6 Q You just mentioned a minute ago in your
7 testimony secondary considerations?

8 A Uh-huh.

9 Q I believe you were reading Paragraph 35 of
10 your declaration; is that right?

11 A That's right. I'm just looking at this.
12 I'm not sure that's -- oh, Paragraph 35 is under
13 level of skill in the art.

14 Q I'm looking at Page 12, Paragraph 35 of
15 exhibit --

16 A Oh, sorry. I'm in the wrong tab. Sorry.

17 Q Do you see Paragraph 35 of your
18 declaration?

19 A Oh, I may have read into the record
20 something that was in Dr. Tinzeris' declaration.
21 I'm sorry about that.

22 Q But what you read into the record comports

1 with your general understanding of the obviousness
2 analysis?

3 A I think so. Sorry about that.

4 Q So then turning to Paragraph 35 of your
5 declaration, SES-2001, do you see where you list a
6 number of secondary considerations?

7 A Sure.

8 Q Yet you did not address any of those
9 secondary considerations elsewhere in your
10 declaration, did you?

11 MR. MOFFA: Objection. Form.

12 BY THE WITNESS:

13 A Just a moment.

14 So I was responding -- I have not
15 addressed those and I'm not aware from
16 Dr. Tinzeris' report where he does that.

17 BY MR. FAHY:

18 Q But you didn't try to find any of the
19 information listed in Paragraph 35 of your
20 declaration from patent owner, did you?

21 A No. I was responding to the declaration --
22 I'm sorry, to the arguments provided by --

1 provided by the petitioner on why the claims were
2 obvious, and since I didn't see Dr. Tinzeris
3 addressing that as an expert, I didn't feel I
4 needed to respond to it.

5 Q But you didn't independently seek out of
6 that information in Paragraph 35 of your
7 declaration from patent owner, correct?

8 A I don't recall doing that.

9 Q Did you draft your declaration, SES-2001,
10 yourself?

11 A So, this declaration was done as a group
12 effort, and I worked with different -- with the
13 counsels, particularly -- together we looked at
14 what the petition said and how to respond to it
15 together and I read things on my own and we
16 drafted this together, but ultimately all the
17 opinions in the report are mine.

18 Q Do you recall what parts that you did not
19 draft?

20 MR. MOFFA: Objection. Form.

21 BY THE WITNESS:

22 A I believe I did not draft the relevant

1 legal standards section.

2 BY MR. FAHY:

3 Q Other than the relevant legal standards,
4 did you draft the rest of your declaration?

5 A I mean, the rest of it was discussed
6 jointly.

7 MR. MOFFA: Objection. Form.

8 BY MR. FAHY:

9 Q Other than the relevant legal standards,
10 did you personally draft the rest of your
11 declaration?

12 MR. MOFFA: Objection. Form.

13 BY THE WITNESS:

14 A I mean, I was involved in it. I edited it
15 and I wrote some of it and I can't recall each and
16 every paragraph -- I write a lot of reports -- I
17 was involved in but ultimately, again, all the
18 opinions in the report are mine.

19 BY MR. FAHY:

20 Q If you can direct your attention to
21 Paragraph 59 of SES-2001, your declaration.

22 A Yes, sir.

1 Q You state in Paragraph 59: The typical
2 read range for 13.56MHz tags is less than 1 meter
3 (or 3 feet).

4 MR. MOFFA: Objection. Form.

5 BY THE WITNESS:

6 A So, yes, in Paragraph 59 I say: For a
7 RFID system operating at 13.56MHz, the approximate
8 distance at which the near-field zone ends is
9 $\text{Lambda over } 2 \text{ pi}$ or 3.5 meters. Beyond this
10 distance the magnetic field is reduced so low that
11 tags cannot be powered. Due to this typical read
12 range for a 13.56MHz tags is less than 1 meter or
13 three feet, and that's what you're asking about,
14 right?

15 Q Correct.

16 A So I stated what it says and I think it
17 comports with what you said.

18 Q Now, you don't provide any citations for
19 your conclusions in Paragraph 59 of your
20 declaration, do you?

21 MR. MOFFA: Objection. Form.

22 BY THE WITNESS:

1 A I don't, but I think that's considered.
2 That's well known.

3 BY MR. FAHY:

4 Q So where did you -- what is your basis for
5 your typical read range of less than 1 meter?

6 MR. MOFFA: Objection. Form.

7 BY THE WITNESS:

8 A Just one second.

9 BY MR. FAHY:

10 Q Do you understand the question,
11 Dr. Surati?

12 A Yes, I did. I'm just trying to look.

13 So I don't cite a particular document --
14 just one second.

15 Yes, so I don't believe that I've cited a
16 particular thing but as POSITA understands and
17 what I understand about it, that's what I
18 understand to be the limits.

19 Q That's just from your experience?

20 A From my experience and reading about using
21 these systems and working and so on and so forth.

22 MR. FAHY: I'd like for Mr. Williams to

1 bring up SES-2006.

2 AV TECH WILLIAMS: Stand by.

3 (A certain document was marked Surati
4 Deposition Exhibit 2006 for identification, as of
5 11/22/2024.)

6 BY MR. FAHY:

7 Q Dr. Surati, you are familiar with
8 SES-2006, right?

9 A Yes, this is the overview of RFI
10 technology, and its application in the food
11 industry.

12 Q You relied on this document to support
13 various statements in your declaration; is that
14 right?

15 A I did.

16 Q If we could return to Page R102.

17 A Sure.

18 Q And I'll direct your attention to the
19 column on the righthand side of R102 under the
20 heading Magnetic Induction.

21 A Sure.

22 Q Specifically the third paragraph under the

1 heading Magnetic Induction states in part: If the
2 strength of the magnetic field is too weak at a
3 given distance, the tag will not have sufficient
4 energy to switch itself on. At 13.56MHz, most
5 near-field systems have a practical operating
6 range between 0.01 and 0.30 meters, and it cites
7 (Want 2004).

8 Do you see that?

9 A I do.

10 Q Do you agree with that statement?

11 A I would just say that at most near-field
12 systems have a practical operating range between
13 .01 and .3 meters, and under that -- even under
14 that definition, the limitations within the claims
15 require something less than 20 centimeters and the
16 30-centimeter range that's discussed here does not
17 meet that limitation.

18 Q My question was related to your statement
19 in Paragraph 59 of your declaration, SES-2001,
20 where you state that the typical read range is
21 less than 1 meter whereas in SES-2006 the typical
22 read range of a 13.56MHz tag is .3 meters?

1 MR. MOFFA: Objection. Form. Counsel, is
2 that a question?

3 BY MR. FAHY:

4 Q Yes. Is the typical read range for
5 13.56MHz tag .3 meters or 1 meter?

6 MR. MOFFA: Objection. Form.

7 BY THE WITNESS:

8 A So both those statements -- what I said,
9 .3 meters is less than 1 meter, so those don't
10 contraindicate what I said. And, again, the
11 limitations within the patent are about being less
12 than 20 centimeters and the 30 centimeter
13 description you provided means that HF RFID being
14 used wouldn't necessarily meet the claim.

15 BY MR. FAHY:

16 Q But you'd agree with me that .3 meters is
17 significantly less than 1 meter, right?

18 MR. MOFFA: Objection. Form.

19 BY THE WITNESS:

20 A It's less than that. I don't know if it's
21 significantly less, but, again, as I said, it's
22 bigger than 20 centimeters which is what the

1 limitation says.

2 BY MR. FAHY:

3 Q I'd like to direct your attention back to
4 SES-2001, your declaration at Paragraph 67.

5 A Sure. Yes, sir.

6 Q You state in part in Paragraph 67: Thus,
7 special materials or distance between the antenna
8 and the metal or liquid is required to read an NFC
9 tag.

10 Do you see that?

11 A Uh-huh.

12 Q What do you mean by special materials?

13 A So I don't know if you're familiar with
14 magnetic permittivity, but you can do various
15 things with special kinds of materials to cause
16 magnetic fields that might have trouble --
17 normally next to a metal surface the B field would
18 be parallel to the surface, and that causes a
19 problem if you're trying to like inductively
20 couple into something that's perpendicular --
21 where the core is perpendicular to the surface but
22 if you add some materials you may be able to

1 direct the magnetic field in such a way that it
2 doesn't -- inside the material for some distance
3 it doesn't have to be parallel and at that point
4 you'll be able to redirect the field back in
5 through the loop.

6 So that would be an example of what I
7 could imagine something being that lets you couple
8 into that system. I'm trying to think of other
9 things, but that's kind of what I meant.

10 Q What about distance?

11 MR. MOFFA: Objection. Form.

12 BY THE WITNESS:

13 A I think there's this aspect of distance
14 that the material might provide that's relevant,
15 but, you know, how much material is between the
16 coil and the metal surface.

17 BY MR. FAHY:

18 Q So you're not saying that an RFID tag at
19 13.56MHz would not work in the presence of metals
20 or liquids, though, right?

21 MR. MOFFA: Objection. Form.

22 BY THE WITNESS:

1 A I think the way I describe it is it could
2 be negatively affected as to what distance you
3 could read it at, but you should be able to read
4 it at some distance probably. You might have to
5 put the thing right up next to it if you have some
6 of these special materials.

7 BY MR. FAHY:

8 Q What are those special materials again?

9 A Just things that have a property that they
10 will redirect the magnetic field such that it
11 loops into the coil in such a way that there's
12 some surface that's coupling the magnetic field.

13 Q But you'd agree that the 13.56 MHz tags
14 can be used in the presence of metals and liquids,
15 and that was known as of 2007, right?

16 MR. MOFFA: Objection. Form. Objection.
17 Foundation. Objection. Relevance.

18 BY THE WITNESS:

19 A I think, I mean, I would just say that
20 it's much more difficult so you have to do special
21 things. It's not unheard of.

22 BY MR. FAHY:

1 Q What special things?

2 A Just what I mention here, materials.

3 Q You also state in Exhibit SES-2001 at
4 Paragraph 67 the orientation of the reader to the
5 tag is also critical when reading an NFC tag.

6 Do you see that?

7 A I do.

8 Q What do you mean by critical?

9 A Critical just means that you need to make
10 sure that the B field according to Maxwell's
11 equations gets coupled into the coil so you can
12 excite the coil. If it's not coupled into the
13 system, it's not going to get powered. That
14 wouldn't be so great if you're trying to power
15 something that you're then trying to read.

16 Q How does the orientation of the reader
17 relate to that?

18 A Maybe a better way to say it is the
19 orientation of the coil with respect to the system
20 has to allow the B field from the coil to
21 intersect into the coil of the tag in such a way
22 that there's a B field coupling that causes a

1 voltage to be created in the coupled coil.

2 Q Are there any antennas that are less
3 sensitive to orientation?

4 MR. MOFFA: Objection. Form. Objection.
5 Foundation. Objection. Relevance.

6 BY THE WITNESS:

7 A I mean, if you have an omnidirectional
8 antenna, then maybe less problematic. I guess
9 there's ways to make directional and
10 nondirectional antennas.

11 BY MR. FAHY:

12 Q Does NFC require omnidirectional antennas?

13 MR. MOFFA: Objection. Form.

14 BY THE WITNESS:

15 A I don't believe so.

16 BY MR. FAHY:

17 Q Can you use omnidirectional antennas with
18 NFC technology?

19 A I think you could make an NFC -- I'm not
20 aware of this, but you often see this as a problem
21 at the cash register in terms of coupling the
22 systems, but could you design one? Potentially

1 you could make a set of coils that do that in 3D,
2 but I'm not aware that people do that typically.

3 Q So is it fair to say that directional
4 antennas would work better for NFC?

5 MR. MOFFA: Objection. Form. Objection.
6 Foundation.

7 BY THE WITNESS:

8 A Yeah, I mean I guess I would say that when
9 I use the word antenna here, I mean, we're talking
10 about inductive coupling so inductive coupling,
11 you know, requires the orientation of the systems
12 to be such that the B fields intersect in such a
13 way that there's an EMF created -- I'm sorry, that
14 a voltage is created when there's a change in the
15 B field.

16 BY MR. FAHY:

17 Q If you can look at Paragraph 58 of your
18 declaration, SES-2001.

19 A Uh-huh.

20 Q Here you say: Passive HF tags use
21 inductive coupling which uses an omnidirectional
22 magnetic flux from the reader in order to power --

1 A Let me get rid of something. Sorry. I
2 had my phone on airline but this stupid phone --

3 Q That's okay. I can ask that again.

4 Are you at Paragraph 58 of your
5 declaration?

6 A I am.

7 Q You say that passive HF tags use inductive
8 coupling which uses an omnidirectional magnetic
9 flux from the reader in order to power the tag.

10 Do you see that?

11 A Yes.

12 Q My question is, then, in Paragraph 67, you
13 say that orientation is critical so it's just not
14 clear from your declaration to me whether
15 omnidirectional or directional antennas work
16 better for NFC technology?

17 MR. MOFFA: Objection. Form.

18 BY THE WITNESS:

19 A I'm sorry. So I think that paragraph that
20 talks about flux basically kind of tries to
21 indicate to you that inductively a single coil has
22 a particular directionality to it so if you say

1 that's an antenna then the directionality of that
2 antenna is basically a function of how would an
3 external B field intersect with it if you're
4 trying to do some kind of coupling.

5 So for NFC I would say that if you have
6 one coil it's directional. If you have maybe a
7 couple of coils, you could try to get more
8 coupling.

9 So when you say better, I'm not sure what
10 you mean by better because maybe it's great to
11 have an omnidirectional system although it might
12 be more expensive to couple into the system. So I
13 don't know. When we say better I don't know what
14 that means. There's a lot of considerations of
15 what better could mean in the context of your
16 question.

17 BY MR. FAHY:

18 Q If we can now turn to Exhibit SES-2001,
19 your declaration, at Paragraph 71 to 79 where you
20 discuss claim construction of planogram.

21 A Yes, sir.

22 Q What is the definition of planogram that

1 you applied in your validity analysis?

2 MR. MOFFA: Objection. Form.

3 BY THE WITNESS:

4 A I don't think I explicitly entail it in
5 this description. I talk about the bounds of what
6 it should mean and then sort of at the end I
7 say -- let me just see here.

8 Paragraph 79: For these reasons, in my
9 opinion a POSITA would understand that the term
10 planogram as generally understood meaning in the
11 art it has a set of common features which I've
12 described above and that the '709 patent was used
13 in a term consistent with that plain meaning.

14 Q I'll ask you what explicitly are the
15 minimum requirements of planogram to satisfy your
16 definition?

17 MR. MOFFA: Objection to Form. Objection.
18 Relevance.

19 BY THE WITNESS:

20 A I could read you what I wrote and I don't
21 know -- I'm not trying to offer new opinions here.
22 I'm just telling you what I wrote, and that I have

1 written it to try to explain the bounds of what I
2 mean. It certainly includes some notion of
3 position and extent of products and things like
4 that but, again, I'm not trying to offer new
5 opinions here.

6 BY MR. FAHY:

7 Q So other than some notion of position and
8 extent of products, what else does your definition
9 of planogram require?

10 MR. MOFFA: Objection. Form. Objection.
11 Relevance.

12 BY THE WITNESS:

13 A I mean, why don't I just -- in
14 Paragraph 71 I say there is a description about
15 why you would use a system. It's a layout or
16 blueprint that deals with the position of the
17 products, X, Y, Z coordinates for the center of
18 the product. Sometimes it may only show you -- it
19 may not have a Z to indicate it may be further
20 back and it may just be within one plane.
21 Planograms can be looked at top down.

22 In Paragraph 75, I talk about how it can

1 be shown in different ways and then in
2 paragraph -- I show some pictures, some examples
3 of a top down and a left and right. So you have
4 to have some notion that allows you to do these
5 kinds of things with the information in the
6 planogram.

7 You know, I kind of try to say there's a
8 variety of definitions of planograms and it can
9 take on many forms but they generally share a few
10 common features such as how products are grouped,
11 where they are placed and how much space they are
12 provided.

13 I also understand planograms to generally
14 serve a common purpose so that retailers can plan
15 track and make provisions about the placement of
16 products throughout a retail store in an effort to
17 maximize sales.

18 And then I talk about an exhibit that
19 describes that and then in 77 it says: For
20 instance, the '340 patent appears to discuss a
21 shelf segment type planogram as I have shown in
22 the exemplary figures above because the patent

1 specifies that planogram describes locations by
2 vertical and horizontal position with the plane
3 perpendicular to the floor with each location
4 being associated one to one with a corresponding
5 unique identifier of an ESL, in other words, '340
6 patent uses the term planogram to refer to some
7 sort of dataset map or diagram that has at least a
8 two dimensional coordinate system along the plane
9 parallel to the shelves, but in my opinion, a
10 POSITA because the '340 patent is concerned with
11 identifying the location of a reader device in a
12 retail area, to optionally provide directions
13 through the entire store, the '340 patents
14 planogram also has location information in a third
15 dimension that characterizes locations in a plan
16 parallel to the floor of the retail area
17 representing spatially localized information to a
18 mobile terminal in relation to the location of the
19 mobile terminal in a sales area. A planogram
20 lists location of all electronic labels three and
21 of the items on sale in a sales area and I go on
22 to quote a number of and he we talk about the

1 prosecution history and Egan, you know,
2 implementing a planogram to collect and analyze
3 sales data in order to optimize future product
4 offerings identifying particular product placement
5 configurations or adjacencies that maximize sales
6 again.

7 So that's kind of how I helped define this
8 to have a set of common fixtures that I've
9 described above.

10 Q Are you limiting your definition of
11 planogram to that disclosed in Egan?

12 MR. MOFFA: Objection. Form.

13 BY THE WITNESS:

14 A It comports with what I think a planogram
15 can include, but I don't know that I would limit
16 my definition that way.

17 BY MR. FAHY:

18 Q I'm going to ask you again explicitly what
19 are the minimum requirements to satisfy your
20 definition of planogram?

21 MR. MOFFA: Objection. Form. Objection.
22 Relevance.

1 BY THE WITNESS:

2 A I'm not offering opinions. You can read
3 what I wrote. I go back here and I say that to
4 meet the limitations, the limitations have certain
5 requirements of what the planogram has to have and
6 I think I've done a good enough job of scoping it
7 to help me make the delineation between whether
8 that patent claim is obvious or not based on what
9 the petitioners have provided.

10 BY MR. FAHY:

11 Q But you won't state explicitly what the
12 minimum requirements are to satisfy your
13 definition of planogram?

14 MR. MOFFA: Objection. Form. Objection.
15 Relevance.

16 BY THE WITNESS:

17 A I say in Paragraph 76, I explain: Thus
18 although there are a variety of definitions of
19 planogram and a planogram can take on many forms,
20 I think generally --

21 MR. MOFFA: I think the reporter would
22 like you to slow down.

1 BY THE WITNESS:

2 A I'm sorry. In Paragraph 76: "Thus
3 although there are a variety of definitions of
4 planogram and a planogram can take on many forms,
5 they all generally share a few common features
6 such as how products are grouped, where they are
7 placed and how much space they are provided. I
8 also understand planograms to generally serve a
9 common purpose so that retailers can plan, track
10 and make decisions about the placement of products
11 throughout a retail store in an effort to maximize
12 sales."

13 And that's kind of how I would answer
14 that.

15 BY MR. FAHY:

16 Q So it's your testimony that Paragraph 76
17 of your declaration states the minimum
18 requirements to satisfy your definition of
19 planogram?

20 MR. MOFFA: Objection. Form. Objection.
21 Relevance.

22 Counsel, I'll point you to Paragraph 9 of

1 Exhibit B of the PTAB Trial Practice Guide in
2 formulating your questions.

3 BY MR. FAHY:

4 Q You may answer.

5 A No, I did not say that.

6 Q Does your definition of planogram require
7 a visual representation of how products are
8 grouped together or could it just be a dataset?

9 MR. MOFFA: Objection to Form.

10 BY THE WITNESS:

11 A I think it could be a dataset that allows
12 you to generate the kinds of visual diagrams I
13 have here.

14 BY MR. FAHY:

15 Q Those diagrams that you cite, for example,
16 I think in Paragraph 74 and 75 of your
17 declaration, those are from extrinsic evidence; is
18 that right? They're not from the '340 patent or
19 prosecution history?

20 MR. MOFFA: Objection to Form.

21 BY THE WITNESS:

22 A I think that's fair to say, but having

1 said that and read the claim limitations
2 requirements for what a planogram might have in
3 it, you could do what I just said.

4 BY MR. FAHY:

5 Q Did you find the extrinsic evidence that
6 you cite in your declaration in Paragraph 74 and
7 75 or was that provided to you by counsel?

8 A Nope. I found it myself.

9 Q How did you go about finding it?

10 A What I recall was what I remembered from
11 my days at Procter & Gamble and going -- these are
12 the notions of planogram and then trying to find
13 references that discuss what the planogram was and
14 use them.

15 Q Did you find any other references to
16 planograms that are not identified in your
17 declaration?

18 MR. MOFFA: Objection. Form. Objection.
19 Relevance.

20 BY THE WITNESS:

21 A Yeah, I may have, but I thought what I
22 provided was extensive enough to provide a notion

1 of what people generally thought of planograms to
2 include.

3 Do you mind if we take another break
4 because it's 11:10 and I'm feeling the need to go
5 to the restroom.

6 MR. FAHY: Absolutely. We can take a
7 break.

8 (A recess was had.)

9 BY MR. FAHY:

10 Q Dr. Surati, if I can direct your attention
11 to Paragraph 72 of your declaration, Exhibit 2001.

12 A Sure.

13 Q At the end of the Paragraph 72, you state:
14 And then each product is given some defined amount
15 of space in the produce section.

16 Do you see that?

17 A Yes.

18 Q What do you mean by a defined amount of
19 space?

20 A So I think that refers to a produce
21 section where you have a certain amount of -- I'd
22 say the way the products are shown usually is on

1 top of a single shelf, although there are some
2 produce areas that have multiple shelves, and the
3 space would refer to sort of the volume of area
4 that is taken up by the produce but there would be
5 a certain amount of area supporting it and the
6 space would maybe go up to the ceiling with you
7 what you fill it up with would be depend on what
8 the area that supports it or how much mass that
9 can support or what looks reasonable before things
10 fall down.

11 Q So for a planogram to meet your
12 definition, is it required to attribute a defined
13 amount of space to each product?

14 MR. MOFFA: Objection. Form.

15 BY THE WITNESS:

16 A So I think the example I gave you where we
17 talk about space, I think that could be considered
18 either 2D or 3D space depending upon how you're
19 trying to optimize your revenue and what you can
20 fit inside it. So I kind of grouped that space
21 thing in Paragraph 76, although there are
22 definitions of planogram, a planogram can take on

1 many forms, they all generally take on a few
2 common features, such as how products are grouped,
3 where they are placed and how much space they are
4 provided.

5 And I think the notion of space could be
6 considered in 2D or 3D. I don't know that it
7 matters as much, but it needs to comport with this
8 idea about the placement of products through a
9 retail store in an effort to maximize sales.

10 Q But is the attribution of a defined amount
11 of space to each product a requirement to meet
12 your definition of planogram or just something
13 that could be in a planogram?

14 MR. MOFFA: Objection. Form.

15 BY THE WITNESS:

16 A I mean, I think as long as it comports
17 with this idea of making decisions about the
18 placement of products through a retail store in an
19 effort to maximize sales, which space can be a
20 function of, then, sure.

21 BY MR. FAHY:

22 Q Turning to Paragraph 77 of your

1 declaration, Exhibit 2001.

2 A Uh-huh.

3 Q You state that: The '340 patent's
4 planogram requires location information in a third
5 dimension that characterized locations in a plane
6 parallel to the floor of the retail area.

7 MR. MOFFA: Objection to form. Counsel,
8 what's the question?

9 BY MR. FAHY:

10 Q What do you mean by that?

11 MR. MOFFA: Objection. Form. Objection.
12 Foundation.

13 BY THE WITNESS:

14 A So you're asking about --

15 BY MR. FAHY:

16 Q Do you want me to repeat the question?

17 A Yeah, I just want to -- can you go back to
18 which part of the paragraph you're referring to?

19 Q Sure. I think it's towards the middle and
20 it's the portion that states: Location
21 information in a third dimension that
22 characterizes locations in a plane parallel to the

1 floor of the retail area.

2 The question is what do you mean by that?

3 MR. MOFFA: Objection. Form.

4 BY THE WITNESS:

5 A So I think what I say here is that it
6 represents spatially localized information to a
7 mobile terminal in relation to a location of a
8 mobile terminal in a sales area. It's sort of
9 talking about where are you in that sales area.

10 BY MR. FAHY:

11 Q Can you provide an example of location
12 information in a third dimension?

13 A So prior to that it was talking about a
14 plane parallel to the shelf face. That's a
15 location with respect to that shelf space, but
16 there are many shelves and so that additional
17 dimension would let you figure out where you are
18 on that floor where those shelves are.

19 Q And is it your testimony or your opinion
20 that the additional third dimension you reference
21 in Paragraph 77 of your declaration is required in
22 order to meet your definition of planogram?

1 MR. MOFFA: Objection. Form.

2 BY THE WITNESS:

3 A I think I say: In other words, the '340
4 patent's use of the term planogram requires
5 knowing the relationship between the locations of
6 items throughout the entire retail area, which
7 would comport with what you said.

8 BY MR. FAHY:

9 Q So location information in a third
10 dimension is a requirement to meet your definition
11 of planogram?

12 MR. MOFFA: Objection. Form.

13 BY THE WITNESS:

14 A Like I said: In other words, the '340
15 patent's use of the term planogram requires
16 knowing the relationship between locations of
17 items throughout the entire retail area.

18 BY MR. FAHY:

19 Q I believe you mentioned in your testimony
20 earlier price information related to products.

21 Do you recall that?

22 A I don't recall exactly, but I do remember

1 mentioning the word price.

2 Q Is it your opinion that price information
3 is required in order to meet your definition of
4 planogram?

5 MR. MOFFA: Objection. Form.

6 BY THE WITNESS:

7 A I'm not sure it is, but I can understand
8 why price and size might help you understand the
9 value of an item if you're trying to maximize
10 store profits. So, for example, if a larger item
11 only gives you \$0.50, but a smaller item gives you
12 \$10, you might want to put the \$10 item closer to
13 the customer.

14 On the other hand, there may be reasons to
15 the other. So price could be part of that
16 information to help you figure out how to maximize
17 sales.

18 BY MR. FAHY:

19 Q So price and size could be part of a
20 planogram, but they aren't required to meet your
21 definition of planogram; is that right?

22 MR. MOFFA: Objection. Form.

1 BY THE WITNESS:

2 A You know, I've opined on them being --
3 they could be part of the planogram, but I haven't
4 opined on what the minimum is.

5 BY MR. FAHY:

6 Q So what is the minimum?

7 MR. MOFFA: Objection. Form.

8 BY THE WITNESS:

9 A I think I asked and answered that question
10 with my description of what a planogram is here in
11 order to evaluate -- I've provided enough scope to
12 help me evaluate any particular non-hypothetical
13 situation where prior art meets the limitations to
14 decide whether this is an obvious patent claim.

15 MR. FAHY: If I could ask Mr. Williams to
16 bring up Exhibit 2015.

17 (A certain document was marked Surati
18 Deposition Exhibit 2015 for identification, as of
19 11/22/2024.)

20 BY MR. FAHY:

21 Q Dr. Surati, do you recognize Exhibit 2015?

22 A Yeah. It's the '893 patent.

1 Q You considered 2015 in your analysis?

2 A I did.

3 Q If we could turn to the third page,
4 Figure 1 of Exhibit 2015.

5 Do you see Figure 1?

6 A I do.

7 Q Is Figure 1 of Exhibit 2015 a planogram
8 under your definition?

9 MR. MOFFA: Objection. Form.

10 BY THE WITNESS:

11 A So looking through this reference, I
12 haven't done a full analysis, but what I would say
13 is that Figure 1 says at least with regard to this
14 patent that the Figure 1 is a planogram of an
15 example floor plan of a facility.

16 Referring now to Figure 1, there's a black
17 diagram shows an illustrative floor plan layout
18 planogram which is generated, updated and
19 maintained in accordance with embodiments of the
20 present invention. If the facility has multiple
21 floors or rooms, the different planogram can be
22 provided for each. The planogram includes

1 generalized models of physical objects such as
2 rectangular shelving, display counters, circular
3 racks, point-of-sale objects, checkout counter or
4 kiosk, price checkers and building fixtures such
5 as doors, windows, power outlets walls, et cetera.
6 The physical objects can be modeled in a database
7 and these models can include generalized physical
8 attributes to the objects which may or may not
9 include specific dimensions, for example, a
10 circular rack is modeled as a right cylinder
11 having a weight and diameter, the exact weight and
12 diameter of the circular rack may be open
13 variables in the model and can be specified by
14 measurement of the rack taken at the same time
15 when a location of the mobile device is
16 determined. In accordance with the present
17 invention, similarly rectangular shelving can be
18 modeled as a right rectangular box with height,
19 width and depth dimensions. The objects shown are
20 merely examples and many other objects include
21 irregularly shaped objects can be modeled in the
22 database.

1 It doesn't -- so, you know, it says it's a
2 planogram -- let me just look at one more thing.

3 So many enterprises are arranged according
4 to a central plan that provides a layout of
5 fixtures and goods offered by the enterprise
6 within a defined facility. One time of central
7 plan is a planogram that is diagrammed to
8 fixtures, fittings and products that illustrates
9 how and where retail products should be displayed.

10 So what's missing in that diagram is any
11 notion of product so I'd be concerned that that
12 saying this meets the limitations of what a
13 planogram is being used in the '340 patent is
14 because the products aren't there and it doesn't
15 talk about a database of products or anything to
16 allow you to do that that at least from that point
17 of view it's not sufficient, but I haven't had a
18 lot of time to consider it so I don't want to make
19 an off-the-cuff remark about it, but at least
20 looking at it from that point of view, I'd be
21 worried that it doesn't have had any sort of
22 supporting basis about what the products are that

1 you could place and decide how to maximize revenue
2 from.

3 Q See did you consider Exhibit 1 of
4 Exhibit 2015 and the related description in your
5 analysis of the validity of the '340 patent?

6 MR. MOFFA: Objection. Form.

7 BY THE WITNESS:

8 A So the places where I referred to exhibit
9 is it 2015?

10 BY MR. FAHY:

11 Q Yes.

12 A One second here.

13 It says: An essential part of creating a
14 planogram is collecting information about the
15 geometry of the underlying retail space, floor
16 levels, walls, doors, construction and locations
17 and size of fixtures, shelves, racks, display
18 cases and fittings, power outlets, et cetera.

19 I think that Figure 1 certainly represents
20 that notion and it's a part of creating a
21 planogram, I would agree with that, but as to
22 whether it's a planogram under the '340 patent's

1 construction that I had, I don't think it is
2 because it doesn't -- just the figure itself
3 doesn't talk about products.

4 MR. FAHY: Mr. Williams, if you could
5 bring up Exhibit 2023.

6 (A certain document was marked Surati
7 Deposition Exhibit 2023 for identification, as of
8 11/22/2024.)

9 BY MR. FAHY:

10 Q Dr. Surati, do you recognize Exhibit 2023?

11 A This appears to be the Ohta reference,
12 Study on the Design of Supermarket Store Layouts:
13 The Principle of "Sales Magnet".

14 Q You considered Exhibit 2023 in your
15 analysis, is that right?

16 A I did.

17 Q If we could turn to Page 210, second page
18 of Exhibit 2023.

19 A Just a moment. Okay, yes.

20 Q Do you see the two figures on Page 210 of
21 2023?

22 A I see three figures, I guess two are

1 figures and one is a table. You meant the two
2 figures?

3 Q Do you see the two figures, not the table?

4 A I do.

5 Q Are the two figures shown in Exhibit 2023
6 at Page 210 planograms as you have defined the
7 term?

8 MR. MOFFA: Objection. Form.

9 BY THE WITNESS:

10 A So this isn't a particular example that I
11 considered, so it's going to take me some time to
12 figure it out and I'm not sure I want to offer an
13 off-the-cuff opinion without putting the proper
14 amount of time in. And my report's considered --
15 I'm not sure I can answer that in the time that's
16 available.

17 BY MR. FAHY:

18 Q Understood. If we can turn back to your
19 declaration --

20 MR. MOFFA: Just a head's up, I think
21 we're going to ask for the witness to get a lunch
22 break at 12 Eastern. So in about 10 minutes. I

1 don't want to interrupt you while you're in your
2 line of questioning, but I'm letting you know.

3 MR. FAHY: Sure. Let's see what we can
4 get done in 10 minutes, but thank you for that.

5 BY MR. FAHY:

6 Q Dr. Surati, if we can look back at your
7 declaration, SES-2001 paragraphs 80 to 83.

8 A Okay.

9 Q In Paragraphs 80 to 83 of your
10 declaration, Exhibit 2001, you discuss the claim
11 construction of the term activated/activating; is
12 that right?

13 A Yes.

14 Q In Paragraph 81, you state in part:
15 Specifically the '340 specification (which is also
16 reflected in the claims) explains that the
17 radiofrequency peripheral uses near-field
18 communication (or NFC) to activate and set up
19 communication with the mobile terminal.

20 Do you see that?

21 A Yes, sir.

22 Q And you cite in support of that statement

1 Exhibit 1001 at Column 5, Lines 65 to 67?

2 A Yes.

3 MR. FAHY: Mr. Williams, if you could pull
4 up Exhibit 1001.

5 (A certain document was marked Surati
6 Deposition Exhibit 1001 for identification, as of
7 11/22/2024.)

8 BY MR. FAHY:

9 Q Dr. Surati, Exhibit 1001 is the '340
10 patent that we've been discussing, correct?

11 A Uh-huh.

12 Q If we could turn to Column 5, Line 65 to
13 67?

14 A Yes, sir.

15 Q It states -- Column 5, 65 to 67, it
16 states: At first the mobile terminal one sets up
17 a communication via radiofrequency with a
18 radiofrequency peripheral 36 of an electronic
19 label three (Step 51.)

20 Do you see that?

21 A Yes.

22 Q So the specification appears to say that

1 the mobile terminal sets up the communication with
2 the radiofrequency peripheral, but in Paragraph 81
3 of your declaration, you stated that the
4 radiofrequency peripheral sets up the
5 communication with the mobile terminal.

6 MR. MOFFA: Objection. Form. Counsel,
7 what's the question?

8 BY MR. FAHY:

9 Q The question is which is correct or why
10 the inconsistency?

11 MR. MOFFA: Objection. Form.

12 BY THE WITNESS:

13 A We're on Paragraph 82; is that correct?

14 BY MR. FAHY:

15 Q I believe it's Paragraph 81.

16 A I'm sorry. Yeah. So you're -- okay.

17 Q You said: The radiofrequency peripheral
18 uses near-field communication or NFC to activate
19 and set up communication with the mobile terminal.

20 You cite the '340 patent, Exhibit 1001, at
21 Column 5, lines 65 to 67, which actually states:
22 The mobile terminal sets up the communications via

1 radiofrequency with a radiofrequency peripheral.

2 And my question is how do you account for
3 the inconsistency there and which one is your
4 opinion?

5 MR. MOFFA: Objection. Form.

6 BY THE WITNESS:

7 A Yeah. I would flip those two but what I
8 would mean by that, Counselor, is that it's the
9 mobile terminal that is setting up -- powering and
10 setting up the communication with the tag.

11 MR. FAHY: Thank you for the
12 clarification.

13 I'll be turning to another topic now and
14 its looks like we just have a couple of minutes
15 before lunch so if it's okay with you should we
16 break for lunch and, if so, how long would you
17 like or do you need?

18 MR. MOFFA: Dr. Surati?

19 THE WITNESS: Could we get 45 minutes?

20 MR. MOFFA: I think that's fine. Counsel
21 is 45 minutes okay?

22 MR. FAHY: Sure. Just so you know, the

1 shorter kind of the better for us in that the
2 sooner we start, the sooner we'll finish but
3 45 minutes will work if that's what you need.

4 THE WITNESS: Whatever you think.

5 MR. MOFFA: I defer to the witness.

6 THE WITNESS: I think 45 minutes.

7 MR. MOFFA: The witness asked for 45 so
8 let's do that.

9 MR. FAHY: Sure. We'll see you in
10 45 minutes.

11 (A lunch recess was had from 10:58 a.m. to
12 11:44 a.m. CST.)

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1 A F T E R N O O N S E S S I O N

2 DR. RAJEEV SURATI,

3 called as a witness herein, having been previously
4 duly sworn and having testified, was examined and
5 testified further as follows:

6 EXAMINATION (Resumed)

7 BY MR. FAHY:

8 Q Hi, Dr. Surati. Good afternoon.

9 A Good afternoon.

10 Q On the lunch break, did you speak with
11 anyone regarding your testimony today?

12 A No.

13 Q If we could turn back to your declaration,
14 Exhibit 2001. If I could turn your attention to
15 Paragraph 102.

16 Do you see Paragraph 102 of your
17 declaration?

18 A Yes.

19 Q As you're reading through it, I'll just
20 direct your attention to my question which is:
21 You use the phrase "retail area" a number of times
22 in Paragraph 102 of your declaration.

1 A Uh-huh.

2 Q I'm just curious what you mean by retail
3 area?

4 MR. MOFFA: Objection. Relevance.

5 BY THE WITNESS:

6 A So I think it's just the idea that it's an
7 area where the shoppers could shop.

8 BY MR. FAHY:

9 Q If we could turn, then, to Paragraph 110
10 of your declaration, Exhibit 2001.

11 A Okay.

12 Q In Paragraph 110 of your declaration, you
13 refer to Fujiwara's database with the No. 310.

14 Do you see that?

15 A Yes.

16 Q I'm just going to ask for clarification.
17 If we could pull up Exhibit 1003.

18 (A certain document was marked Surati
19 Deposition Exhibit 1003 for identification, as of
20 11/22/2024.)

21 BY THE WITNESS:

22 A Okay.

1 BY MR. FAHY:

2 Q Figure 4 of 1003 which is actually on
3 Page 27, but first I'll just start by asking you,
4 Dr. Surati, if you recognize Exhibit 1003?

5 A I do. Oh, yes, yes, this is the corrected
6 Fujiwara.

7 Q You considered Fujiwara as part of your
8 analysis?

9 A I did.

10 Q So the point of clarification I'm asking
11 for is we just saw in Paragraph 110 of your
12 declaration you refer to Fujiwara's database 310,
13 and I'm just wondering did you mean 301 when you
14 look at Figure 4 of Fujiwara?

15 A Oh, okay. Three -- I'm trying to see
16 where -- I'm looking at Page 27. Is that what I
17 should be looking at?

18 Q Yes, that's Figure 4, right.

19 A Yes and you're saying there's a
20 Figure 301?

21 Q That's my question is you referenced 310
22 in relation to Figure 4.

1 MR. MOFFA: I also heard you say Page 27
2 but I'm confused if you mean exhibit Page 27 or
3 header Page 27. Let's just give the witness a
4 clear question, okay.

5 MR. FAHY: Sure. Thank you.

6 BY MR. FAHY:

7 Q Exhibit 1003, Page 27 of the exhibit on
8 the bottom.

9 A Then there's Figure 4 and where is a
10 reference to 300 anything.

11 Q Well, that's my question for you.

12 MR. MOFFA: Counsel, you're asking him to
13 look at Figure 4?

14 THE WITNESS: Yeah.

15 MR. FAHY: Yes.

16 MR. MOFFA: Figure 4.

17 BY THE WITNESS:

18 A Oh, okay. Sorry. I see.

19 BY MR. FAHY:

20 Q Do you see Figure 4 of Exhibit 1003?

21 A Yeah, I do, although -- I do. Just let me
22 go back to the patent.

1 Q If you look at your declaration
2 Paragraph 110, you say: To start, Fujiwara's
3 Figure 4 does not represent what information is
4 included in Fujiwara's database 310.

5 A I'm just going to go back to -- oh, I
6 think -- yeah, that probably should be 301 because
7 310 is the shelf label product information and 301
8 is the electronic shelf label database.

9 Q Okay. Thank you for the clarification.

10 MR. MOFFA: I'm going to object to form on
11 that question, not the line of questioning.

12 BY MR. FAHY:

13 Q Dr. Surati, if you can turn to
14 Paragraph 138 of your declaration, which is
15 Exhibit 2001.

16 A 138?

17 Q Paragraph 138.

18 A Okay. Yep.

19 Q And the last sentence of Paragraph 138 of
20 your declaration, you state: Based on these
21 descriptions, a POSITA would have understood the
22 claimed less than 20cm range is critical to the

1 claimed invention, otherwise these disclosed
2 benefits could not be realized.

3 Do you see that?

4 A I do?

5 Q Why is the claimed 20cm range critical to
6 the claimed invention?

7 A So I think I say here in 135: A POSITA
8 would have understood that any communication range
9 20cms or more would not provide the needed
10 prevision of a location determination for the
11 mobile terminal. Okay. That's one place.

12 And then I say: The '340 patent explains
13 that a communication range of less than 20cm
14 firstly ensures matching between an electronic
15 label three and the mobile terminal one and,
16 secondly, allows interference to be limited
17 between electronic labels when they are positioned
18 close to one another.

19 And then the uniqueness of the label
20 identifier and of the location associated with
21 each electronic label allows unambiguous
22 determination of location of the electronic label

1 three from this identifier, and as a result, it's
2 possible to determine location of the mobile
3 terminal.

4 MR. MOFFA: Slow down, please.

5 BY THE WITNESS:

6 A Oh. Okay.

7 So, moreover, providing such a short range
8 requires deliberate action by the user to set up
9 communication. That cannot easily be diverted
10 from its primary location.

11 Based on this description, a POSITA would
12 have understood the claim less than 20cm range as
13 critical to the claimed invention otherwise these
14 disclosed benefits could not be realized.

15 BY MR. FAHY:

16 Q So Dr. Surati, would a 1cm change from
17 20cm render the disclosed benefits that you just
18 articulated from the invention unrealized?

19 MR. MOFFA: Objection. Form. Objection.
20 Relevance. Objection. Foundation.

21 BY THE WITNESS:

22 A You're asking if it were 21cm, is that

1 what you're asking?

2 BY MR. FAHY:

3 Q If it were 21cm would that render the
4 disclosed benefits of the invention unrealized?

5 MR. MOFFA: Objection. Form. Objection.
6 Foundation. Objection. Relevance.

7 BY THE WITNESS:

8 A It is a claim limitation and that claim
9 limitation distinguishes one technology from
10 another. I haven't heard about other technologies
11 working at 21cm. That would be my answer.

12 BY MR. FAHY:

13 Q So you don't know one way or another if a
14 21cm range would render the disclosed benefits of
15 the invention unrealized?

16 MR. MOFFA: Objection. Form, relevance.

17 BY THE WITNESS:

18 A It really depends on the situation.

19 BY MR. FAHY:

20 Q Is there a situation where a greater than
21 20cm range could still realize the benefits of the
22 claimed invention?

1 MR. MOFFA: Objection. Form, relevance,
2 foundation.

3 BY THE WITNESS:

4 A It would be really hard for me to say
5 because I haven't considered it.

6 BY MR. FAHY:

7 Q So, Dr. Surati, turning, then, to
8 Paragraph 148 of your declaration, Exhibit 2001,
9 do you see Paragraph 148?

10 A I do.

11 Q In Paragraph 148 of your declaration, you
12 state in part: Substituting microwave RFID with
13 NFC requires modifications to the entire
14 communication system from hardware to transmission
15 protocols.

16 Do you see that?

17 MR. MOFFA: Objection. Form.

18 BY THE WITNESS:

19 A Just one second. Okay.

20 BY MR. FAHY:

21 Q My question for you, Dr. Surati, is what
22 specifically would require modification, if you

1 could give some examples.

2 MR. MOFFA: Objection. Form.

3 BY THE WITNESS:

4 A I think these are different frequencies so
5 for NFC, you would be looking for inductive
6 coupling for UHF, you would be looking for a
7 radiative type of antenna which are physically
8 different. There's another section of this
9 document that talks about that, and I could go
10 show you that. Let me just --

11 BY MR. FAHY:

12 Q Where is the antenna located?

13 A In which situation?

14 Q The one you just mentioned.

15 MR. MOFFA: Objection. Form.

16 BY THE WITNESS:

17 A You mean on the tag or on the mobile
18 device?

19 BY MR. FAHY:

20 Q So there's one antenna on the tag and
21 another antenna on the mobile device?

22 A Right. And the UHF scenario you'd have a

1 single conductor and in the -- you know, with no
2 connections to ground or to connect it back to
3 itself kind of, not back to itself but in the
4 other scenario you'd have a looped inductor that
5 would be coupling things in the case of NFC, so
6 you'd have to like have enough loops to couple the
7 amount of energy to get that NFC signal to have
8 enough voltage to do things and then you'd
9 probably need different chips, reception chips, to
10 do the reception because they are different, at
11 different frequencies and different protocols
12 being used.

13 BY MR. FAHY:

14 Q But aren't microwave RFID tags and reading
15 modules, aren't those just off-the-shelf products?

16 MR. MOFFA: Objection. Form. Objection.
17 Foundation.

18 BY THE WITNESS:

19 A You're asking if you could take
20 off-the-shelf products and just replace them?

21 BY MR. FAHY:

22 Q Yeah, exactly. I'm asking wouldn't this

1 just be a matter of replacing microwave RFID tags
2 and associated readers with NFC tags and
3 associated readers that are all off-the-shelf
4 products?

5 MR. MOFFA: Objection. Form.

6 BY THE WITNESS:

7 A We're talking about 148?

8 BY MR. FAHY:

9 Q Yes.

10 A We're talking about something that already
11 is an electronic cell with UHF baked into it and
12 you could potentially get modules to replace that,
13 but in other cases, you might not be able to and
14 so if you're just talking about replacing the
15 communication part and what it has, it would be
16 more than just replacing modules. You might have
17 to change the way the circuits are designed,
18 et cetera. You might have to change the size of
19 what it is and things like that. There may be a
20 scenario where what you're discussing could
21 happen, but I just don't know. When you talk
22 about modifying something the way it's being

1 discussed, it depends on really what it is, but
2 fundamentally you need to make those changes that
3 I discussed.

4 Q Would a person of skill in the art be
5 capable of making such a substitution?

6 MR. MOFFA: Objection. Form.

7 BY THE WITNESS:

8 A So, technically, they could make such a
9 substitution but, again, it wouldn't have the
10 benefits of -- it wouldn't have the benefits of
11 what the patent is asking for in terms of those
12 three things that we discussed before.

13 BY MR. FAHY:

14 Q If we could turn to Paragraph 149 of your
15 declaration. You mention encryption?

16 A I do.

17 Q In your opinion, does the '340 patent
18 require encryption?

19 MR. MOFFA: Objection. Form.

20 BY THE WITNESS:

21 A Is there a particular claim you're asking
22 about that requires it? Is there a particular

1 limitation you're asking about?

2 BY MR. FAHY:

3 Q I'm asking in general the claims at issue
4 in this proceeding, do the claims of the '340
5 patent require encryption?

6 MR. MOFFA: Objection. Form.

7 BY THE WITNESS:

8 A So I don't think I gave an opinion about
9 whether it was or wasn't required, but I gave an
10 opinion about the NFC that the '340 patent
11 mentions encryption.

12 BY MR. FAHY:

13 Q If you could turn to Paragraph 180 of your
14 declaration, Exhibit 2001.

15 In Paragraph 180 of your declaration, you
16 refer to the term item location and then tag
17 location.

18 Do you see that?

19 A Let me just read this. Okay.

20 Q What is the difference between item
21 location and tag location?

22 MR. MOFFA: Objection. Form.

1 BY THE WITNESS:

2 A I believe in Bandy, objects or items,
3 products are tagged so that you can go get more
4 information about them with your mobile reader
5 that you go up to them, and Fowler has tags which
6 are like ESLs that are not necessarily attached to
7 items.

8 BY MR. FAHY:

9 Q Now turning to Paragraph 186 of your
10 declaration. If you can go ahead and read through
11 that and I'll direct your attention to -- my
12 question for you will be you refer to a binary
13 protocol in Paragraph 186 of your declaration, and
14 I'm just curious what is a binary protocol?

15 MR. MOFFA: Objection. Foundation. And
16 objection. Form. And objection. Relevance.

17 BY THE WITNESS:

18 A I believe it's involving 1s and 0s, but
19 I'd have to look carefully at more references to
20 tell you exactly.

21 BY MR. FAHY:

22 Q But it's your opinion in Paragraph 186 of

1 your declaration that a binary protocol is
2 compatible with UHF RFID but not NFC; is that
3 right?

4 MR. MOFFA: Objection. Form.

5 BY THE WITNESS:

6 A I think that's what I said.

7 BY MR. FAHY:

8 Q Why is that?

9 A I'd have to look again, but let me think.

10 Q Do you understand my question?

11 A Yes, I'm trying to answer it.

12 Q Okay. Do you have an answer, Dr. Surati?

13 A Yeah. I would say that -- I'm trying to
14 say that those are anti-collision protocols and I
15 think in the passive case it's not generally used
16 because you're using -- you are so close to
17 things.

18 Q What do you mean by anti-collision?

19 A They are protocols that try to prevent
20 multiple devices from being routed at the same
21 time so you would end up with multiple packets or
22 active things sending you packets and you want to

1 make sure that when you receive them, you're not
2 confused about what source it's from. And so with
3 short range NFC, it's much harder to have that
4 issue.

5 Q If we could turn back to Exhibit 1003,
6 right there, Figure 4.

7 Dr. Surati, we were discussing what's on
8 the screen right now, Exhibit 1003, Figure 4 of
9 Fujiwara earlier.

10 Do you recall that?

11 A I do.

12 Q Is Figure 4 of Exhibit 1003 an example of
13 a planogram under your definition?

14 MR. MOFFA: Objection. Form.

15 BY THE WITNESS:

16 A Are you just asking if the figure itself
17 with its description represents a planogram.

18 BY MR. FAHY:

19 Q Correct. A planogram under your
20 definition.

21 A Thank you.

22 MR. MOFFA: Objection. Form.

1 BY THE WITNESS:

2 A So are you asking if the system that we
3 discussed implements the ability -- could be made
4 based on its implementation to provide the
5 information I was discussing with regard to
6 altering a planogram.

7 BY MR. FAHY:

8 Q Yeah. I'm asking would Figure 4 as
9 described, shown and described in Exhibit 1003,
10 would it be a planogram under the definition that
11 you've provided in your declaration?

12 MR. MOFFA: Objection. Form.

13 BY THE WITNESS:

14 A Just a moment. So I'd say a couple of
15 things.

16 So one of the things is that the system in
17 Fujiwara doesn't have the capability to tell you
18 how wide the different extents of the products
19 are. So if we're implementing the system in
20 Fujiwara, you don't get the kind of information
21 that you would want in defining a planogram. So
22 just looking at a figure, I can't tell what

1 information is being stored, but from the
2 description, I can tell you that it doesn't let me
3 decide horizontally how much of an area particular
4 product takes up, and for that reason I would say
5 no.

6 BY MR. FAHY:

7 Q So the allocation of the amount of space a
8 product takes up is a requirement of your
9 definition of planogram?

10 MR. MOFFA: Objection. Form.

11 BY THE WITNESS:

12 A You know, again, I think you can go back
13 to my description of a planogram, and I can say
14 that if it's helping you determine -- I mean, we
15 talked about it. I'll just go back to my
16 paragraph. Sorry.

17 So in 76 I say: Thus, although there are
18 a variety of definitions of planogram and a
19 planogram can take on many forms, they all
20 generally share a few common features such as how
21 products are grouped, where they are placed and
22 how much space they are provided. I also

1 understood planograms to generally serve a common
2 purpose so that retailers can plan, track and make
3 decisions about placement of products throughout a
4 retail store in an effort to maximize sales and so
5 on and so forth.

6 Q It's your opinion that Figure 4 of
7 Fujiwara does not meet that definition?

8 A I think that's fair.

9 MR. MOFFA: Objection. Form.

10 MR. FAHY: That's my last question for you
11 at this time, Dr. Surati. I thank you for your
12 time this morning and I will pass --

13 THE WITNESS: Are you on the west coast?

14 MR. FAHY: I am in Chicago so it's now
15 afternoon.

16 THE WITNESS: Sorry to interject.

17 MR. FAHY: No, that's fine. Again, thanks
18 for your time and I pass the witness to counsel.

19 THE WITNESS: Thank you, sir.

20 MR. MOFFA: Let's take a five-minute break
21 and then we'll do redirect.

22 (A recess was had.)

1 EXAMINATION

2 BY MR. MOFFA:

3 Q Dr. Surati, do you remember at the start
4 of your deposition you were asked some questions
5 about what portion of your income came from
6 consulting on litigation versus other sources?

7 A Uh-huh, sorry, yes.

8 Q And I think you said that it was
9 60 percent/40 percent; is that right?

10 A I think I said something like that, yeah.

11 Q Was that 60 percent income from litigation
12 consulting and 40 percent from other sources or
13 40 percent from litigation consulting and
14 60 percent from other sources?

15 A 40 percent --

16 MR. FAHY: Objection. Form.

17 BY THE WITNESS:

18 A 40 percent from litigation consulting.

19 BY MR. MOFFA:

20 Q Just because there's an objection there,
21 why don't you explain what portion of your income
22 this year and over the last five years came from

1 litigation consulting?

2 A Yes. It's in that range, like less than
3 half of my consulting income -- less than half of
4 my income has come from litigation consulting.

5 MR. MOFFA: No other questions.

6 MR. FAHY: No further questions here.

7 Thank you again.

8 (Deposition concluded at 12:37 p.m. CST.)
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1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2 I, Theresa A. Vorkapic, Certified
3 Reporter and Notary Public within and for the
4 State of Illinois do hereby certify:

5 That Dr. Rajeev Surati, the witness whose
6 deposition is hereinbefore set forth,

7 Was duly sworn by me before the
8 commencement of such deposition and that such
9 deposition was taken before me and is a true
10 record of the testimony given by such witness.

11 I further certify that the adverse
12 party, Patent Owner, was represented by counsel at
13 the deposition.

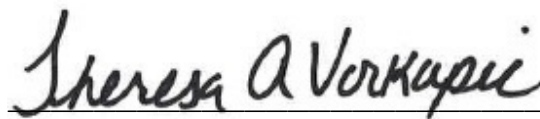
14 I further certify that the deposition of
15 Dr. Rajeev Surati, occurred virtually on Friday,
16 November 22, 2024, commencing at 8:07 a.m. CST to
17 12:37 p.m. CST.

18 I further certify the inspection,
19 reading and signing of said deposition was
20 waived on the record by agreement of all parties.

21 I further certify that I am not related
22 to any of the parties to this action by blood

1 or marriage, I am not employed by or an attorney
2 to any of the parties to this action, and that I
3 am in no way interested, financially or otherwise,
4 in the outcome of this matter.

5 IN WITNESS WHEREOF, I have hereunto set
6 my hand this 27th day of November, 2024.

7
8
9 
10 _____

11 Theresa A. Vorkapic

12 My commission expires November 6, 2027.

13 NOTARY PUBLIC IN AND FOR THE
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