

1 UNITED STATES PATENT AND TRADEMARK OFFICE

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5 BEFORE THE PATENT TRIAL AND APPEAL BOARD

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10 COLLEGE PRODUCTS, INC.,
Petitioner,

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13 v.

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16 INTIRION CORPORATION,
Patent Owner.

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20 PGR2024-00003
Patent No. 11,674,745

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20 PGR2024-00004
Patent No. 11,674,746

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Page 2

1 THE DEPOSITION OF EMAD Y.
2 TANBOUR, Ph.D., taken before Janice M. Doud,
3 Registered Professional Reporter and Notary
4 Public, commencing at 8:45 a.m., on the 13th day
5 of September, 2024, at 111 East Grand Avenue,
6 Suite 301, Des Moines, Iowa.

7 A P P E A R A N C E S

8 Petitioner by: RUSSELL T. WONG
9 Attorney at Law
Blank Rome, LLP
717 Texas Avenue
Suite 1400
Houston, TX 77002
(713) 228-6601
russell.wong@blankrome.com

-and-

10 ALEXANDER S. PERRY
11 (Via Telephone)
12 Attorney at Law
Blank Rome, LLP
1825 Eye Street NW
Washington, D.C. 20006
(202) 420-2200
alex.perry@blankrome.com

14 Patent Owner and Dr. Tanbour by:

15 R. SCOTT JOHNSON
16 THOMAS M. PATTON
Attorneys at Law
Fredrikson & Byron, P.A.
111 East Grand Avenue
Suite 301
Des Moines, IA 50309
(515) 242-8900
rsjohnson@fredlaw.com
tpatton@fredlaw.com

20 Also present: Eric Hennings

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23
24
25 Reported by: Janice M. Doud, R.P.R.

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I N D E X

Examination by:		Page
Mr. Wong		5
Mr. Johnson		219
Exhibit	Description	Marked
Exhibit 1	Petitioner's Notice of Deposition of Dr. Emad Tanbour re Patent No. 11,674,745	5
Exhibit 2	Petitioner's Notice of Deposition of Dr. Emad Tanbour re Patent No. 11,674,746	5
Exhibit 3	Declaration of Emad Y. Tanbour, Ph.D., re Patent Nos. 11,674,745 and 11,674,746	5
Exhibit 4	Declaration of Emad Y. Tanbour, Ph.D., re Patent Nos. 11,674,745 and 11,674,746	5
Exhibit 5	Patent No. US 11,674,745 B2	23
Exhibit 6	Patent No. US 11,674,746 B2	23
Exhibit 7	U.S. Patent Application Publication No. US 2009/0188911 A1	128
Exhibit 8	Patent No. 4,496,817	132
Exhibit 9	Patent No. US 8,446,048 B2	178
Exhibit 10	U.S. Patent Application Publication No. US 2012/0276763 A1	191

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P R O C E E D I N G S

(Exhibits 1, 2, 3, and 4 were
marked for identification.)

MR. WONG: This is Russell Wong
on behalf of Petitioner College Products, Inc.,
and joining me on the phone is Alex Perry, and
we're with Blank Rome.

MR. JOHNSON: This is Scott
Johnson on behalf of Patent Owner Intirion
Corporation. Joining me is my colleague Thomas
Patton. We're with Fredrikson & Byron. And
we're here on behalf of the witness as well.

EMAD Y. TANBOUR, Ph.D.
called as a witness, having been first duly
sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WONG:

Q. Good morning, Mr. Tanbour.

A. Good morning.

Q. Nice to see you again.

A. You too. Nice to see you in person.

Q. I know you've been deposed before
because I deposed you earlier in the district
court litigation between College Products and
Intirion.

1 Do you recall that?

2 A. I do.

3 Q. I just want to go over a few ground
4 rules again so that you're reminded of those.

5 You understand you're under oath?

6 A. Yes.

7 Q. Are there any issues affecting your
8 health or mental condition today that would
9 prevent you from providing accurate answers
10 today?

11 A. No.

12 Q. If you during the deposition don't
13 understand a question I'm asking, can I get your
14 agreement that you will ask me to clarify?

15 A. Absolutely.

16 Q. And so can I assume that if you don't
17 ask me to clarify the question, you understand
18 the question; is that correct?

19 A. That's fair.

20 Q. If you need to take a break, please let
21 me know, and we can do that any time.

22 A. Sure.

23 Q. I'm going to ask -- I'm going to show
24 you two documents that have been marked as
25 Exhibits 1 and 2, and I'm going to ask you a

1 couple questions about these in a minute.

2 MR. WONG: Can we go off the
3 record for a second?

4 (An off-the-record discussion
5 was held.)

6 MR. WONG: Back on the record.

7 Q. Dr. Tanbour, I've placed before you two
8 documents. One has been marked as Exhibit 1.
9 The other is marked as Exhibit 2.

10 Let me just start off, with
11 respect to Exhibit 1, which is titled
12 "Petitioner's Notice of Deposition of Dr. Emad
13 Tanbour" and above that is "PGR2024-00003,
14 Patent No. 11,674,745," do you see that?

15 A. Yes.

16 Q. Have you seen that notice before?

17 A. I did. I believe I did, yeah.

18 Q. And do you understand you're appearing
19 today with respect to that deposition notice?

20 A. I do.

21 Q. The other document that's been marked
22 as Exhibit 2 is titled "Petitioner's Notice of
23 Deposition of Dr. Emad Tanbour, PGR2024-00004,
24 Patent No. 11,674,746." Do you see that?

25 A. Yes.

1 Q. Have you seen that document before?

2 A. I believe I did.

3 Q. And do you understand that you are
4 appearing today in response to that deposition
5 notice?

6 A. I do.

7 Q. I'm going to now place before you two
8 documents that have been marked as Exhibit 3 and
9 Exhibit 4.

10 A. They appear to be identical.

11 Q. Yes. I'll get to that in just one
12 second.

13 Dr. Tanbour, before we refer to
14 Exhibits 3 and 4, I want to go back to Exhibits
15 1 and 2.

16 You understand that Notice Number 1
17 or Exhibit Number 1, which is for PGR2024-00003, is
18 a proceeding involving the Patent No. 11,674,745;
19 correct?

20 A. Correct.

21 Q. And for purposes of brevity, can I get
22 your agreement that if I refer to the '745 patent,
23 you understand that I'm referring to Patent No.
24 11,674,745?

25 A. Sure.

1 Q. And then for this proceeding, the
2 proceeding that is the subject of Deposition
3 Notice Number 1, you'll see that it says
4 PGR00003. Do you see that?

5 A. I do.

6 Q. Can I get your agreement that if I
7 refer to PGR000 -- well, I'll call it PGR 3,
8 that I'm referring to that proceeding?

9 A. That should be fine.

10 Q. And then with respect to Exhibit 2,
11 you'll see that that is labeled PGR2024-00004,
12 and it's for Patent No. 11,674,746. Do you see
13 that?

14 A. I do.

15 Q. And can I get your agreement that if
16 I refer to the '746 patent, I'm referring to
17 that patent number I just read?

18 A. Sure you can.

19 Q. And then if I'm referring to that
20 proceeding, I'll refer to it as the PGR 4.

21 Is that acceptable?

22 A. Yes.

23 MR. JOHNSON: We just need a
24 definition sheet to start things off.

25 Q. Okay. Now I've placed before you two

1 documents, one that's been marked as Exhibit 3
2 and the other that's been marked as Exhibit 4.

3 Do you have those before you?

4 A. Yes.

5 Q. Do you recognize those documents?

6 A. I breezed quickly through them, and I
7 do recognize them. I notice that one is having
8 my signature. The other one is without my
9 signature.

10 Q. Yeah. For some reason that's the way
11 we had it in our records, but please feel free
12 to look at them, but can you confirm that those
13 are declarations that you submitted in the two
14 proceedings that we are discussing today?

15 A. I just flipped through them quickly,
16 and I believe these are like the same copy of my
17 declaration, except that I notice that the last
18 page of Exhibit 4, which is page 93, does not
19 have my signature, but I believe -- I believe
20 they are identical, but I can't be 100 percent
21 sure because I didn't read every word, you know,
22 but I trust that these are identical.

23 Q. They look to be --

24 A. Right.

25 Q. -- the declarations that you submitted

1 in both proceedings?

2 A. Absolutely. Absolutely.

3 Q. And we tried to copy it accurately.

4 A. Sure.

5 Q. If there's a missing page, we didn't do
6 it intentionally.

7 A. It's not a missing page. It's the
8 signature missing on page 93.

9 Q. Do you recall, the document that has the
10 missing signature, that's Exhibit 4; correct?

11 A. That's correct.

12 Q. Okay. And can you identify what
13 Exhibit 4 is?

14 A. It reads "Declaration of Emad Tanbour,"
15 and it is Case No. PGR2024-00003 and PGR2024-00004.

16 Q. And do you see at the bottom of that
17 document there's a reference to just 00004?

18 A. Yes, I do.

19 Q. And do you recall submitting a
20 declaration with respect to the PGR 4
21 proceeding?

22 A. Yes.

23 Q. And can you identify Exhibit 3, please?

24 A. I think it has the same title and
25 information that I read on Exhibit 4, except

1 at the very bottom it refers to PGR 3, as we
2 agreed.

3 Q. And so is it your understanding that
4 Exhibit 3 is the declaration that was submitted
5 for PGR 3?

6 A. Yes.

7 Q. With respect to those two declarations
8 that you submitted, is there any difference
9 between those declarations, other than the
10 lacking of the signature on Exhibit 4?

11 A. I don't believe so.

12 Q. From your memory, you submitted the
13 same declaration in both proceedings; correct?

14 A. That's what I recall, yes.

15 Q. So for brevity, again, and so that we
16 won't have to repeat the questions, can I get
17 your agreement that if I ask you questions about
18 Exhibit 3 and you respond to those questions,
19 those responses are equally applicable to
20 Exhibit 4?

21 A. That's fair.

22 Q. Because they're the same?

23 A. Right.

24 Q. They're the same declarations; correct?

25 A. Yes.

1 Q. Can you briefly describe your educational
2 background, Dr. Tanbour?

3 A. I earned an undergraduate degree in
4 mechanical engineering in 1987 from Yarmouk
5 University, which is now Jordan University of
6 Science & Technology.

7 And I immediately transitioned to
8 the graduate school, and I earned a master's
9 degree in mechanical engineering in 1990, the
10 summer of 1990.

11 And then I taught briefly, and
12 then I came to the University of Iowa in the
13 very beginning of 1992, and I earned a doctorate
14 in mechanical engineering from the University of
15 Iowa, Iowa City, in 1997.

16 And then -- so these are the
17 major educational backgrounds. When I was in
18 industry, I went and I got education, an
19 executive M.B.A., also at the Tippie School of
20 Business at the University of Iowa, but I did
21 not earn a degree, but I finished all the
22 coursework.

23 Q. You know, if you look at Exhibit 3 and
24 Appendix A, is that your curriculum vitae?

25 A. I believe so, yes.

1 Q. And to your knowledge is that still
2 accurate as to your curriculum vitae?

3 A. Until the time I submitted that to the
4 case, I think, yeah. Maybe there have been
5 minor updates down the road, like new
6 publications or other activities.

7 Like, I believe -- I'm not sure
8 if my rank is up to date because I was promoted.
9 So it is still listing me as an associate
10 professor, but I have been promoted to full
11 professor effective July 1st.

12 Q. Congratulations.

13 A. Thank you.

14 Q. Since the time of this curriculum vitae
15 that you submitted to now, have you had any
16 experiences that would be relevant to the subject
17 matter of these proceedings?

18 MR. JOHNSON: Objection, broad.

19 A. Well, this is kind of like a very
20 open-ended question. I have a hard time, if you
21 can specify it more. Like, as a full professor
22 in a public university, as a consultant I work --
23 I do consulting. I continually either learn new
24 knowledge or practice more research that can
25 blend into most of the cases. You know what I

1 mean?

2 So it's not -- Honestly, there's
3 no hard answer for this question, other than
4 saying that I'm a continuous learning person all
5 the time, and I'm very active in the field of
6 consulting as the technical expert field. So I
7 on a continuous basis gain knowledge that can be
8 relevant to the case.

9 Q. Since the time you submitted this --
10 And I'll call it a CV just for shorthand.

11 A. Yeah. Sure.

12 Q. Since the time you submitted the CV,
13 have you had any experiences that would affect
14 the substance of the opinions you stated in
15 Exhibit 3?

16 MR. JOHNSON: Objection, overly
17 broad, just with experiences.

18 Are we including his work in the
19 litigation or just general experiences?

20 MR. WONG: General experiences.

21 MR. JOHNSON: So not including
22 his work on the case specifically?

23 MR. WONG: Well, I'll get to the
24 exhibits specifically in a minute, but I'm
25 trying to find out if he's had any experiences

1 that would affect his -- that would be relevant
2 to the opinions that he's giving in these
3 exhibits.

4 MR. JOHNSON: I understand. I
5 was just trying to clarify we're talking
6 outside of the context of the litigation or,
7 of course, he's done a lot of work to prepare
8 the declarations. Are you excluding that work?

9 MR. WONG: Yeah. Yes.

10 MR. JOHNSON: Okay.

11 MR. WONG: I get it.

12 MR. JOHNSON: Okay.

13 Q. Yes, excluding the work you specifically
14 did on these declarations, have you had any
15 experiences since the time of your CV that would
16 affect the opinions that you provided in these
17 declarations?

18 MR. JOHNSON: That I understand.
19 Thanks, Counsel.

20 A. I don't think -- I don't think so,
21 maybe is the short answer.

22 Q. Now, over the course of your
23 experiences, have you had any direct experience
24 with designing microwave ovens?

25 A. I believe I didn't.

1 Q. And over your career have you had any
2 experience designing refrigerators?

3 A. This is also another broad question,
4 and I can explain why, how I should answer it.

5 I have managed product development
6 engineering for a major appliance manufacturer,
7 A. O. Smith, which is the largest manufacturer
8 of water heaters in America.

9 And in that role I was leading
10 teams to develop efficient water heaters. That
11 also included a heat pump, which is -- which has
12 all the components of a refrigerator. You know
13 what I mean? Compressor, evaporator, condenser,
14 and stuff like that.

15 So to me the heat pump itself is
16 a me-too to a refrigerator in terms of the major
17 components and the principle of operation.

18 Q. Refrigerators that are typically for
19 residential home use, are those heat pumps?

20 A. No, they are not.

21 Q. So with respect to refrigerators that
22 are designed for residential home use, have you
23 had any design experience with respect to those?

24 A. Okay. Now, I ask you to, if you help
25 me, define the word "design experience" because

1 I taught myself thermal dynamics for many years,
2 you know, so we teach how to design refrigerator
3 on the college level.

4 I have taught thermal fluids lab
5 for many years, and we use refrigeration cycle
6 in how we design it. I teach how to design it,
7 not only being involved in designing it.

8 So if you count this as an
9 experience, you know, the answer is, yes, I have
10 been involved in not only designing refrigerators
11 but also designing the principle of operation and
12 how to test it, its performance in the lab for
13 all these future designers, which are my students.

14 Q. Other than the academic experience that
15 you're describing, have you been involved in the
16 design of commercial refrigerators for home use?

17 A. No. The answer is no.

18 Q. I want to turn your attention to your
19 CV. And, unfortunately, there are no numbers on
20 the CV, but I'd like to turn your attention to
21 the section that has to do with your expert
22 witness experience, which I believe is maybe the
23 fifth or sixth page in. It's titled "2019 to
24 Present Expert Witness Experience." Do you see
25 that?

1 A. Before my publications or after that?

2 Q. Yeah, it's right before where it says
3 "Teaching Experience" and the top of the page
4 says "Industrial/Manufacturing Appointments."
5 Do you see that?

6 A. Yes.

7 Q. And is that all of the expert witness
8 engagements you've had from 2019 to today?

9 A. I need to read through to answer this
10 question, if you allow me.

11 So the answer is, no, there's
12 more cases that I worked on after that. I did
13 not capture them in my CV.

14 Q. How many more?

15 A. At least one more that has been
16 concluded, and I did not capture this case that
17 I'm working on now in that list, and there is
18 potentially one upcoming one that I signed up
19 for, but the work did not start yet.

20 Q. I want to set that one aside.

21 A. Right.

22 Q. I don't want to ask you about that one.

23 A. Right.

24 Q. But the one where you said it's been
25 concluded, what was the subject matter of that

1 engagement?

2 A. Commercial ice makers.

3 Q. Was it a patent case?

4 A. It was a patent infringement case.

5 Q. And did you submit a declaration in
6 that case?

7 A. Yes, I did.

8 Q. Was that a district court litigation?

9 A. It was an ITC case, International Trade
10 Commission case.

11 Q. Did you submit a declaration in any
12 patent office proceeding relative to that work
13 that you did?

14 A. I can't recall that I did, so I can't
15 recall the answer honestly. I can't recall if I
16 did because I did a lot of work, you know, and I
17 was traveling when I was doing that work, so I
18 can't remember exactly.

19 Q. When did that conclude?

20 A. I think the first or second week of May
21 2024. May 11th, something like that.

22 Q. Who was the party for which you were an
23 expert witness in that case?

24 A. It was the owner of the patent. So I
25 was on the side of the owner of the patent that

1 has been infringed, and the company name is
2 Hoshizaki America.

3 Q. Hoshizaki?

4 A. Hoshizaki America, yeah.

5 Q. What did you -- Strike that.

6 Did you opine on infringement in
7 that case, patent infringement?

8 A. I believe I did, yeah.

9 Q. Did you opine on patent validity in
10 that case?

11 A. Absolutely.

12 Q. Let me refer you -- I'm going to go
13 back to the list in your CV, and the first item
14 is an engagement that you refer to as A. O.
15 Smith versus Bradford White. Do you see that?

16 A. Yes, I do.

17 Q. On whose behalf were you an expert
18 witness?

19 A. I was an expert witness on behalf of
20 A. O. Smith, the owner of the patent.

21 Q. And is that who you refer to as your
22 client in that case?

23 A. Yes.

24 Q. And then the next case is SPG versus
25 Evapco. Do you see that?

1 A. I do.

2 Q. And, again, do you refer -- And who did
3 you represent in that -- Strike that.

4 On whose behalf were you an
5 expert witness in that case?

6 A. Again, the owner of the patent, SPG.

7 Q. And is SPG the entity for which you
8 refer to as your client in that case?

9 A. Yes. I was working with the attorney
10 office that is representing SPG, so -- but I
11 assume, depending on how you define the client.
12 So I was working for the law firm that SPG hired
13 in that case, but the ultimate client is SPG.

14 Q. And you believed you were submitting
15 opinions in support of your client in both of
16 those cases?

17 A. When you refer to "both," which cases?

18 Q. Number 1 and Number 2 in your CV that
19 we've been referring to.

20 A. Okay. So what was the question again?

21 Q. Was it your understanding that you were
22 submitting opinions in support of your client in
23 both of those proceedings?

24 A. Yes.

25 Q. Now I want to turn your attention

1 away from Appendix B but to the other part of
2 Exhibit 3.

3 Now, as you testified earlier,
4 that's a declaration that you submitted in the
5 PGR 03 proceeding; correct?

6 A. Correct.

7 Q. Are there any changes or corrections
8 that you believe are necessary for that
9 declaration?

10 A. Not that I'm aware of.

11 Q. You've reviewed it, and everything
12 still appears to be accurate?

13 A. I did.

14 Q. You haven't changed any opinions since
15 the time you submitted those declarations;
16 correct?

17 A. That's correct.

18 (Exhibits 5 and 6 were marked
19 for identification.)

20 Q. I'm going to put before you, Dr. Tanbour,
21 a document that's been marked as Exhibit 5. It's
22 U.S. Patent No. 11,674,745.

23 MR. JOHNSON: I think I have 100
24 of these.

25 Q. Do you recognize Exhibit 5?

1 A. Yes, I do.

2 Q. Can you describe what that is, please?

3 A. I believe, in short, this is what we
4 agreed to refer to as the '745 patent.

5 Q. And that is the patent for which you
6 submitted your declaration that's been identified
7 as Exhibit 3; correct?

8 A. That's correct.

9 Q. Let me also put before you a document
10 that's been marked as Exhibit 6, Patent No. U.S
11 11,674,746.

12 Do you recognize Exhibit 6,
13 Dr. Tanbour?

14 A. Yes, I do.

15 Q. Can you describe what that is, please?

16 A. I believe this is a copy of what we
17 agreed to refer to in short as the '746 patent.

18 Q. And the '746 patent is the subject
19 of your declaration that has been marked as
20 Exhibit 4; is that correct?

21 A. That is correct.

22 Q. Now, is it your understanding that the
23 '745 patent and the '746 patent are the same
24 except for the claims?

25 A. I think the way I should answer this,

Page 24

1 if you allow me, is that the specification of
2 the '745 patent and the specification of the
3 '746 patent have a lot of similarity.

4 And I think I can -- I just need
5 to refer to the two documents, if you allow me
6 just to answer the second half of your question
7 in terms of the number.

8 So the answer is, yes, including
9 my previous portion of the explanation that I
10 did in terms of the specification being quite
11 similar.

12 Q. Let me ask it differently.

13 When you say that they're similar,
14 do you understand what a continuation application
15 is?

16 A. Yes.

17 Q. If you look at the front of -- Well,
18 strike that. Let me do it this way.

19 When you say "similar," is that
20 different than saying that the specifications
21 are the same?

22 A. Well, I can't recall that I compared
23 word by word on the specification between the
24 two. Sitting here, just I would be speculating
25 to answer that question.

1 Q. Do you have an understanding that each
2 of those patents are continuations of the same
3 parent application?

4 A. I believe so.

5 Q. And as continuations of the same
6 parent application, they would have the same
7 specification; is that correct?

8 A. I don't know the answer to this
9 question, honestly, because, as I said, I did
10 not compare word by word.

11 But I do have a very strong
12 understanding that the specifications of both
13 are widely similar. They may not be one million
14 percent, you know, the same, but they are
15 similar.

16 Q. Do you have an understanding of what a
17 continuation patent application is?

18 A. Not as a -- the understanding of a
19 lawyer, but I do have an understanding of that.

20 Q. What is your understanding of a
21 continuation application?

22 A. It's a -- My understanding, it's a
23 patent requested to be issued based on a
24 previous patent that has been issued or
25 application that has been issued, filed, you

1 know.

2 Q. And it has the same specification as
3 the parent. Is that your understanding?

4 MR. JOHNSON: Objection to form.

5 A. I don't understand the legal answer of
6 this question, honestly.

7 Q. What I'm trying to get at is, again,
8 for purposes of brevity, if I asked you questions
9 about the '745 patent and about the content of the
10 '745 patent, is your understanding that those
11 responses would be applicable to the '746 patent
12 as well?

13 A. When it comes to the specification or
14 the claims?

15 Q. When we talk about the specification.

16 A. I just repeat my previous answer, is I
17 did not do the exercise of word-by-word
18 comparison between the two. And I'm honest
19 saying that. But I do believe, from studying
20 the whole case, that the specifications of the
21 '745 and the '746 are very similar, I should
22 say.

23 Q. Again, for brevity, what I'm trying to
24 do is avoid having to ask you a question about
25 the '745 patent section and then go to the '746

1 patent for the same section and ask you the
2 question again.

3 And so I'm trying to get your
4 understanding as to whether, if I ask a question
5 about the '745 patent specification, to your
6 understanding, would it also be applicable to
7 the '746 patent?

8 A. I prefer to kind of like verify as I
9 go, which makes me feel more comfortable,
10 because I'm under oath, you know. I don't want
11 to commit to something that I'm not 100 percent
12 sure. So if we do an exercise like that during
13 the deposition, if you don't mind, that makes me
14 feel more comfortable.

15 Q. Okay. Let's refer to Exhibit 3, please.
16 Turn your attention to paragraph 40 at page 15.

17 MR. JOHNSON: I apologize, Counsel,
18 what number did you say? Paragraph 40?

19 MR. WONG: Paragraph 40, page 15.

20 MR. JOHNSON: Thanks.

21 Q. Do you see that?

22 A. I do.

23 Q. And, actually, this section, Section E,
24 is about a legal concept called "Indefiniteness";
25 correct?

1 A. Yes.

2 Q. And now let me turn your attention to
3 paragraph 41. Do you see you state, "I further
4 understand that a claim may fail this requirement
5 and be indefinite if, when read in light of the
6 specification delineating the patent and the
7 prosecution history, it fails to inform a POSITA
8 about the scope of the invention with reasonable
9 certainty"? Do you see that?

10 A. I do.

11 Q. What is your understanding of what
12 "reasonable certainty" means in that sentence
13 that you provided there?

14 A. I think I read it as the plain, ordinary
15 meaning, reasonable certainty.

16 Q. And what does that mean to you? What
17 does the plain, ordinary meaning of reasonable
18 certainty mean to you?

19 A. I think when somebody is certain, the
20 way I understand it is that there's just a
21 level of assurance that the facts that are being
22 taught are for a POSITA, a person of ordinary
23 skill in the art, POSITA, are -- have some good
24 level of certainty.

25 Q. Does that mean that a POSITA has good

1 level of certainty as to what the claim term
2 means; correct?

3 A. That's correct.

4 Q. And so the POSITA ought to be able to
5 tell whether they're within the language of the
6 claim term or outside the language of the claim
7 term; is that correct?

8 A. To tell what?

9 Q. Well, you are opining here about your
10 understanding of a claim; correct?

11 A. Right.

12 Q. And it may fail if it doesn't meet this
13 requirement, correct, of definiteness; right?

14 A. Uh-huh.

15 Q. So if it's indefinite, it may fail;
16 correct?

17 A. If it is indefinite, yeah.

18 Q. And I'm trying to understand what that
19 means with respect to your statement.

20 With reasonable certainty, does
21 that mean that a POSITA should be able to tell
22 whether they're inside of the meaning of the
23 claim term or outside the meaning of the claim
24 term? Is that your understanding?

25 A. Well, it's kind of like -- this is a

1 very kind of like loaded question with legal
2 jargon, you know.

3 So since I'm not a lawyer, I will
4 try my best to kind of like -- it appears that --
5 I agree, I should say. Not as a lawyer, but as
6 an expert, as a POSITA.

7 Q. Right. That's your understanding.

8 A. Yeah.

9 Q. I'll turn your attention to the next
10 page, 16, Section F, titled "Enablement." Do
11 you see that?

12 A. Yes.

13 Q. And do you see in the first sentence
14 you say, "I have been informed and understand
15 that to meet the enablement requirement, an
16 applicant is required to disclose sufficient
17 information to allow a POSITA to make and use the
18 claimed invention without undue experimentation"?
19 Do you see that?

20 A. I do.

21 Q. What is your understanding of what
22 "sufficient information" is?

23 A. Again, it's the plain and ordinary
24 meaning.

25 Q. And can you explain what you mean by

1 "plain and ordinary meaning"?

2 A. It's highly dependent on the POSITA
3 experience and being a POSITA in the field, that
4 sufficient information is defined by that field,
5 specific field.

6 So what's sufficient information
7 for a POSITA in surgical equipment is different
8 than sufficient information for a POSITA with a
9 combined appliance like a microwave-refrigerator.

10 Q. So is it your understanding that for
11 this disclosure requirement, that the POSITA
12 brings some understanding of the technology so
13 that the patent application doesn't have to
14 explain, necessarily, all the details of what
15 is being disclosed; is that correct?

16 A. The way I understand enablement is the
17 way I put it here in this paragraph, you know.
18 So I think if I read the paragraph one more
19 time, I should answer your question, I assume.
20 Am I right?

21 Q. Well, I'm asking --

22 A. So the answer to your question is the
23 paragraph you just read, the first part of
24 paragraph 43.

25 Q. Yeah. And what I'm trying to

1 understand is, when you refer to "sufficient
2 information," for example, in a patent, does a
3 patent have to give manufacturing details of a
4 product in order to be sufficient information
5 for disclosure?

6 A. I'm the named inventor on many patents,
7 you know, so I have a hard time, I mean,
8 understanding how you're using manufacture, the
9 word "manufacture" in your question, so can you
10 rephrase the question so I should be able to
11 answer it?

12 Q. So you say you're an inventor on many
13 patents; correct?

14 A. Right. Right.

15 Q. When you are deciding what you put into
16 the specification, how do you decide what level
17 of detail you will put into the specification?

18 A. I think it's the level that's sufficient
19 enough for a POSITA to understand how to make use
20 of the specification.

21 Q. So based on the POSITA's common
22 understanding of the technology; correct?

23 A. That's correct.

24 Q. So, for example, if you're talking
25 about an electrical device, you don't have to

1 specify, if you're talking about a circuit,
2 necessarily, the details of how a transistor
3 works; is that correct?

4 A. That's fair.

5 Q. And by the same token, for example, if
6 you're talking about a relay, you don't have to
7 describe all the details of the relay and how
8 it works and how operationally it functions; is
9 that correct?

10 A. To the extent that this relay is not
11 one of a kind or a brand-new concept for a
12 relay, that's correct.

13 Q. To the extent the relay is not a novel
14 aspect of the electrical appliance, you don't
15 really go into detail about how the relay works;
16 is that correct?

17 A. To a certain extent, yeah.

18 Q. What do you mean "to a certain extent"?
19 I'm sorry.

20 A. Because as my previous answer, just
21 the -- I list that component that we are
22 discussing in the specification as a new -- a
23 new feature. It still is called a relay, but it
24 may have some little new thing in it, you know.

25 Q. Yeah. So if the relay is not a novel

1 aspect of the invention, then there's no reason
2 to go into that kind of detail; correct?

3 A. That's fair.

4 Q. Let me turn your attention to page 19
5 of Exhibit 3, please. Do you see that?

6 A. Uh-huh.

7 Q. Section 6 is entitled "The
8 Patents-At-Issue." Do you see that?

9 A. I do.

10 Q. And that spans paragraphs 53 through
11 63; correct?

12 A. In what -- In what terms the span?

13 Q. I just mean Section 6 goes from
14 paragraph 53 through paragraph 63; correct?

15 A. That's correct.

16 Q. And can you explain, what is the
17 purpose of that section that is titled "The
18 Patents-At-Issue"? Why did you include those
19 paragraphs?

20 A. I think I was listing the fact that I
21 reviewed the specification, the prosecution
22 history of all these patents-at-issue.

23 Q. And does this section represent your
24 understanding of the '745 patent?

25 A. I need to verify it, okay, if you allow

1 me to read, because I don't memorize these things.

2 So what is the question again,
3 please?

4 Q. Does Section 6 represent your
5 understanding of the '745 patent?

6 A. I do see the '745 patent listed at
7 least at paragraph 56, which is in the same
8 Section 6, yes.

9 Q. And it's titled "The Patents-At-Issue,"
10 so this description applies to both the '745
11 patent and the '746 patent; correct?

12 A. I believe it is fair, yeah.

13 Q. What is the general subject matter that
14 the '745 patent is directed to?

15 A. I think it has -- So is this question
16 related to the claim parts or the overall
17 description?

18 Q. The overall subject matter disclosure
19 of the patents.

20 A. Okay. As the title says, like, I mean,
21 if I may read from the '745 patent, if you
22 allow me, it's multiple linked appliance with
23 auxiliary outlet.

24 So that's the general subject.
25 So we have a combination appliance, a microwave

1 and refrigerator, and there are novel features
2 that have been taught and specified and claimed
3 in the '745 patent related to safety, like the
4 smoke detector being inside the microwave, and
5 also features related to controlling power
6 supply or power demand overload as well as
7 auxiliary power outlets, the ability to shut the
8 refrigerator when the microwave is demanding
9 power and the ability to, I think, reset the
10 circuitry to allow the refrigerator to demand
11 power once the refrigerator is cleared from
12 demanding power or stuff like that. So these
13 are the things that I -- from my memory, okay,
14 related to the '745 patent.

15 Q. Thank you.

16 If you look at paragraph 55,
17 which begins on page 19, the sentence that
18 bridges pages 19 and 20, it says, "In many
19 embodiments, these appliances are a linked
20 microwave and mini-refrigerator. Both
21 Patents-at-Issue teach a smoke sensor within the
22 microwave is operatively connected to a power
23 control circuit which is configured to disable
24 power to the microwave's magnetron (i.e., the
25 component which heats food during normal

1 microwave operation) prior to the set cooking
2 time in the event the smoke sensor detects
3 excessive smoke during the cooking session." Do
4 you see that?

5 A. I do.

6 Q. I want to focus first on your reference
7 to "the set cooking time." Do you see that?

8 A. Uh-huh.

9 Q. What is that referring to?

10 A. Again, plain and ordinary meaning is
11 that the user of the microwave, knowing what is
12 the food that has been put into the microwave to
13 receive the microwave heating, that knowledge of
14 what is being cooked inside can teach the user
15 what is the time needed to be allowed for the
16 microwave to be set on.

17 Q. So a microwave typically has a type of
18 input device that allows you to input the time
19 that you want the microwave to heat whatever
20 food is inside the microwave; correct?

21 A. I think your statement is incomplete.
22 And I can explain --

23 Q. Please.

24 A. -- if you allow me.

25 Q. Yeah.

1 A. Because there are also different
2 powers. So like two minutes under Power 1 may
3 not be as strong as two minutes under a higher
4 power setting, you know, so there are also
5 different powers.

6 Q. Different power settings, but in each
7 of those instances the user sets the time that
8 it wants the microwave to run to heat the food;
9 correct?

10 A. That's correct.

11 Q. And so when you refer to "the set
12 cooking time," you're referring to the user's
13 input of the set cooking time; correct?

14 A. Okay. Now, the user input is my
15 problem with this.

16 Q. I see.

17 A. I can explain.

18 Q. Yep.

19 A. Because there are certain microwave
20 interfaces where they have one button choice for
21 like potato or popcorn or something like that,
22 so they don't have -- the user doesn't have to
23 manually enter the time.

24 Q. In those instances where it says
25 popcorn or potato, how long does the microwave

1 know to run in those instances for whatever food
2 is inside?

3 A. A POSITA would know that time, you know,
4 that can be programmed into the controller.

5 Q. So those buttons, do they relate to a
6 specific time for whatever product is indicated?
7 So, for example, if it's popcorn and you hit the
8 popcorn button, it provides a certain time for
9 the microwave to run?

10 A. My understanding, a POSITA understands
11 these times because, also, they can vary from
12 power to another, you know, from a power setting
13 to another, but I mean -- So what was the
14 question again?

15 Q. Yeah. It's not very -- It wasn't very
16 well said. Let me ask it differently.

17 These buttons that are labeled
18 for, say, popcorn or potato, when you depress
19 one of those buttons, does it correspond to a
20 set cooking time?

21 A. Yes.

22 Q. And microwave ovens, and I've seen what
23 you're talking about, but they always also have
24 a separate keypad that allows the user to input
25 the cooking time; correct?

1 A. That's correct.

2 Q. Is it your understanding that all
3 microwaves have keypads that allow the user to
4 input a set cooking time?

5 A. I think my experience with the
6 microwaves I used throughout my life is the
7 answer is yes.

8 Q. Yes. So you don't know of any
9 microwaves that don't have the ability for the
10 user to put in a set cooking time; correct?

11 A. I'm not aware of any.

12 Q. The rest of that sentence, it says
13 "prior to the set cooking time" -- Well, let me
14 back up because it doesn't make sense.

15 The patents teach a smoke sensor
16 within the microwave operatively connected to a
17 power control circuit which is configured to
18 disable power to the microwave's magnetron prior
19 to the set cooking time in the event the smoke
20 sensor detects excessive smoke during the
21 cooking session. Do you see that?

22 A. I do.

23 Q. What do you mean by "excessive smoke"?

24 A. Excessive smoke is what I understand is
25 what a POSITA understands to be indicative of a

1 dangerous condition.

2 Q. Do you agree that not all smoke -- Strike
3 that.

4 Do you agree that when cooking food,
5 there is some smoke that is emitted that is not
6 excessive; correct?

7 A. That's why the word "excessive" is in
8 here, yeah.

9 Q. Yes, which means that there's some
10 level of smoke that is not excessive; correct?

11 A. I think that's fair, given the word
12 "excessive" in this statement.

13 Q. Well, it's your statement.

14 A. Right. Yeah.

15 Q. Is that your understanding?

16 A. Yeah. Yeah.

17 Q. When does that smoke level become
18 excessive? How does one know?

19 MR. JOHNSON: Objection, beyond
20 the scope. You can answer.

21 A. A POSITA, who is an expert in designing
22 these, they have R&D labs, and they burn things,
23 and they decide what is excessive and what is
24 not.

25 I have been in these facilities

1 all my tenure in the industry, and a POSITA
2 would know what is excessive and what is not
3 based on their R&D and the product development
4 process.

5 Q. And these POSITAs and these R&D labs,
6 they all have their own R&D labs; correct?

7 MR. JOHNSON: Objection, calls
8 for speculation.

9 A. How can I answer a question like that
10 honestly? Because it is -- it is an excessively
11 open question, like all POSITAs on earth. You
12 know what I mean?

13 Q. Well, my point is, you were saying that
14 POSITAs have their labs to determine what is
15 excessive; and my question is, but not all
16 POSITAs have the same lab; correct? There are
17 different labs that different POSITAs utilize?

18 MR. JOHNSON: Same objection,
19 speculation.

20 A. I was just giving an example, you know.
21 So when I use this R&D lab, I was just giving an
22 example. But another POSITA may not have a lab
23 but is informed because they are in the field.
24 They can be informed by another POSITA, hopefully,
25 who has a lab. So that's a scenario I can give

1 you where not every POSITA would have an R&D
2 lab.

3 Q. There are many different suppliers of
4 microwave ovens; correct?

5 A. So the question again?

6 Q. There are many different suppliers of
7 microwave ovens; correct?

8 A. That's correct, yeah.

9 Q. So you don't believe all microwave
10 ovens come from the same company; is that right?

11 A. That's very hard to believe, yeah.

12 Q. And is it your understanding that
13 typically companies have their own R&D labs?

14 MR. JOHNSON: Objection, form,
15 speculation.

16 A. Now, in the world of outsourcing,
17 you know, and I've been in the industry for
18 17 years, a typical appliance cannot be, like,
19 the exclusive outcome of one single
20 manufacturer. There are a lot of things that
21 are outsourced.

22 So there are labs within the
23 manufacturer, labs outside the manufacturer,
24 labs of the suppliers of the OEM components and
25 stuff like that.

1 Q. And so each of those labs, as you refer
2 to them, they would set their own design criteria;
3 correct?

4 MR. JOHNSON: Again, speculation.

5 A. So the word "design criteria" is also an
6 issue for me to be able to answer this question
7 because I was on that side of the industry where
8 labs are also used to test the performance.

9 So it has nothing to do with the
10 design criteria. You know what I mean? It can
11 be something related to performance. So if you
12 can rephrase the question for me, it may help me
13 answer.

14 Q. Let's back up to your prior answer.

15 So different companies would have
16 different labs for designing products; correct?

17 MR. JOHNSON: Same objection,
18 overbroad, speculation.

19 A. It's possible that a company may not
20 have their own lab, but they invent an idea or
21 invent a new novel concept that can work with
22 different suppliers to put it together for them
23 and test it even, participate in overseeing
24 testing or testing.

25 So that's my kind of like

1 explanation. I don't know if this is an answer
2 for your question.

3 Q. Let me go back to your statement of
4 excessive smoke. All right? And you referred
5 to a POSITA would know what excessive smoke is;
6 correct?

7 A. Right.

8 Q. Is it your testimony that all POSITAs
9 would set the same level with respect to what is
10 excessive smoke?

11 MR. JOHNSON: Objection, beyond
12 the scope, calls for speculation.

13 A. Will you repeat the question, please?

14 Q. I'm trying to understand what
15 "excessive smoke" means.

16 A. Right.

17 Q. And it appears that it depends on a
18 POSITA which may be involved in different
19 activities.

20 MR. JOHNSON: Objection.

21 Q. Correct?

22 MR. JOHNSON: Objection, beyond
23 the scope.

24 A. I think my answer was -- for the word
25 "excessive smoke" is probably the answer to your

1 question, so I see that a POSITA -- I will repeat
2 my answer again, is a POSITA who is well-versed
3 in the field will understand exactly what is the
4 meaning by excessive smoke.

5 Q. A POSITA. POSITA is not one individual;
6 correct? It's a group of people; right?

7 A. That's correct.

8 Q. And when I say "a group," I mean, I
9 don't know what the number is POSITA, but it's
10 people that are skilled in the art; correct?

11 A. That's correct.

12 Q. And because there are multiple people
13 that are skilled in the art, isn't it true that
14 they would have different opinions on what
15 excessive smoke is?

16 MR. JOHNSON: Objection, beyond
17 the scope, calls for speculation.

18 A. I think to answer your question, I have
19 to run a questionnaire across all POSITAs in the
20 combined microwave-refrigerator and then see the
21 different answers, you know, to answer your
22 question.

23 So I would be speculating if I
24 answer your question, honestly, because I can't
25 have the ability to meet them all and test their

1 understanding. You know what I mean?

2 Q. No, I'm not asking for you to meet them
3 all, but I'm just asking, because there are so
4 many people in the group of POSITAs, that there
5 could be different opinions about what excessive
6 smoke is, and I'm asking if you agree with that.

7 MR. JOHNSON: Objection, beyond
8 the scope, calls for speculation.

9 A. I can't agree with that because my
10 understanding throughout this case about
11 excessive smoke is what a POSITA understands,
12 that this is indicative of a dangerous condition.

13 Q. Let me refer you now to paragraph 57.
14 It says, "At their peaks, the combined power
15 demands of the microwave and mini-refrigerator
16 may exceed the capacity of a standard electrical
17 outlet in environments such as dormitories and
18 hotels and cause an overload condition." Do you
19 see that?

20 A. I do.

21 Q. What are you referring to there with
22 respect to the operation of the
23 microwave-refrigerator combination?

24 A. Well, I don't understand the question.

25 Q. What are you referring to in that

1 sentence?

2 A. It refers to how the combined
3 microwave-refrigerator can manage the demand on
4 the power. So there is alternation between the
5 draw of power between the microwave and the
6 refrigerator so they don't overload the regular
7 outlet on the wall in a typical end user space.

8 Q. And why is it that you don't want it to
9 overload the circuit?

10 A. The question again?

11 Q. Why is it important not to overload the
12 circuit?

13 A. Because this can interrupt the operation
14 by the circuit breaker maybe in the dwelling or
15 the dormitory can trip, you know. It can cause
16 inconvenience, you know.

17 Q. Is it also possible in an overload
18 condition it can cause a fire? Is it a safety
19 issue as well?

20 MR. JOHNSON: Objection,
21 compound.

22 A. I believe if the dormitory or the
23 place where you place the combined appliance
24 is properly designed by whatever construction
25 company, it should have safety precautions to

1 trip the circuit breaker. That's common
2 knowledge if an overload is demanded from an
3 outlet.

4 Q. And the reason the circuit breaker
5 trips is to prevent hazards such as a fire;
6 correct?

7 A. Well, I'm very honest with you. This
8 word "fire" in your question has -- I have a
9 problem with it because the teachings of the
10 patents at issue, when they refer to "dangerous
11 condition," they're referring to the combustion
12 that happens in the cooking appliance, which is
13 a different field and different -- different
14 field of application than a fire that can be
15 caused in a wall outlet or cause a fire in a
16 house due to an overdraw of power.

17 So I have a -- So this word
18 "fire," there are two different sources of fire
19 in your question because we are talking about --
20 my understanding, at least my understanding, is
21 that the smoke detector, the smoke sensor that
22 is inside the microwave in the patents at issue
23 is there to provide that safety against fire,
24 and that's why it detects excessive smoke coming
25 from the cooking process, which is a different

1 source of fire than an overload on a different
2 field of application in the wall outlet.

3 Q. Yeah. And for these questions I'm not
4 referring to fire inside a microwave that's
5 caused by cooking the food. I'm really focused
6 on your statement here about can cause an
7 overload condition.

8 And I believe when you refer to
9 "overload condition," you're referring to an
10 overload on the circuit with respect to the
11 electricity draw which can be dangerous for the
12 circuit, not for the microwave, inside the
13 microwave oven.

14 Do you understand?

15 A. So when you say "the circuit," the
16 circuit of the wiring inside the dormitory, in
17 the wall.

18 Q. That's correct, yeah, from the wiring
19 inside. That's a danger that an overload
20 condition can create; correct?

21 A. I think I'll refer to my previous
22 answer, which I said if the building is properly
23 designed, then there is a circuit breaker in the
24 main panel that refers to whatever dwelling that
25 takes care of tripping.

1 So once the overdraw happens, so
2 the number of amps, amperes, are required
3 exceeds the circuit breaker standard trip point,
4 then the circuit breaker itself in the panel
5 will trip.

6 Q. And that's a safety condition; correct?
7 It trips for safety reasons?

8 MR. JOHNSON: Objection, compound.

9 A. I believe there is no way that I can
10 answer this question for one reason I can
11 explain is the fact that there is a limited
12 number of amps coming into any space, and the
13 goal of the circuit breakers is to regulate the
14 distribution of these amps based on the design
15 of the structure itself, the home, the dwelling,
16 the dormitory.

17 So the process of tripping by the
18 circuit breaker in the panel, this is in the
19 dwelling, the panel itself, is more like to
20 ration, like, okay, ration the distribution of
21 these amps.

22 So we have 400 amps coming to the
23 house or to the dwelling, and these circuit
24 breakers not only are safety devices, but also
25 they are checkpoints, regulators. So this area

1 of the house is only -- we dedicate 15 amps for
2 that, and anything that's demanded above that
3 will not be allowed. So it's not only safety.
4 That's my understanding.

5 Q. Not only safety, but safety is an
6 aspect of it; correct?

7 A. Again, if the circuit breaker trips,
8 then there will be no safety problem, so I don't
9 know where safety is coming in the question.

10 Q. Yeah, but if the -- That's the
11 question. But if the circuit malfunctions for
12 whatever reason, doesn't trip, it could be a
13 safety issue; correct?

14 A. I think it is correct, yeah, if the
15 circuit breaker malfunctions, yeah.

16 Q. So preventing an overload condition
17 is also -- one of its aspects is for safety;
18 correct?

19 A. Okay. Now, you want to define the
20 overload word here. Referring to the overload
21 in the combined appliance?

22 Q. Well, I'm referring to, in your
23 paragraph 57, the operation of the microwave and
24 the mini-refrigerator, that if it exceeds a certain
25 capacity could cause an overload condition.

1 A. Yeah.

2 Q. And that creates a safety issue; correct?

3 A. I think when I read the patents, I was
4 more leaning towards convenience and inconvenience
5 when it comes to the overload condition. That's
6 why the controller of the combined appliance is
7 managing the demand, so there will be no
8 interruption at the outlet.

9 So it's more for convenience,
10 but the safety side that I understand is the
11 placement of the smoke detector itself within
12 the microwave.

13 Q. So your opinion is that the managing
14 of the overload condition is not a safety
15 consideration.

16 Is that what you're saying?

17 A. My opinion is this management of the
18 demand on power and managing it between the
19 microwave and the refrigerator has more to do
20 with convenience, and then maybe safety comes
21 later, but I think it's predominantly for
22 convenience.

23 Q. What do you mean "and then maybe safety
24 comes later"? What do you mean by that?

25 A. If the circuit breaker in the wall, as

1 you suggested, malfunctions.

2 Q. Then the overload condition or managing
3 it does have a safety aspect to it; correct?

4 A. It can have a safety benefit, yeah.

5 MR. WONG: Can we take about a
6 ten-minute break, please?

7 MR. JOHNSON: You bet.

8 (A recess was taken.)

9 MR. WONG: Okay. We can go back
10 on the record.

11 Q. Let me turn your attention, Dr. Tanbour,
12 to paragraph 58 of Exhibit 3.

13 MR. JOHNSON: Counsel, can I just
14 raise one thing, sorry, before you ask a question?

15 I notice the client is here and
16 has a copy of the dec. Did you remove those
17 sections that we talked about? Okay. Perfect.

18 MR. WONG: Can we go off the
19 record for a second?

20 (An off-the-record discussion
21 was held.)

22 MR. WONG: Okay. Back on the
23 record.

24 Q. Are you at paragraph 58, Dr. Tanbour?

25 A. Okay. Do you want me to read it?

1 Q. No. Well, yes, maybe you could read
2 the first sentence of paragraph 58.

3 A. Aloud?

4 Q. Yes, please.

5 A. Okay. "A key innovation in the
6 Patents-at-Issue is the inclusion of a safety
7 sensor (hereinafter referred to as a 'smoke
8 sensor') that is operatively connected to the
9 microwave."

10 Q. When you refer to "a safety sensor,"
11 what do you mean by that?

12 MR. JOHNSON: Objection, beyond
13 the scope.

14 MR. WONG: Well, it's right there
15 in his dec.

16 MR. JOHNSON: I understand.

17 A. I'm not sure if this is more like a
18 claim construction question. Is it? Is it
19 within the scope of the --

20 Q. I'm just asking what you mean in your
21 words there by a safety sensor. That's all.

22 A. I think I already spoke about this
23 before today when I mentioned that the inclusion
24 of the smoke sensor inside the microwave is meant
25 to sense excessive smoke, which is indicative of a

1 dangerous condition. So a POSITA would understand
2 what is the meaning of the safety benefit of having
3 that. That's what I mean.

4 Q. But when you refer to -- You say
5 "safety sensor (hereinafter referred to as a
6 'smoke sensor')."

7 Is safety sensor broader than a
8 smoke sensor?

9 A. If we keep in context the fact that this
10 declaration is related to the patents at issue
11 only, it's not broad because it's immediately
12 defined in my statement here as the smoke
13 sensor.

14 Q. So when you say "safety sensor," that
15 is in this paragraph synonymous with smoke
16 sensor; is that correct?

17 A. I don't think it is synonymous. What
18 is meant by the benefit of the smoke sensor is
19 the safety benefit of that. That's why the word
20 "safety" is in the paragraph.

21 Q. So your statement is, "A key innovation
22 in the Patents-at-Issue is the inclusion of a
23 safety sensor." And then it says, paren,
24 "hereinafter referred to as a 'smoke sensor'."

25 What I'm trying to understand is,

1 your reference to a safety sensor, is that
2 broader than what a smoke sensor is or is it the
3 same as a reference to a smoke sensor?

4 A. I think what I meant is this paragraph
5 is a reference to the smoke sensor.

6 Q. I see. So safety sensor refers to a
7 smoke sensor; correct?

8 A. In this paragraph.

9 Q. And where you're talking about the
10 patents at issue, do you mean that with respect
11 to the patents at issue, that a safety sensor is
12 a smoke sensor?

13 A. Yes.

14 Q. And so safety sensor doesn't encompass
15 sensors other than smoke sensors; correct?

16 A. In the context of this paragraph, the
17 patents at issue.

18 Q. How does a smoke sensor work?

19 A. A POSITA would understand that there
20 are different ways of detecting smoke. So the
21 principle of operation varies.

22 So there are smoke sensors that
23 are, like, the generic operation or the
24 principle operation is based on electrochemical
25 principle, where a smoke sensor has some kind of

1 interface with the flow that has the smoke, and
2 that smoke can alter the electrical resistance
3 of that interface.

4 And this can be calibrated
5 within the principle of operation into some kind
6 of a trigger once the change in the electrical
7 characteristics of the electrochemical interface.

8 There are smoke sensors that
9 rely on optical detection of the smoke. There
10 are infrared, for example, smoke detectors that
11 you can detect the smoke using infrared. You
12 can detect the smoke from, also, like, similar
13 to the motion sensor, but it senses the flow
14 itself from an optical point of view or light
15 interruption point of view.

16 Q. So in the next paragraph -- I'm sorry.
17 In the next sentence of that paragraph, you
18 identify various types of smoke sensors;
19 correct?

20 A. That's correct.

21 Q. So in all of these smoke sensors, they
22 are detecting properties regarding the makeup
23 of the chemical composition of smoke; is that
24 correct?

25 A. Under one condition, that's correct, is

1 the fact that we both agree that we're talking
2 about post-combustion business, meaning the
3 smoke detector, from its name, I mean, because
4 smoke is an outcome of combustion, so it cannot
5 be a pre-combustion emitted gas or something.
6 You know what I mean?

7 Q. I'm going to ask you about that in a
8 minute; but with that condition, what we're
9 talking about, the content of the gas -- I'm
10 sorry, the content of the smoke, right, the
11 characteristics of the content of the smoke;
12 correct?

13 A. It's not really a correct statement,
14 sir. I can explain why.

15 For example, if we are doing the
16 infrared sensor of the smoke, it has nothing to
17 do with the chemical. It's a light -- It's like
18 a light-blocking business, you know, like a
19 motion sensor, you know. It doesn't care if a
20 cat or a human is passing by the motion sensor.
21 Right? So I don't think your question is
22 specific, if you don't mind.

23 Q. But smoke sensors are not triggered
24 by temperature, is that correct, the temperature
25 of the smoke? They're not triggered by the

1 temperature of the smoke; correct?

2 A. Well, I have, also, difficulty here
3 trying to agree with you, sir, because the
4 smoke, once generated in the cooking appliance,
5 it is mixed with all kinds of gases that are
6 existing due to the cooking, including water
7 vapor, for example, stuff like that.

8 So when you say "the temperature
9 of the smoke," I have a problem with that
10 because, like, a thermometer or thermistor, the
11 combination of thermistor, for example, in this
12 example I have here is not sensing separately
13 the smoke from the rest of the atmospheric or
14 air inside the cooking appliance. Okay? So
15 just can you explain to me how you use the word
16 "temperature of the smoke"?

17 Q. Let me ask it differently.

18 Does the smoke sensor detect the
19 temperature of the smoke?

20 A. Still I have a problem with the word
21 "temperature of the smoke" because say we have
22 overcooked something inside the microwave.
23 Okay? And the microwave is still cooking, so we
24 pass the combustion, so there's a combustion
25 started, and then smoke is generated.

1 That smoke will not be solely the
2 only gas in the microwave. It's accompanied by
3 all kinds of gases that are existing before the
4 cooking, during the cooking, and after the
5 combustion started.

6 Q. What is smoke?

7 A. Smoke is the gas that is predominantly
8 emitted once the combustion kicks in, the burning
9 process kicks in.

10 Q. Okay. When does combustion occur?
11 Strike that. What does combustion mean?

12 A. Combustion is a chemical reaction.
13 Predominantly, in the case applicable to the
14 microwave, we have the food products are
15 subjected to elevated temperatures where if the
16 temperature of -- the smoke point, for example,
17 of an ingredient within the food is arrived,
18 then smoke starts to generate as an indication
19 of the very beginning of the combustion reaction.

20 Q. Combustion and fire, are they different?

21 A. For example, in the science of combustion,
22 okay, there's something called detonation, and
23 there's something called the flame propagation,
24 so you can have -- you can reach the smoke point
25 of a substance and it starts generating smoke,

1 further heating can generate a flame, which is
2 what you call fire in a layman term.

3 Q. In the cooking cycle in a microwave
4 oven, when you are cooking food and you turn on
5 the microwave, when does combustion begin?

6 A. I think a POSITA would know that if the
7 temperature supplied to the food inside the
8 microwave exceeds the smoke point of one of the
9 ingredients, then combustion starts. Once the
10 smoke starts to be generated, that is -- that's
11 the point of beyond combustion being started
12 already.

13 Q. When you say -- Let's see. You said
14 the combustion starts once the smoke starts to
15 be generated; correct?

16 A. What I meant is, if the smoke starts
17 to be generated, that means combustion already
18 started.

19 Q. Oh, I see. Combustion starts, but
20 smoke may not be generated immediately?

21 A. No, that's not what I meant.

22 Q. Okay. Maybe you can explain.

23 A. What I meant is exactly what I said,
24 is that further heating of the cooked food can
25 generate a circumstance where the temperature of

1 one of the ingredients in the food reaches or
2 starts to pass its smoke point. Then smoke will
3 be generated, which is indicative of a dangerous
4 condition, which is combustion and possibly fire
5 down the road.

6 Q. Is there any smoke generated before you
7 reach the smoke point?

8 A. I think, according to my understanding
9 as a POSITA, the smoke point requires that the
10 temperature of the smoke point, which is a
11 temperature, a feature of a typical, for
12 example, oil used in -- like, for example,
13 butter, for example, if it is in the food, tends
14 to have a smaller smoke point compared to olive
15 oil, for example. Olive oil probably requires
16 more temperature to reach a smoke point.

17 So once that smoke point is
18 reached, then that ingredient starts to generate
19 smoke, indicative of combustion has started, at
20 least on that ingredient.

21 Q. So when a food is heated up in a
22 microwave oven, the food contains constituents
23 that are different than oils; correct?

24 A. That's correct.

25 Q. So when you turn on the microwave oven,

1 is there smoke generated before you get to the
2 smoke point of the oils in the food?

3 A. If an ingredient other than oils have,
4 say, a smoke point that is lower than all other
5 oils in the food being cooked, then it can
6 start -- if it reaches its smoke point, start
7 to -- it can start generating smoke.

8 Q. So is your testimony that all
9 ingredients have a smoke point? Is that your
10 testimony?

11 MR. JOHNSON: Objection, beyond
12 the scope.

13 A. So I will probably answer this question
14 according to my understanding, okay, as a
15 person -- a POSITA as well as a person who had
16 some education in thermal fluids. Okay?

17 Like, smoke points, for example,
18 are used -- they're predominantly for the oils,
19 like, for example, cooking oil or stuff like
20 that. And, like, some liquid fuels have
21 something called flash point, okay, which can
22 trigger fire.

23 So solid ingredients of food,
24 they burn in a different fashion than a liquid.
25 Being mixed with a liquid or having a solid food

1 ingredient that is structurally integrated with
2 oils, cooking oils, they behave in a different
3 way when they burn than plain solids without oil,
4 you know. That's how I understand the smoke
5 point.

6 Q. Well, in your testimony you refer to
7 smoke point of ingredients other than the oil,
8 and so I'm trying to understand what you're
9 referring to there because I understood smoke
10 points were relative to oils, and so I'm trying
11 to understand what you refer to when you're
12 saying smoke points for ingredients other than
13 oil.

14 A. Right, which is the non-oil ingredients
15 within the food. That's what I meant. Like
16 starch.

17 Q. Yeah. They have smoke points?

18 A. I mean, any material, if you -- if you
19 test it, you can -- you can generally characterize
20 it by the point when the combustion starts, when
21 the smoke starts to be generated. That's my
22 understanding.

23 Q. Is it your understanding that there is
24 a certain level of smoke that can exist prior to
25 the smoke sensor -- Strike that.

1 Are there smoke levels that exist
2 in a microwave that do not trigger the smoke
3 sensor?

4 MR. JOHNSON: Objection, beyond
5 the scope.

6 A. The way I may answer this question is
7 a POSITA understanding of the principle of
8 operation of a smoke detector.

9 A smoke detector has a set point,
10 like a threshold. That's why there's a threshold
11 where the smoke concentration in the flow that is
12 passing the sensor has to reach that threshold
13 in order to trigger the smoke sensor to sense
14 smoke.

15 Q. Yeah. So there's some level of smoke
16 that can exist that doesn't exceed the
17 threshold; correct?

18 MR. JOHNSON: Same objection,
19 beyond the scope.

20 A. As long as we agree that in the teaching
21 of these patents at issue, that whatever below the
22 threshold is not in the view of a POSITA present
23 a dangerous condition.

24 Q. Right. So there can be smoke that
25 exists that is not necessarily a dangerous

1 condition; correct?

2 MR. JOHNSON: Same objection.

3 A. That's a very broad statement that I
4 can't agree to.

5 Q. Well, I thought that's just what you
6 said, that there's a threshold, which means the
7 smoke gets to a certain level and then it meets
8 the threshold; correct?

9 A. As long as we agree that whatever below
10 the threshold does not constitute a dangerous
11 condition. A POSITA would know that.

12 Q. Right. And so below that threshold,
13 not a dangerous condition, but there can be
14 smoke; correct?

15 MR. JOHNSON: Objection, beyond
16 the scope.

17 A. A threshold is a point that you have to
18 arrive to, so there should be smoke that is
19 generated until that threshold is arrived, yeah.

20 Q. Yeah. So there's smoke -- there's some
21 level of smoke that's below the threshold.

22 MR. JOHNSON: Objection.

23 Q. Correct?

24 A. It should --

25 MR. JOHNSON: Beyond the scope.

1 A. I think I don't agree to the word "some
2 level" because it is too rubbery, elastic. It's
3 too open.

4 Q. How would you characterize it?

5 A. I characterize it as a non-dangerous
6 condition level.

7 Q. Of --

8 A. Of smoke, yeah.

9 Q. I'm sorry. A non-dangerous condition of
10 a level of smoke can exist below the threshold.

11 MR. JOHNSON: Objection, beyond
12 the scope.

13 Q. Is that right?

14 A. That's what I meant, yeah.

15 Q. I'm just trying to get clarity on your
16 testimony, Dr. Tanbour.

17 A. Right. No worries. No worries.

18 Q. Okay. You referred to smoke point, and
19 you said smoke point is a temperature; correct?

20 A. That's my understanding.

21 Q. And so in the operation of a smoke
22 detector or smoke sensor, it does not detect
23 temperature; correct?

24 A. Well, in one of the definitions that I
25 mentioned here in paragraph 58 is that you can

1 have alcohol sensors coupled with the thermistor,
2 which is a temperature sensor. You know, the
3 thermistor is a temperature sensor.

4 So there are smoke detectors that
5 are alcohol sensors coupled with a thermistor.
6 So it senses the alcohol and the combination of
7 the alcohol and the temperature combined.

8 That's in paragraph 58, the third
9 line. "The smoke sensor may be an alcohol sensor
10 coupled with a thermistor." And a thermistor is
11 a temperature sensor.

12 Q. How does that work, the alcohol sensor
13 coupled with a thermistor?

14 A. Again, I'm going to answer it according
15 to my training.

16 Q. As a POSITA; correct?

17 A. As a POSITA.

18 The dangerous conditions are --
19 the smoke itself is indicative of dangerous
20 conditions. When overheating of food happens
21 and some of these alcohols can be emitted in
22 combination with certain temperature, that can
23 be indicative of the existence of the smoke
24 itself because combustion in the microwave, as
25 similar to any combustion process, can

1 experience what is known in the literature as
2 incomplete combustion, meaning that there are
3 combustibles that do not get the combustion in.

4 So the products of the combustion,
5 the smoke, has incomplete combustion components;
6 for example, alcohol. Okay?

7 So if that alcohol -- So the way
8 they -- This is my understanding. The way they
9 design these, combination of alcohol sensor with
10 the thermistor, is if the conditions exist where
11 alcohol concentration and certain temperatures,
12 these are -- these are indicative of the existence
13 of smoke in the microwave.

14 Q. I see. So let me make sure I understand.

15 So your understanding is that for
16 an alcohol sensor coupled with the thermistor,
17 it is measuring both the sensitivity caused by
18 the alcohol as well as the temperature of the
19 smoke; is that correct?

20 A. Of the gases emitting from the cooking,
21 yeah.

22 Q. Right. But those type of sensors have
23 two characteristics they're looking for. It's
24 the alcohol sensor and a temperature, and
25 together they indicate to the smoke detector

1 what the level of smoke is; is that correct?

2 A. Yeah, but they don't work independently.
3 They work together. They are one sensor, has
4 two -- two functions.

5 Q. One sensor, but measuring two variables;
6 is that right?

7 A. And based on the existence of the
8 condition of alcohol concentration and a
9 temperature known to indicate that the smoke
10 exists, you know. This is how I understand it.

11 Q. What is humidity?

12 A. Well, according to -- it's the
13 percentage of water vapor in a typical
14 atmosphere.

15 Q. So does smoke have a humidity
16 characteristic?

17 A. I think this statement -- this question
18 is wrong from a scientific point of view. And I
19 can explain.

20 You are trying to tell -- to let
21 me say I agree with you that the smoke has
22 humidity characteristics instead of saying --
23 which I can agree with you if you change your
24 question or ask it in a different way, but avoid
25 the word "smoke" because we have previously

1 agreed that when cooking happens, there is
2 smoke, if the smoke is there, but there are
3 other gases, like water vapor, for example. So
4 water vapor itself is not part of the smoke. It
5 coexists with it in the microwave.

6 Q. Just so we use the terminology the
7 same, would you agree when I refer to water
8 vapor, that's a reference to humidity?

9 A. In the context of the discussion of
10 cooking in the microwave, yes.

11 Q. Yes. Okay.

12 So your testimony is that water
13 vapor is not part of the smoke?

14 A. That's not what I said.

15 Q. Okay.

16 A. What I meant is, smoke is combustion
17 products, predominantly, and water vapor can
18 exist before combustion. Make sense?

19 So smoke and water vapor can
20 coexist, but water vapor can exist before
21 combustion due to just heating.

22 Q. Do smoke detectors also measure water
23 vapor?

24 MR. JOHNSON: Objection, beyond
25 the scope.

1 A. They are not water vapor detectors, no.
2 They are smoke detectors.

3 Q. So in the microwave, in the
4 environment -- in the cooking environment, when
5 you're cooking food, there is smoke and there is
6 water vapor in the environment; correct?

7 A. And there may be also other constituents
8 in the environment, yeah.

9 Q. What other constituents?

10 A. I can't honestly speculate. I'm not a
11 chemist. But I understand combustion very well.
12 I've been trained in combustion.

13 So the food, depending on what
14 food we have, you know, so it can be water vapor
15 if food has some -- What if it has some wine in
16 it? So you might have some alcohol vapor. You
17 know what I mean?

18 So the smoke and the water vapor
19 are two of the ingredients that can exist in the
20 cooking in a microwave, but they'll not be the
21 only two, in my opinion.

22 Q. So is your testimony, then, for example,
23 if there's wine and there's vapor caused by the
24 wine, that would not be part of the smoke?

25 MR. JOHNSON: Objection, beyond

1 the scope.

2 A. All right. So this is where we, I
3 think -- I need to kind of explain my
4 understanding. Okay?

5 So when I say the smoke, we both
6 agree that it is a post-combustion point already.
7 Other ingredients can exist before combustion.
8 Alcohol vapor, water vapor can exist before
9 combustion.

10 So you're trying -- you're trying
11 to let me agree that alcohol, for example, vapor
12 or water vapor is a constituent of the smoke. I
13 mean, the smoke is exclusive outcome of the onset
14 of combustion, sir, and other -- like water vapor
15 can exist before the onset of combustion. Make
16 sense?

17 So the smoke is a product of
18 combustion. It can have H₂O, water vapor. It
19 can have incomplete hydro -- unburned
20 hydrocarbon gases and burned hydrocarbon gases,
21 like CO₂. It can have CO₂. It can have CO. It
22 needs another O to burn. You know what I mean?

23 So I can't use the smoke as the
24 umbrella for other gases. I hope you agree with
25 me, I mean at least understand me.

1 Q. I'm trying to understand from your
2 definition of smoke what components are included,
3 and I believe your testimony is that smoke can
4 have gases and it can have incomplete -- well,
5 it can have -- it also has particles; is that
6 correct?

7 A. If at a certain point the burning
8 starts, you can have soot particles, for
9 example. There may not be too many, but there
10 might be, yeah, soot particles, which is carbon
11 that's not burned yet, completely burned.

12 Q. Those carbons that are not completely
13 burned, are those volatile organic compounds?

14 MR. JOHNSON: Objection, beyond
15 the scope.

16 A. I think my training in chemistry does
17 not refer to carbon alone as an organic compound
18 because an organic compound, according to my
19 understanding, should have hydrogen and carbon
20 bonded together, so hydrocarbon. You know what
21 I mean?

22 Q. Okay. Well, what is a volatile organic
23 compound?

24 A. Now I'm answering it from a POSITA
25 point of view, chemistry -- my chemistry

1 training.

2 An organic compound is a compound
3 that has both carbon and hydrogen bonded to each
4 other. Like, gasoline is an organic compound.
5 It has C and H, carbon and hydrogen, bonded
6 together.

7 Volatile means it can offset
8 vapor of that substance when it is in liquid
9 form. It can also sublime if it is in solid
10 form, immediately go to the gas phase without
11 passing through the liquid phase.

12 Q. The gases that are in smoke, what are
13 those gases?

14 A. I think what a POSITA would refer to as
15 combustion products. I can explain.

16 Like when we burn natural gas,
17 predominantly methane, CH₄, we provide oxygen
18 through the combustion process. The products
19 of combustion can be completely combusted
20 components plus incomplete combustion components.
21 The combination of the two are the combustion
22 products, which can exist in the smoke.

23 Q. You refer to this -- You refer to
24 combustion. What is the relationship between
25 combustion -- Strike that.

1 Is there any relationship between
2 combustion and a dangerous level of smoke?

3 MR. JOHNSON: Objection, beyond
4 the scope.

5 A. How can there not be a relationship? I
6 mean, since we all agree that the smoke is -- we
7 both agreed, I assume, that the smoke is indicative
8 that combustion already kicked in. So they are
9 related to each other, so I don't understand the
10 question.

11 Q. Well, can combustion occur before a
12 dangerous condition occurs?

13 A. Again, we have to define the word
14 "combustion" because, for example, we both
15 agreed that there is a threshold to arrive at
16 for a typical smoke sensor. Make sense? So
17 there are -- combustion can generate a smoke
18 level that is not reaching that threshold.

19 Q. That's what I was trying to understand.

20 The smoke sensor that is
21 described in the patents at issue, is it your
22 understanding that those smoke sensors were
23 commonly available at the time?

24 A. That's true.

25 MR. JOHNSON: Objection, beyond

1 the scope.

2 A. That's my understanding.

3 Q. So, I mean, the invention wasn't the
4 invention of a smoke sensor; correct?

5 A. That's correct.

6 Q. I want to again go back to your
7 statement in paragraph 58. You refer to
8 "operatively connected." Do you see that?

9 A. Yes.

10 Q. Let me just read the sentence again so
11 we have the context.

12 "A key innovation in the
13 Patents-at-Issue is the inclusion of a safety
14 sensor (hereinafter referred to as a 'smoke
15 sensor') that is operatively connected to the
16 microwave." Do you see that?

17 A. I do.

18 Q. What do you mean by "operatively
19 connected"?

20 A. I did not invent this term. It's within
21 the teaching of the patents at issue. This
22 "operatively connected" is already mentioned in
23 the patents at issue, and a POSITA would
24 understand that there should be some connection
25 between the smoke sensor and the control circuit

1 of the microwave. This is what a POSITA would
2 understand "operatively connected."

3 Q. Okay. What is your understanding of
4 what "operatively connected" means?

5 A. Okay. So I took the microwave apart,
6 okay, and I saw the connection between the
7 smoke detector and the control circuit of the
8 microwave, and the connection was a wire. So
9 there is a communication between the smoke
10 sensor and the controller of the microwave.

11 Q. So your understanding, this "operatively
12 connected" refers to the connection between the
13 microwave and a micro -- I'm sorry, between the
14 smoke sensor and the microcontroller?

15 A. And the micro what?

16 Q. The microcontroller.

17 A. So the controller of the -- the control
18 circuit of the microwave, yes.

19 Q. That's what you mean here when you say
20 oper- --

21 A. Operatively connected.

22 Q. Yeah, that the smoke sensor is
23 operatively connected to the microwave, you're
24 referring to it being operatively connected to
25 the controller of the microwave.

1 Is that what you mean?

2 A. That's what I mean, yeah.

3 Q. So that "operatively connected" is not
4 about the smoke sensor sensing smoke?

5 A. Well, the word "operative" is including
6 what the smoke sensor is doing, you know. It's
7 the principle of operation of the smoke sensor,
8 as a POSITA would understand that in order for
9 it to operate.

10 We don't put the smoke sensor
11 there as a decorative piece of -- it's not a
12 decorative piece, so it has a function to
13 operate.

14 So once it senses smoke, it
15 communicates that sensory with the controller
16 of the microwave, and then the microwave -- as
17 an indication of a dangerous condition, the
18 microwave is deprived power.

19 Q. Right. But your statement says that
20 the safety sensor, i.e. smoke sensor, is
21 operatively connected to the microwave, and I
22 believe your testimony is that means operatively
23 connected to the microcontroller of the
24 microwave.

25 A. To the control circuit to the microwave,

1 yes.

2 Q. So it's an electrical operatively
3 connected; correct?

4 A. Through a wire, if you mean that.

5 Q. Yes.

6 A. Yeah.

7 Q. Yeah.

8 Further in paragraph 58 it says,
9 "The smoke sensor operates in connection with
10 the power control circuit to withdraw power
11 from the microwave's magnetron upon detection of
12 excessive smoke in the microwave's cooking area,
13 which could be indicative of a potentially
14 dangerous condition like a fire." Do you see
15 that?

16 A. Yes.

17 Q. Does a potentially dangerous condition
18 have to be a fire?

19 A. The way a POSITA understands this
20 statement is that once smoke is detected to the
21 level of smoke that is indicative of a dangerous
22 condition, then a fire is expected to happen if
23 further heating continues. In fact, an explosion
24 can happen.

25 Q. Go ahead. I didn't want to interrupt

1 you.

2 A. These incomplete combusted -- incomplete
3 burned hydrocarbons, they can explode if they
4 receive some kind of a spark source.

5 Q. So the smoke detector, as described in
6 the patents at issue, is designed to detect a
7 dangerous condition prior to a fire; is that
8 right?

9 A. That's not always right because you can
10 have a flame propagation combined with smoke
11 generation the smoke detector can detect while a
12 flame is already part of the combustion process.

13 Q. In the patents at issue, the smoke
14 detector and -- Strike that.

15 I want to focus again on your
16 paragraph 58, where you're describing your
17 understanding of the patents at issue; correct?

18 A. That's correct.

19 Q. And it says, "The smoke sensor operates
20 in connection with the power control circuit to
21 withdraw power from the microwave's magnetron
22 upon detection of excessive smoke in the
23 microwave's cooking area, which could be
24 indicative of a potentially dangerous condition
25 like a fire."

1 Is it your understanding that the
2 detection of the excessive -- that excessive
3 smoke may be when there's fire already?

4 MR. JOHNSON: Objection, beyond
5 the scope.

6 A. Can you repeat the question one more
7 time?

8 Q. Yeah. Let me ask it differently
9 because I'm trying to understand your
10 understanding of how the smoke detector works
11 at the patents at issue.

12 Does it detect -- the excessive
13 smoke level that it's detecting, is that before
14 or after a fire or is it -- yeah, is it before
15 or after a fire?

16 MR. JOHNSON: Objection, beyond
17 the scope.

18 A. It can be before and it can be while a
19 flame already has started to propagate in the
20 food.

21 Q. I see.

22 So the excessive smoke level that
23 it detects could be when a fire has already
24 occurred?

25 MR. JOHNSON: Same objection,

1 beyond the scope.

2 A. The question again?

3 Q. The excessive smoke level that triggers
4 the smoke detector could be at a point where
5 there's a fire already.

6 MR. JOHNSON: Objection, beyond
7 the scope.

8 Q. Is that correct?

9 MR. JOHNSON: Same objection,
10 beyond the scope.

11 A. Well, if we both agree -- I can say
12 yes to the question if we both agree that we're
13 talking about the fire inside the microwave as
14 like a flame is propagating in a portion of the
15 food being burned, being cooked.

16 Q. Right. And I'm talking about fire
17 inside the microwave.

18 A. Right. Right. Yeah. Yes. The answer
19 is yes.

20 Q. So, I'm sorry, because we had some
21 back and forth, just to be clear, so when the
22 smoke detector in the patents at issue detects
23 an excessive amount of smoke, that could be
24 coincident to a fire also being present?

25 MR. JOHNSON: Objection, beyond

1 the scope.

2 A. As long as we both agree that what we
3 refer to as the fire is the flame that is
4 existing inside the microwave within the food
5 being cooked.

6 Q. Yes, inside the microwave.

7 A. Right.

8 Q. If there's a flame already inside the
9 microwave, is the microwave reusable?

10 MR. JOHNSON: Objection, beyond
11 the scope.

12 A. This is a question that probably the
13 classic answer to it is, it depends.

14 Q. It depends on what?

15 A. Like, for example, I mean, we all use
16 microwaves, and we all burn things in our life,
17 you know. So there are small flames that can
18 exist in anything that if we stop the source of
19 heating can die due to quenching. It's called
20 the quenching process.

21 Flame quenching happens because
22 the surrounding atmosphere surrounding the flame
23 quenches the flame envelope and kills it before
24 it propagates more.

25 Q. So a fire inside a microwave doesn't

1 necessarily mean the microwave cannot be used
2 after the fire is extinguished; correct?

3 MR. JOHNSON: Objection, beyond
4 the scope.

5 A. I'm going to go back to the -- I'm
6 going to go back to my agreement with you before
7 that you loosely referred to the word "flame" as
8 fire.

9 And fire is always kind of like --
10 it can include the burning of the dwelling.
11 That's a fire. We have firefighters who don't
12 fight the small flame of a popcorn bag that can
13 die if I stop the microwave. You know what I
14 mean?

15 So I'm struggling with your
16 question. So can we agree on using flame, for
17 example, in certain questions?

18 Q. Yeah, let me just -- for clarification,
19 when I'm talking about a fire in these questions,
20 it's a fire inside the microwave, not a fire in
21 a building.

22 Do you agree with -- Do you
23 understand?

24 A. Still, it's different than saying
25 "flame" because a fire -- for example, okay, if

1 I have the microwave filled with dry food and it
2 all burns and I can see flame that is engulfing
3 all the food, that's a fire.

4 But a microwave that has like a
5 popcorn bag that the tip of the bag starts to
6 receive a flame propagation and then the
7 controller shuts it off and then it dies due to
8 quenching, that's not -- I don't consider this a
9 fire.

10 Q. I see.

11 When does a flame become a fire?

12 MR. JOHNSON: Objection, beyond
13 the scope.

14 A. You mean from a dangerous condition
15 point of view?

16 Q. I just mean from the description.
17 Because you said --

18 A. Right.

19 Q. -- there's fires and there's flames.

20 Does a flame, if allowed to last
21 long enough, become a fire?

22 MR. JOHNSON: Same objection,
23 beyond the scope.

24 A. With my example that I threw, yeah, a
25 small flame, if it is not stopped, can propagate

1 and can generate a fire.

2 Q. Okay. When does that line occur? When
3 does it become a fire?

4 A. I think if we have a microwave that --

5 MR. JOHNSON: Same objection,
6 beyond the scope. Sorry.

7 A. Like, if we have a microwave without a
8 smoke sensor, you know, you can have a fire
9 because heating can continue beyond the
10 combustion. You know what I mean? And a fire
11 can happen.

12 Q. Really, I'm asking a question that has
13 nothing to do with the smoke detector. It's
14 when does a -- You talked about flames, and you
15 talked about fire.

16 As I understand it, those are not
17 necessarily the same; correct?

18 MR. JOHNSON: Objection, beyond
19 the scope.

20 A. I'm talking about the -- What I mean is
21 the scope of the word itself, you know? For
22 example, fire is a very loose word that can
23 include a lot of combustion phenomenas, but a
24 flame itself is indicative that the combustion
25 has already matured enough to generate a flame

1 propagation.

2 Do you understand what I'm talking
3 about?

4 Q. Well, not exactly, because I believe,
5 you please correct me if I'm wrong, fire is
6 composed of flames.

7 MR. JOHNSON: Objection, beyond
8 the scope.

9 A. It's composed of flames; but, also,
10 it's composed of other phenomenas, like melting.
11 It can include overheating. So a fire is a very
12 big term to use.

13 So my understanding from within
14 the scope of this discussion here is the smoke
15 detector itself, referring to -- the word "fire"
16 here in my statement is directly related to how
17 I explain that the smoke detector detects the
18 excessive level of smoke and prevents a fire to
19 happen. That's why I have this.

20 MR. JOHNSON: Let me know when it
21 might be a good time for a break.

22 MR. WONG: Yeah, just a couple
23 more questions.

24 Q. You know, Dr. Tanbour, I'm using your
25 terminology, but as I understand it, you can

1 have a flame, but a flame is not necessarily a
2 fire; is that correct?

3 MR. JOHNSON: Objection, beyond
4 the scope.

5 A. What I meant is, a flame starts once
6 combustion starts and starts to propagate. So
7 flames have different sizes. Make sense? So
8 you have a small flame. You have a big flame.
9 That's what I meant.

10 MR. WONG: Okay. We can take a
11 break now.

12 MR. JOHNSON: Thanks.

13 (A recess was taken.)

14 MR. WONG: Okay. We can go back
15 on the record.

16 Q. Dr. Tanbour, I just want to get some
17 clarification on a topic we were talking about
18 earlier, and that has to do with smoke in the
19 microwave when food is cooking. And I believe
20 that you said for a smoke detector, that water
21 vapor is not part of the smoke that is being
22 detected; is that correct?

23 MR. JOHNSON: Objection, beyond
24 the scope.

25 A. I don't think that's what I said, sir.

1 What I meant is, and I can explain more, the
2 smoke is a product of combustion, but water
3 vapor can be a product of just heating the food,
4 you know. That's what I meant.

5 Q. What are the components of smoke when
6 food is being cooked in a microwave?

7 MR. JOHNSON: Objection, beyond
8 the scope, asked and answered.

9 A. It depends again. This is an answer --
10 Like, it has to start with it depends on the food
11 that's being cooked in the microwave.

12 Different foods have different
13 ingredients. When you burn them, they dictate the
14 chemistry of the outcome of the combustion. So
15 different foods can generate different products
16 of combustion.

17 Q. What kinds of products are contained in
18 smoke?

19 MR. JOHNSON: Objection, beyond
20 the scope, asked and answered.

21 A. Again, smoke -- anything from olive oil
22 being -- arriving at the smoke point is going to
23 be different than smoke coming out of the onset
24 of burning starch, for example. We all -- We
25 both refer to them as smoke, you know, but the

1 chemistry of both can differ.

2 Q. In paragraph 58 you refer to --

3 A. Can I go back to the --

4 Q. Yes, please, Exhibit 3, paragraph 58.

5 A. So paragraph 58?

6 Q. Yes.

7 A. Okay. So I'm at paragraph 58.

8 Q. And you refer there in the second
9 sentence to different types of smoke sensors;
10 correct?

11 A. Right.

12 Q. So at least one type of smoke sensor
13 detects volatile organic compounds; correct?

14 A. That's correct.

15 Q. And you spoke earlier about what we
16 refer to as VOCs, volatile organic compounds;
17 correct?

18 A. Correct.

19 Q. So that's one possible component of
20 smoke that is detected; correct?

21 A. That's correct.

22 Q. And we also talked about, I believe,
23 particulates, components that aren't completely
24 combusted that are in the smoke.

25 Is that another element of smoke?

1 MR. JOHNSON: Again, objection,
2 beyond the scope.

3 A. Yes.

4 Q. Okay. So now we have volatile organic
5 compounds. We have particulates.

6 What other gases can be contained
7 in smoke?

8 MR. JOHNSON: Same objection,
9 beyond the scope, asked and answered.

10 A. We go back to my first request just
11 to -- not to use the smoke as an umbrella for
12 everything in the microwave once the combustion
13 started, you know.

14 So smoke is a combination of
15 gases that can coexist with other gases that
16 cannot -- that are not always a product of
17 combustion, like water vapor, for example.

18 Q. Okay. But for operation of a smoke
19 sensor, which of those gases would the smoke
20 sensor detect?

21 A. It depends on the principle of
22 operation of the specific smoke sensor.

23 Q. So is it possible one of the components
24 could be water vapor?

25 MR. JOHNSON: Objection, beyond

1 the scope.

2 A. That the smoke detector detects, you
3 mean?

4 Q. That's correct, that the smoke detector
5 detects water vapor as a component of the smoke.

6 MR. JOHNSON: Same objection,
7 beyond the scope.

8 Q. Is that possible?

9 MR. JOHNSON: Same objection,
10 beyond the scope.

11 A. I don't think it's according to my
12 understanding of the principle -- principles,
13 plural, of the operation of smoke detectors that
14 that's possible. It's not possible.

15 Q. So smoke detectors, as you understand
16 it, would not detect water vapor as a constituent
17 of smoke; is that right?

18 MR. JOHNSON: Objection, beyond
19 the scope, asked and answered.

20 A. The way I understand it is a POSITA
21 would not put a smoke detector if they were just
22 seeking to detect water vapor because there are
23 water vapor sensors that are disclosed. I mean,
24 a POSITA knows about them.

25 In the field of microwave, also,

1 they have a different buzz name called -- I
2 think automatic cooking sensors it's called.
3 And they are not only used in microwaves, other
4 appliances that cook food, like ranges and stuff
5 like that.

6 Q. So your understanding as a POSITA, that
7 a smoke detector, as used in the patents at issue,
8 would not be designed to detect water vapor.

9 MR. JOHNSON: Objection, beyond
10 the scope.

11 Q. Is that correct?

12 MR. JOHNSON: Sorry. Objection,
13 beyond the scope, asked and answered.

14 A. Can you repeat the question, please?

15 Q. Yeah. So your understanding is that a
16 smoke detector as used in the patents at issue
17 would not be designed to detect water vapor; is
18 that correct?

19 MR. JOHNSON: Objection, it's
20 beyond the scope, asked and answered.

21 A. My understanding is that the smoke
22 detector detects smoke. That's from the name of
23 it. You know, a POSITA would understand that.
24 The just plain meaning of a smoke detector is to
25 detect the smoke.

1 I already said that, according to
2 my understanding of combustion, that smoke can
3 be accompanied by other gases, like water vapor.
4 So if the smoke sensor detects the smoke, that
5 does not prevent the fact that some water vapor
6 is still also coexisting with the smoke.

7 Q. Okay. The fact that it coexists, does
8 that mean it's also being detected by the smoke
9 sensor?

10 A. No.

11 Q. So the smoke sensor is not detecting
12 the water vapor, although the water vapor is in
13 the smoke; correct?

14 MR. JOHNSON: Same objections,
15 beyond the scope, asked and answered.

16 A. You insist on -- You insist on going
17 back to using the smoke as an umbrella. What I
18 am saying is they coexist. That means they are
19 two different entities.

20 Smoke is a combustion product,
21 predominantly is indicative of a dangerous fire,
22 a dangerous condition. Water vapor in the
23 microwave during the cooking process is not
24 indicative of a dangerous condition. It can be
25 indicative of mature cooking, well-done food,

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1 overheating, but not to the point of arriving at
2 combustion.

3 Q. Right. And that's all I'm asking.

4 Does the smoke detector, as
5 described in the patents at issue, detect water
6 vapor? That's all I'm asking.

7 A. My understanding --

8 MR. JOHNSON: Same objections.

9 THE WITNESS: I didn't hear the
10 objection.

11 MR. JOHNSON: I'm sorry. Same
12 objections, beyond the scope and asked and
13 answered.

14 A. So my understanding is that the smoke
15 detector is a device that detects smoke, which
16 is indicative that combustion already started,
17 and these are signs of a dangerous condition.

18 Water vapor is not -- is not
19 meant to be detected by a smoke detector. The
20 smoke detector, from its name, it detects smoke,
21 or smoke sensor.

22 Q. Right. So it's not detecting water
23 vapor; correct?

24 MR. JOHNSON: Same objections,
25 beyond the scope, asked and answered.

1 A. I can explain why I have a problem with
2 that, okay, if you allow me. Okay?

3 Q. Please.

4 A. So, now, we both agreed that -- or at
5 least if you agree with me that once combustion
6 starts and then smoke starts to be generated,
7 it can be accompanied by other gases, like water
8 vapor. And this mixture of smoke and water vapor
9 can pass through an optical smoke detector.

10 So because this mixture passes
11 through the optical, it is part of the things
12 that the optical smoke detector detects.

13 If the smoke detector principle
14 of operation is different than optical, it may
15 be only capturing the constituents of the smoke,
16 which are the combustion products.

17 So it depends. The answer is it
18 depends on the principle of operation of the
19 smoke detector.

20 Q. Okay. Let's exclude the optical
21 detectors. The other detectors, they don't
22 detect water vapor; correct? Smoke sensors,
23 they don't detect water vapor; correct?

24 MR. JOHNSON: Objection, compound,
25 beyond the scope, asked and answered.

1 Q. Dr. Tanbour, let me just reask the
2 question.

3 You talked about optical
4 detectors as possibly being affected by the
5 level of water vapor in the smoke; correct?

6 A. Affected?

7 Q. By what the smoke detector is sensing,
8 water vapor, for an optical detector, may affect
9 what is being detected as smoke by the smoke
10 sensor; correct?

11 A. I don't think --

12 MR. JOHNSON: Objection.

13 A. -- the statement is correct. And I can
14 explain.

15 Because, for example, light
16 sensors that receive -- you send a light beam,
17 and there is a receiving photovoltaic cell. And
18 so water vapor, we know that it is transparent.
19 It's not opaque. But smoke is opaque. So a
20 light sensor senses smoke, but it doesn't care
21 about the water vapor in this example.

22 Do you agree with me? I don't
23 have to ask a question. I'm not supposed to ask
24 a question. I apologize. I withdraw my question.
25 I withdraw my question. I'm sorry.

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1 Q. Is your answer complete? Are you
2 finished?

3 A. Yeah.

4 Q. Okay. Let me direct your attention to
5 paragraph 60 in your report.

6 A. Six zero?

7 Q. Yes, six zero.

8 You said, "The combination
9 appliances also include a reset function whereby
10 the power control circuit will re-enable
11 delivery of cooking power to the microwave once
12 the condition that triggered the smoke sensor
13 has been resolved, enabling a subsequent cooking
14 session." Do you see that?

15 A. Yes.

16 Q. What is the purpose of the reset
17 function?

18 A. A POSITA understanding of the reset
19 function is to return the ability for the
20 microwave to operate.

21 Q. So you can use it again --

22 A. Right.

23 Q. -- after the shutdown; correct?

24 A. Right.

25 Q. And, of course, you'd want to use it

1 again if the microwave hasn't been damaged;
2 correct?

3 A. Hopefully, yeah. Yes.

4 Q. What do you mean? I don't know what
5 you mean, "hopefully."

6 A. Well, because maybe the user would open
7 and check how much -- The answer is correct.

8 Q. Let me just make sure.

9 Obviously, if the microwave hasn't
10 been damaged, the user would want to be able to
11 reuse the microwave, and that's why you have a
12 reset function; correct?

13 A. That's my understanding.

14 Q. And that would just be apparent to any
15 user; that if it's not damaged, you want to be
16 able to reuse the microwave; correct?

17 A. That's correct.

18 Q. When this reset occurs, what is being
19 reset?

20 A. My understanding is that what's being
21 reset is the ability for the magnetron to receive
22 power again, start heating food.

23 Q. I'm going to switch back to the smoke
24 detector for a minute, Dr. Tanbour.

25 The gases that a smoke detector

1 can detect, we talked about volatile organic
2 compounds; correct?

3 A. Okay.

4 Q. I mean, that was one of the components
5 in the gas that can be detected; correct?

6 A. That's correct.

7 Q. There are also, as we talked about
8 earlier, alcohol sensors; correct?

9 A. That are coupled with a thermistor,
10 yeah.

11 Q. Yes. And those are detecting the level
12 of alcohol in the gas; correct?

13 A. In combination with a thermistor
14 reading, they can be calibrated to detect smoke.

15 Q. Right, but it's a different -- it's a
16 different component of gas than the volatile
17 organic compound, the alcohol is; correct?

18 A. Alcohol is an organic compound. When
19 it becomes gas, it's a volatile -- it's already --
20 it evaporated, so it is a -- it's a VOC. Alcohol
21 vapor is a VOC.

22 Q. So you consider alcohol as a VOC?

23 A. One of the VOCs, yeah.

24 Q. There are also sensors that can detect
25 tin dioxide, is that correct, in the gas?

1 A. Can you direct me to where this is
2 listed? Because offhand now I can't recall
3 that.

4 Q. Well, what I'm trying to get at is, the
5 gases can be -- gas and smoke is comprised of
6 various components; correct?

7 A. Correct.

8 Q. So it's not limited to VOCs; correct?

9 MR. JOHNSON: Objection.

10 Q. V-O-C-s.

11 A. In terms of constituents, yes.

12 Q. That's right.

13 And they're still components of
14 gas; correct?

15 A. Correct.

16 Q. I want to get back to the reset
17 function.

18 Could you please refer to
19 Exhibit 5, which is the '745 patent?

20 A. Okay.

21 Q. Can you refer to Figure 4, please, of
22 the '745 patent?

23 A. Okay.

24 Q. What is your understanding of what is
25 depicted in Figure 4?

1 A. I see that there is some kind of
2 circuitry that ties the management of power
3 between both the microwave and the refrigerator
4 or the compressor of the refrigerator.

5 I see, also, circuit components
6 related to controlling the power supply to the
7 rear power outlet that a refrigerator can be
8 plugged in.

9 And I see some circuit components
10 related to, I think, the auxiliary, if I'm not --
11 I need to check my -- if you allow me one second
12 here. Is it okay if I just refresh my memory?

13 Q. Take your time.

14 A. Yep, 11 and 12 in Figure 4 refer to the
15 auxiliary power outlets that are disclosed in
16 this patent.

17 Q. When the smoke sensor detects a
18 dangerous level of smoke, causing a shutdown
19 of the magnetron, in Figure 4 is there a change
20 in -- what component in Figure 4 is affected?
21 Is there a relay that is affected?

22 MR. JOHNSON: Objection, compound.

23 A. I'm not an electrical engineer to answer
24 that question precisely, honestly, but the
25 component that's affected upon the smoke sensor

1 sensing a dangerous condition is the magnetron
2 that is receiving the power to start the heating.

3 So once you deprive the -- once
4 the magnetron is deprived from being supplied
5 with power, heating will cease, will stop.

6 Q. And what is your understanding of how
7 power is deprived to the magnetron? Is it
8 opening a relay?

9 A. I don't understand the specific answer
10 for that, but I understand that there's a
11 control circuit within the microwave that has a
12 combination of programming and circuitry that
13 manages the provision of power supplied to the
14 magnetron when dangerous conditions happen.

15 Q. And the reason you don't understand
16 the specifics, that's because you're not an
17 electrical engineer.

18 MR. JOHNSON: Objection.

19 Q. Is that correct?

20 MR. JOHNSON: Beyond the scope.

21 A. Well, it's because, the way I studied
22 the patents, the control circuit that is existing
23 in the microwave in the combined appliance is
24 responsible for managing the power to avoid the
25 overload.

1 So I did not dig deeper than that
2 in terms of studying how this is programmed or
3 what are the mechanics that are used.

4 Q. What I'm trying to understand is, this
5 reset function, do you know what is being reset
6 from an electrical standpoint to allow the
7 microwave to resume operation?

8 A. I have some understanding of that.
9 Some of it is automatic. For example, in
10 response to opening the door of the microwave.

11 So once the door of the microwave
12 is open, that can -- there are sensors in the
13 microwave door. There's a switch in the
14 microwave door that can also communicate with
15 the control and telling -- telling the
16 controller that the microwave door was open.

17 So once it is closed back, this
18 is one of the ways to reset, you know. That's
19 my understanding from reading the patents.

20 Q. Your understanding is that one of skill
21 in the art could understand how to make that work
22 based on the description of a reset function by
23 opening the door; correct?

24 A. That's one way of doing it, yeah.

25 Q. Right. But a POSITA would understand

1 how to implement that functionality without
2 describing the exact details of how to do it;
3 correct?

4 A. This specific -- Correct, for this
5 specific example that I mentioned.

6 Q. So in the '745 patent, where it talks
7 about the reset function, I don't believe it
8 gives specific guidance on exactly the
9 electrical components that are affected by the
10 reset function; is that correct?

11 A. I believe it gives enough information
12 for a POSITA to receive how -- to enable a
13 POSITA to use this reset function.

14 Q. Paragraph 62 in Exhibit 3 --

15 A. So we're done with Exhibit 5?

16 Q. For now.

17 A. For now.

18 Q. Correct.

19 A. Okay. I'm at paragraph 62.

20 Q. And just to remind us of where we are,
21 paragraph 62 is in the section describing the
22 patents at issue; correct?

23 A. Correct.

24 Q. In paragraph 62 it says, "Placing a
25 smoke sensor inside the microwave oven allows

1 for faster and more accurate detection of
2 potentially dangerous conditions," and then it
3 goes on. Do you see that?

4 A. I do.

5 Q. Are the patents at issue limited to
6 placing the smoke sensor inside the microwave
7 oven?

8 MR. JOHNSON: Objection, beyond
9 the scope.

10 A. Can I check some -- Can I check the
11 patent itself for one little thing in the claims?

12 Q. Please.

13 A. So we're talking about claims now;
14 right? When you use the word "limited," is it
15 claim limitation?

16 Q. It is talking about what is described
17 in the patent. Is it limited to placing the
18 smoke sensor inside the microwave oven?

19 A. But the word "limited," is it derived
20 from claim limitation or inclusive of the
21 specific --

22 Q. Let's talk about the claim limitations.

23 A. Okay. So can I just take a quick look?

24 Q. Yes.

25 A. And we're talking the '745, right, or

1 it doesn't matter?

2 Q. Well, we're talking about the '745, but
3 is it correct that this would be applicable to
4 the '746 as well?

5 A. Okay. Let me just --

6 Q. Is that your understanding, it would be
7 applicable to both patents?

8 A. Okay. My understanding is applicable
9 to both, yeah, but I just want to -- Okay. I
10 can see independent Claim 1, for example, in the
11 '745, and if we go to Column 24 and line --
12 starting from line 51, "wherein the microwave
13 oven includes a smoke sensor, wherein the smoke
14 sensor is positioned in operative connection
15 with a cooking area inside the microwave oven."
16 So the word "inside" is there.

17 Q. Okay. So Claim 1 in the '745 patent,
18 you referred to the language where it says, "the
19 smoke sensor is positioned in operative connection
20 with a cooking area inside the microwave oven";
21 correct?

22 A. Correct.

23 Q. And your understanding of that is
24 that that means the smoke sensor is inside the
25 microwave oven; is that correct?

1 MR. JOHNSON: Objection, beyond
2 the scope.

3 A. So what was the question again? I'm
4 sorry.

5 Q. Well, we started off by talking about
6 your statement in paragraph 62 of whether the
7 patent is limited to a smoke sensor inside the
8 microwave oven. Remember?

9 A. Yes.

10 Q. Okay. And then you said, is it in the
11 claims or not, and I said in the claims, and you
12 referred to Claim 1; correct?

13 A. Oh, '745.

14 Q. Of the '745 patent; correct?

15 A. Right, which is an independent claim,
16 as I understand.

17 Q. Right. We're referring to Claim 1
18 of the '745 patent, and I'm referring to the
19 limitation that you referred to wherein the
20 smoke sensor is positioned in operative
21 connection with a cooking area inside the
22 microwave oven; correct?

23 A. That's correct.

24 Q. You referred to that section, that
25 limitation.

1 Is it your understanding that
2 that limitation means that the smoke sensor must
3 be inside the microwave oven?

4 MR. JOHNSON: Objection, beyond
5 the scope.

6 A. I think I go back to my statement here
7 that you referred me to, if you don't mind, which
8 is -- I think you referred me to statement --
9 paragraph 62 of my declaration, and here it says
10 that it allows for faster and more accurate
11 detection of potentially dangerous conditions.

12 So the placement of the smoke
13 detector inside the microwave has that
14 disadvantage that I'm referring to in paragraph
15 62.

16 Q. But is the invention limited to placing
17 it inside the microwave oven?

18 MR. JOHNSON: Objection, beyond
19 the scope, calls for a legal conclusion.

20 A. Again, if you mean by "limited," the
21 word "limited," being derived from the claim
22 limitation, the answer is yes for the '745. I
23 can -- If you allow me to check the '746 --

24 Q. Please.

25 A. I think the answer is the same for

1 '746.

2 Q. And that answer being that the claims
3 are limited to the smoke sensor being located
4 inside the microwave oven; correct?

5 MR. JOHNSON: Again, objection,
6 beyond the scope, calls for a legal conclusion.

7 A. "Limited" being derived from claim
8 limitation, the answer is yes.

9 Q. Let's just focus on that language a
10 little bit, Dr. Tanbour. And I'm going to refer
11 to Claim 1 of the '745 patent, and it's the
12 limitation that we've been talking about, "is
13 positioned in operative connection with a
14 cooking area inside the microwave oven." Do you
15 see that?

16 A. Referring to the smoke sensor; right?

17 Q. Right. Line 50 -- I don't know. I
18 guess it's around line 53.

19 A. 54.

20 Q. Yeah, 54.

21 A. Yeah, 53. Sorry. Yes.

22 Q. And that's the language we've been
23 talking about just now.

24 A. Uh-huh.

25 Q. And, again, just to be clear, there is

1 similar language in the '746 patent; correct?

2 You just looked at it.

3 A. Right. That's correct.

4 Q. What does "operative connection" mean
5 to you?

6 A. I already answered that. So "operative"
7 for a POSITA means that the operation of the
8 smoke sensor is in communication with the control
9 board while it is positioned inside the microwave.

10 Q. So "operative connection" to you has
11 two aspects. One is connection between the
12 smoke sensor and the microcontroller and also
13 with respect to the placement of the smoke
14 sensor inside the microwave oven; is that
15 correct?

16 MR. JOHNSON: Objection, compound
17 and calls for a legal conclusion, beyond the
18 scope.

19 A. I did not mean that. I meant that the
20 Claim 1 has limitations. They have to all be
21 together, you know. You cannot dissect and pick
22 and choose.

23 So I cannot isolate operative
24 connection from being inside. So the claim
25 limitation of an operative connection with the

1 cooking -- with the control is referring to the
2 smoke sensor being placed inside the microwave.

3 Q. Yeah. So the limitation we're talking
4 about where the smoke sensor is positioned in
5 operative connection with a cooking area inside
6 the microwave oven relates to the positioning of
7 the smoke sensor relative to the microwave oven;
8 correct?

9 MR. JOHNSON: Objection, beyond
10 the scope, calls for a legal conclusion.

11 A. That's not correct.

12 Q. Okay. Please tell me what's wrong
13 about that.

14 A. Because it's like a -- it's one
15 sentence, "is positioned in operative connection
16 with a cooking area inside the microwave oven."

17 So that means it is placed inside
18 the microwave oven, within operative connection
19 of the cooking area.

20 Q. So if the smoke sensor is in a
21 passageway that is connected to the inside of
22 the -- I'm sorry. Strike that.

23 If the smoke sensor is connected
24 to a passageway that is connected to the cooking
25 area inside the microwave oven, can it be an

1 operative connection with the inside of the
2 microwave oven?

3 A. That's what exactly exists in the
4 product. That's what's in the MicroFridge.

5 Q. So the sensor can be outside of the
6 microwave oven as long as it's in a passageway?

7 MR. JOHNSON: Objection to form.

8 A. No. I mean, your statement is not
9 correct, sir, because you used the word
10 "microwave oven," the whole thing, and you want
11 it to be outside now.

12 We're saying outside the cooking
13 area but in operative -- it's operative connection
14 with the cooking area within the -- inside the
15 outer skin of the microwave oven.

16 Q. How do you come to that conclusion with
17 that language? Where does it say it has to be
18 inside the skin of the microwave oven?

19 A. That's a very good question. Because a
20 POSITA -- a POSITA would understand that there is
21 an inner skin and an outer skin for a microwave,
22 and there's a passage in between, and the fan
23 that is driving the flow is inducing the flow to
24 occur and communicate and allow the smoke to
25 pass by the smoke detector placed within the

1 two skins of the microwave.

2 Q. Where does it say that in that
3 limitation we just described, just talked about?

4 MR. JOHNSON: Objection, beyond
5 the scope, calls for a legal conclusion.

6 A. A POSITA would understand that an
7 operative connection with the cooking area means
8 that it will be firsthand communication of the
9 gases being emitted from the cooking area before
10 they come out of the microwave oven and being
11 diluted with the atmosphere, the room atmosphere,
12 you know.

13 Q. In a microwave oven -- Strike that.

14 Do microwave ovens have exhaust
15 fans?

16 A. If you -- If you want to call the fans
17 disclosed in the patents at issue exhaust fans,
18 the answer is yes.

19 Q. What do you mean by that qualification?
20 Are the exhaust fans in the patents at issue
21 different than normal exhaust fans in microwaves?

22 A. Fans can vary in their nature, you know,
23 and their structure and construction. So there
24 are centrifugal fans. There are axial fans.
25 You know what I mean?

1 Q. Let me go back to the question.

2 Are there fans in microwave ovens
3 for exhausting the gases generated in the microwave
4 oven, an exhaust fan?

5 MR. JOHNSON: Objection, beyond the
6 scope of the direct testimony.

7 A. My experience with microwaves that I
8 came across in my career, they all have a fan
9 that does that function.

10 Q. Well, it only stands to reason you've
11 got to exhaust the fumes inside the microwave;
12 correct?

13 A. That's correct.

14 Q. The exit of the exhaust fan from a
15 microwave oven, is that inside or outside the
16 microwave oven?

17 A. From the ones I checked from inside,
18 they are -- they are pointing their discharge to
19 the exit, the back of the microwave.

20 Q. Which would be outside the microwave
21 oven; correct?

22 A. Their discharge is pointed to the
23 openings in the back of the microwave that
24 discharges to the atmosphere.

25 Q. Yes. Okay.

1 Let me draw your attention to
2 Column 16 of the '745 patent.

3 A. Okay.

4 Q. And I want to draw your attention to
5 the paragraph beginning "Referring to Figure 26."

6 A. Okay.

7 Q. It says, "Referring to Figure 26, in
8 another exemplary arrangement, the safety sensor
9 may include an optical motion sensor 336."

10 And do you agree that the reference
11 to "safety sensor" is a smoke detector, as we
12 previously discussed; correct?

13 A. So the answer is yes.

14 Q. And it goes on to say in that paragraph,
15 "The optical motion sensor 336 may be positioned
16 in the microwave cavity 332 adjacent air exhaust
17 vents 338, 340 of the microwave, which comprises
18 an air passage that connects an area where
19 food is cooked in the microwave oven to the air
20 outside the housing of the microwave oven";
21 correct?

22 A. Correct.

23 Q. And then it goes on, "The optical
24 motion sensor 336 detects motion which is sensed
25 due to the presence of smoke blown by an exhaust

1 fan 342 of the microwave oven 2 through the air
2 passage"; correct?

3 A. Correct.

4 Q. Now, in that situation the placement of
5 the microwave -- I'm sorry, the placement of the
6 smoke detector can be in the passageway outside
7 the microwave oven; correct?

8 A. Incorrect.

9 Q. Okay. Please explain.

10 A. Because it still says the air passage,
11 which is a component of the microwave oven.
12 It's not outside. This is how a POSITA would
13 understand.

14 Q. So the air passage, as you understand
15 it, is contained entirely within the microwave
16 oven?

17 A. This is how I understand it, yeah.

18 Q. Would the sensor be operatively
19 connected to the microwave oven if it was
20 placed in a passageway that extended beyond
21 the microwave oven?

22 A. A POSITA would consider this possibility
23 an impractical possibility.

24 Q. Even though impractical, would it be
25 operatively connected to the inside of the

1 microwave oven?

2 A. A POSITA won't be motivated to do that.
3 So, I mean, I'm trying to be very respectful
4 here, but a POSITA may look at this possibility
5 as deficient because by that time heat transfer,
6 cooling, all these things can happen, and then
7 you get an erroneous triggering or lack of
8 triggering because the gases down the stream
9 will be cooled.

10 Q. So your testimony, then, is once it's
11 outside the microwave oven, it would no longer
12 be operatively connected to the inside of the
13 microwave oven; correct?

14 MR. JOHNSON: Objection, beyond
15 the scope, calls for a legal conclusion.

16 A. So, now, when we say operatively
17 connected to the cooking area, meaning to put
18 it in the most suitable location to detect smoke
19 as immediately as possible upon it exists as
20 close as possible. The further we go down the
21 stream, a POSITA will not consider -- will be
22 motivated even to consider that.

23 Q. And how far down does it no longer be
24 considered operatively connected?

25 MR. JOHNSON: Same objection,

1 beyond the scope, calls for a legal conclusion.

2 A. See, this question also deserves an "it
3 depends" answer because, depending on the
4 principle of operations of the smoke detector.

5 For example, if we take the
6 alcohol sensor combined or coupled with the
7 thermistor further down, away from the cooking
8 area, within the microwave, a POSITA would
9 understand that the thermistor will be reading a
10 cooler temperature and may not trigger the smoke
11 detector, even though smoke already happened.

12 So the closer -- and as I said in
13 my paragraph 62, the closer you are, the smoke
14 detector to the cooking area within the
15 microwave, the better or as early like alarm to
16 provide the early control of sensing dangerous
17 conditions.

18 MR. WONG: I think before we get
19 to another section, maybe we take a break for
20 lunch. Does that make sense?

21 MR. JOHNSON: Yeah, that's fine.

22 (A recess was taken.)

23 Q. Dr. Tanbour, welcome back from lunch.

24 A. Thank you.

25 Q. I hope you had a good break.

1 A. I did.

2 Q. Let's go back to Exhibit 3, please, if
3 you could turn to paragraph 65. Are you there?

4 A. Yes.

5 Q. The parenthetical in paragraph 65 that
6 you have there says "an exemplary infrared
7 sensor 'may use the smoke point of oil...as the
8 basis for the threshold amount.'" Do you see
9 that?

10 A. Yes.

11 Q. Now, you testified earlier that the
12 smoke point of oil is a temperature; correct?

13 A. Yes.

14 Q. So this is not -- the infrared sensor
15 doesn't literally use the temperature as the
16 threshold amount, does it?

17 A. Okay. Now, there are infrared
18 temperature sensors out there already in the
19 market. In fact, there are infrared --
20 hand-held infrared. You point them to subjects,
21 and you can read out the temperature. So I
22 honestly don't understand the scope of the
23 question.

24 Q. So you believe the infrared sensor that
25 is referred to here senses temperature?

1 A. It is possible that it can sense
2 temperature to sense the smoke point of oil,
3 yeah.

4 Q. So an infrared -- what is an infrared
5 sensor sensing?

6 A. There are many methodologies, I think,
7 but the way I understand it from my training is
8 an infrared sensor sends out an infrared beam,
9 and that beam is reflected back into a receiver
10 that can translate that reflected infrared light
11 into a calibration that, hence, reading or
12 sensing temperature.

13 Q. So your understanding is that the
14 infrared sensor can sense the light that is
15 bounced back and convert that into a
16 temperature?

17 A. That's one kind, yeah. That can be
18 one kind, yeah.

19 Q. And that's used in smoke sensors?

20 A. If it -- If it senses the specific.
21 Because it can interact with what constitutes
22 smoke because, as I said before, smoke is --
23 in the best ways is not transparent. It's
24 transluc- -- It's opaque or at least translucent.

25 So smoke itself is not like water

1 vapor, which is translucent -- or transparent,
2 sorry. So smoke is either opaque or in the worst
3 scenario it is translucent, which is semi-opaque,
4 you know. It can reflect back the light, including
5 infrared.

6 Q. The smoke point of oil refers to, by its
7 definition, an oil being heated up; correct?

8 A. It's not a completely correct statement
9 or complete, I should say.

10 Q. Okay. Go ahead.

11 A. So heated up enough to start combustion
12 that generates smoke.

13 Q. Yes. And so before you hit the smoke
14 point of oil, is there any smoke being generated
15 by the temperature increase in the oil?

16 MR. JOHNSON: Objection, beyond
17 the scope.

18 A. A POSITA would not consider any
19 temperature that's below the start of generating
20 smoke as smoke point. It has to -- It has to
21 start the combustion to generate smoke.

22 Q. When the smoke point of oil is reached,
23 so we're at the smoke point of oil, is that
24 necessarily a dangerous condition?

25 MR. JOHNSON: Same objection,

1 beyond the scope.

2 A. It's indicative of a dangerous condition.

3 Q. It is? Once you hit the smoke point of
4 oil, that's indicative of a dangerous condition.
5 Is that your testimony?

6 A. That's my understanding.

7 Q. Let me turn you to paragraph 70 of your
8 declaration. You see it says, "Emma illustrates
9 and generally describes a combined microwave 2
10 and refrigerator 3 with a control model whereby
11 power to a compressor is monitored to sense
12 operation of the compressor, such that when
13 power to the microwave is demanded, the
14 compressor is disabled for a preset minimum
15 period." Do you see that?

16 A. Yes.

17 Q. The compressor that you're referring to
18 there is the compressor for a refrigerator; is
19 that correct?

20 A. That's correct.

21 Q. And so this preset minimum period is
22 based on when the power to the microwave is
23 demanded and the compressor is disabled or
24 turned off; correct?

25 A. Can you repeat the question, please?

1 Q. Yeah.

2 This preset minimum period, do
3 you see that in your statement?

4 A. Uh-huh.

5 Q. It is tied to when the compressor is
6 disabled; correct?

7 A. That's correct.

8 Q. That's the start time for the preset
9 period?

10 A. Yes.

11 Q. That preset determined period as
12 described in paragraph 70, is that also
13 described in the '745 patent?

14 A. I can't recall. I can check, but I
15 can't recall.

16 Q. Well, before you check, do you understand
17 that the Emma reference is a parent to the '745
18 patent?

19 A. We're talking about Emma, the 2009?

20 Q. Yes.

21 A. I need to check. I don't have a copy
22 of Emma 2009. I don't recall the dates.

23 Q. I'm going to mark as Exhibit 7
24 U.S. Patent Application Publication No. US
25 2009/0188911 A1.

1 (Exhibit 7 was marked for
2 identification.)

3 A. This is Exhibit 7. This is the 2009
4 Emma.

5 Q. So I've put before you a document
6 that's been marked as Deposition Exhibit 7.

7 Is that the Emma reference that is
8 referred to in paragraph 70 of your declaration?

9 A. I believe so. I will verify, make sure.
10 Yes.

11 Q. And then the question was, do you
12 recognize Emma, Exhibit 7, as a parent application
13 to the '745 patent?

14 A. So can you refresh my memory how to find
15 out these dates here to answer your question?
16 Can you point me to the right part of the dates
17 on these, on the Emma and the '746 and '745?

18 I found -- I found the continuation
19 on '745, and it says it is -- which is a
20 continuation in part of Application Number
21 12/317,632, which is the application number listed
22 on the 2009 Emma.

23 Q. You're faster than me finding that
24 reference. Thank you.

25 A. It's not always beautiful to have it

1 continued after a picture, you know. It's
2 tedious. I understand.

3 Q. So, now, do you understand that Emma
4 is a parent application to the '745 patent?

5 A. If the parent application is the same
6 meaning as continuation in part as listed in
7 '745 because I'm not -- I don't know the legal
8 differences, if any.

9 Q. So let's go back to my original question.
10 Does that refresh your recollection
11 as to whether the description in paragraph 70 of
12 your declaration is also described in the '745
13 patent?

14 A. Yes.

15 Q. I'm sorry, let me just -- It does
16 refresh your recollection and it is described in
17 the '745 patent; correct?

18 A. Paragraph 70?

19 Q. Yes.

20 A. Okay. Now, I believe the mechanism may
21 be different in terms of the control. Let me
22 just check one thing here.

23 So the question of refreshing my
24 memory again?

25 Q. Yeah. Let me ask it more directly.

1 A. Okay.

2 Q. Your description in 70, which says,
3 "Emma illustrates and generally describes a
4 combined microwave 2 and refrigerator 3 with a
5 control model whereby power to a compressor is
6 monitored to sense operation of the compressor,
7 such that when power to the microwave is demanded,
8 the compressor is disabled for a preset minimum
9 period." Do you see that?

10 A. Uh-huh.

11 Q. Does that description also apply to what
12 is described in the '745 patent?

13 A. In different, maybe, sentences or
14 languages, but it's describing similarly.
15 Similar, I should say.

16 Q. Let me refer your attention to Exhibit 5.

17 A. Okay.

18 Q. Are you at Exhibit 5?

19 A. Yeah.

20 Q. If you'll look at Column 4, line 59,
21 are you there?

22 A. Yes.

23 Q. You'll see it says, "When cooking power
24 is demanded by the microwave, the compressor is
25 disabled by having electrical power thereto

1 withdrawn by the at least one control circuit
2 for a preset minimum period." Do you see that?

3 A. I do.

4 Q. And that is basically the same
5 description you gave in paragraph 70 with respect
6 to Emma; correct?

7 A. When you say "same," it's not verbatim;
8 right? It's not verbatim; right?

9 Q. I didn't ask if it was verbatim; right?

10 A. Yeah.

11 Q. But it has the same meaning as what you
12 have in paragraph 70, correct, with respect to
13 the preset --

14 A. Yeah.

15 Q. -- minimum period?

16 A. So the only thing that I'm struggling
17 with is in the -- in the Column 4 of the '745
18 patent that you directed me to, starting with
19 line 59, the word "control circuit" is presented
20 here, you know, but I'm not talking about --
21 there's no control circuit in paragraph 70 when
22 I was talking about Emma. So it is not verbatim.
23 That's what I meant. Make sense?

24 Q. I understand what you said.

25 A. Okay.

1 Q. So in the '745 patent, in Column 4,
2 beginning at line 59 and going through line 62
3 or 63, is it your understanding that the preset
4 minimum period begins when the compressor is
5 disabled? Is that correct?

6 A. That's correct.

7 (Exhibit 8 was marked for
8 identification.)

9 Q. Dr. Tanbour, I'm going to place before
10 you a document that's been marked as Exhibit 8.

11 Can you describe what that is,
12 please?

13 A. I think this is Patent No. 4,496,817
14 that is referred to in this case as the Smith
15 patent.

16 Q. And you analyzed this patent for purposes
17 of your declaration that has been marked Exhibit 3;
18 correct?

19 A. Correct.

20 Q. What is your understanding of what is
21 disclosed in the Smith reference?

22 And let me just clarify. Will
23 you agree with me that U.S. Patent 4,496,817,
24 if I refer to the Smith patent, that that is
25 the same patent that we're discussing?

1 A. Yes.

2 Q. Okay. So could you describe for us
3 your understanding of what is disclosed in the
4 Smith reference?

5 A. Yes. I believe, first of all, this is
6 not about a combination appliance, so it's only
7 talking about the microwave, without the
8 refrigerator. I don't recall that it does have
9 a refrigerator or a combination appliance.

10 It does disclose a humidity sensor
11 that is included in the disclosure, and it speaks
12 about -- clearly about the pre-combustion area of
13 heating the food.

14 And the sensor, as I recall, is
15 employed to monitor -- I'm going to use my own
16 metaphoric -- the way I -- my own language, but
17 I hope I'm accurate.

18 The way I recall is that the
19 sensor that is used in Smith uses what Smith
20 calls cumulative water vapor concentration in
21 the atmosphere of the cooking microwave. And he
22 also kind of like specifies certain commercial
23 designation of such sensors to be used that are
24 available in the market at the time.

25 And the fact that these sensors

1 sense the cumulative concentration of water
2 vapor in the stream of gases coming from the
3 cooking area and using that sensor to indicate
4 that a pre-combustion -- that I think there is
5 something like a pre-combustion thing here
6 somewhere in the patent that talks about before
7 combustion.

8 And the word "imminent" was
9 used even in the abstract I can see, the last
10 word in the abstract. That means that the
11 combustion condition in the oven cavity is
12 imminent, meaning it is predicted to happen,
13 but the sensor that's disclosed does not sense
14 combustion products because the patent itself
15 does not even disclose combustion.

16 Q. So is it your understanding that Smith
17 is directed to disabling the microwave before
18 combustion begins?

19 A. The way that Smith is disclosing the
20 mechanism of shutting down the microwave is by
21 utilizing the water vapor sensor, which at that
22 time was predominantly used in the cooking
23 appliance industry.

24 And the buzz name for it was auto
25 cooking sensor, which basically is indicative

1 of how the food is drying out marching towards
2 the pre-combustion time. This is how I
3 understood Smith.

4 Q. And so it's directed at shutting down
5 the microwave before combustion begins?

6 A. To answer -- from the abstract it
7 answers -- from the abstract, if I read to you
8 the last -- the last sentence in the abstract
9 answers your question.

10 "Upon detection" -- I'm reading
11 the last paragraph of the abstract of the Smith
12 patent, the January 29, 1985 patent, and it
13 says, "Upon detection of the characteristic rate
14 of change," in that sensor, "power to the oven
15 is turned off and indication is provided to the
16 user that a combustion condition in the oven
17 cavity is imminent."

18 That means it didn't happen yet.
19 Imminent is expected. This is how I understand
20 it. It's about to happen.

21 Q. So it would be -- because combustion
22 hasn't happened, it would be before a fire in
23 the microwave; correct?

24 A. Definitely.

25 Q. So it would be before the cooking

1 session damaged the microwave oven; correct?

2 A. Well, I have a problem with the word
3 "damage" because you may damage the microwave by
4 putting kerosene in it and try to heat it, you
5 know, and maybe you will never get combustion, and
6 the kerosene vapor will probably short-circuit all
7 the controls. So the word "damage" is -- I have
8 a problem with it. Can you just rephrase the
9 question?

10 Q. Well, first, do you think the kerosene
11 example you described is a practical example?

12 A. No. No. I was just trying to explain
13 to you. If you can rephrase the question. I
14 apologize.

15 Q. Well, what I'm trying to get at is, one
16 of the reasons you want to shut down the microwave
17 is to prevent the microwave from being damaged by
18 the cooking event; correct?

19 A. That was probably one of the advantages
20 but not all the advantages.

21 Q. But that's one of the reasons you would
22 want to shut it down before combustion; correct?

23 A. But, hypothetically, I can give you an
24 example where a fire can be prevented but
25 damaging the microwave may not be preventable,

1 you know.

2 So if somebody put something that
3 generates -- I'm just putting a hypothetical
4 example. Okay? No fire happened, no combustion,
5 but we generated a truckload of steam, and the
6 steam made it to the controllers and the circuit
7 boards and started to condensate there and
8 short-circuit certain components, it can damage
9 the microwave. I'm just giving you like a
10 hypothetical example.

11 Q. Well, do you think a POSITA would
12 consider those hypotheticals as they're reading
13 this patent, the one that you just described?

14 A. No, no, I did not describe that as a
15 POSITA would consider; but in response to you, to
16 ask you to, if you can -- if you can rephrase your
17 question without using the word "damage" because
18 damage can -- damage to a microwave can have
19 different causes other than just overheating.

20 Q. Yeah. Well, I guess you could slam a
21 hammer into the microwave, and that would damage
22 it, but it has nothing to do with the sensor;
23 correct?

24 MR. JOHNSON: Objection.

25 A. Yeah, but I did not go to that extent,

1 you know.

2 Q. I know, but I think the examples are
3 similar to just any kind of damage.

4 A. Right.

5 Q. But what we're focusing on is damage
6 caused by the heating of the food, and I believe
7 that's what Smith is about; right? It's about
8 heating of the food?

9 A. Yeah, but --

10 MR. JOHNSON: Objection, compound.

11 A. -- Smith, also, sir, is titled
12 "Automatic Fire Detection," so he is relating
13 detecting that to preventing fires. That's what
14 I understand from the -- even from the title,
15 without reading.

16 Q. Right. So preventing fires, meaning,
17 as you pointed out, at a point before the fire
18 begins; correct?

19 A. Before the combustion starts, yeah.

20 Q. Yeah. And without combustion, you
21 won't have a fire; correct?

22 A. That's correct.

23 Q. So let me go back to where we started.
24 And we're limiting it to the situation where
25 it's about cooking food and the cooking of the

1 food could result in harm to the microwave oven.

2 With respect to Smith, it describes
3 a situation where it shuts down the microwave oven
4 before any kind of damage can occur; correct?

5 MR. JOHNSON: Objection, beyond
6 the scope.

7 A. If you -- If you describe shutting off
8 the microwave in response to a Smith sensor of
9 water vapor or humidity sensor of Smith as
10 preventing damage to the water heater, then the
11 answer is yes.

12 Q. You said "as preventing damage to the
13 water heater." Did you mean --

14 A. I mean to the microwave.

15 Q. -- preventing damage to the microwave
16 oven?

17 A. I apologize. The microwave, yeah.

18 Q. In that situation, if the microwave is
19 shut down before any damage caused by the heating
20 of the food, in the scenario you described, would
21 it be expected that the user could use that
22 microwave again?

23 MR. JOHNSON: Objection,
24 speculation.

25 A. So the question is, if I understand it,

1 that will the microwave be usable if the microwave
2 senses danger, shuts off, and then the source of
3 danger is gone?

4 Q. That's right, in the context of Smith.
5 That's right.

6 The microwave would be usable
7 again; correct?

8 A. Yes.

9 Q. In Smith, when the shutdown occurs of
10 the microwave, do you know what electrically
11 happens? How does the shutdown occur?

12 A. I learned instrumentation, so I --
13 from my instrumentation knowledge I am answering
14 as a POSITA that the moisture sensor of Smith or
15 the humidity sensor of Smith, which commercially
16 was known as also automatic cooking sensor, senses
17 what it described as cumulative concentration of
18 water vapor in the cooking area.

19 And that sensing itself can generate
20 a signal. The sensors generate a signal based
21 on measurement. And that signal can transfer
22 into an electromotive force, like a current,
23 electromotive force that can generate a current,
24 and that current goes to the -- communicates
25 with the controller to ask the controller to

1 deprive the magnetron from power supply.

2 Q. And then after the shutdown occurs and,
3 as we said, and the microwave hasn't been
4 damaged, how does a user then cause it to work
5 again, turn it back on after the shutdown? How
6 does that occur?

7 MR. JOHNSON: Objection, beyond
8 the scope.

9 A. There are many hypothetical answers
10 for -- scenarios to answer your question. For
11 example, a user can, in one instance, for
12 example, open the door.

13 The door of the microwave has
14 some kind of electrical communication. Most
15 of them have a switch, a mechanical switch that
16 senses the opening of the door. And that
17 opening of the door can teach the controller
18 that the user is now aware of the situation.

19 The user's decision to close the
20 microwave back can also tell the controller that
21 the user has taken care of the source of a hazard
22 or something like that.

23 Q. So a POSITA would know how to reset the
24 microwave so it would become operational again
25 after the shutdown?

1 MR. JOHNSON: Objection, beyond
2 the scope.

3 A. This is -- Like, as I said, this is one
4 hypothetical example I throw out. There are
5 other ways. Like a controller itself may also
6 have other means to be programmed to give enough
7 period or enough alarms, and after that a reset
8 button can be pushed to reset the microwave. So
9 there are a lot of hypothetical examples --

10 Q. Yeah, meaning --

11 A. -- a POSITA can perceive.

12 Q. Sorry. Yeah, meaning a POSITA can have
13 a variety of choices they could have to reset
14 the microwave; correct?

15 MR. JOHNSON: Objection, beyond
16 the scope.

17 A. I think the variety of procedures may
18 not be, I should say, a stand-alone element in
19 an invention. It has to be -- It has to be -- A
20 POSITA would look at them as one element of many
21 elements that are being disclosed in an invention.
22 This is how I'm trained, you know, to understand.

23 Q. Right. But we weren't talking about
24 any specific invention. I was asking about --
25 We were talking about where the microwave was

1 shut down in accordance with Smith and then
2 it's not damaged and the user chooses to use it
3 again, a POSITA would know how to reset the
4 microwave for that to happen?

5 MR. JOHNSON: Objection,
6 speculation, incomplete hypothetical.

7 A. Okay. Now, are we mixing between a
8 POSITA and end user who may not be a POSITA?

9 Q. Well, I don't think an end user knows
10 how to design a microwave.

11 A. Okay.

12 Q. So talking about a POSITA.

13 A. Okay. So now you --

14 MR. JOHNSON: Same objections.

15 A. So you introduced the word "design"
16 now, so now I understand we're talking about a
17 POSITA, not an end user anymore.

18 Q. Well, we never were talking about the
19 end user.

20 A. Oh, because in my previous --

21 Q. We were always talking about the
22 POSITA.

23 A. Yeah, but in my previous answer I said
24 the end user can just open the door and close
25 it, and you accepted my answer. Am I right?

1 Q. Well, you said the end user can do
2 that.

3 A. Right.

4 Q. But in order for the microwave to
5 perform that function, someone had to design it
6 into the microwave; correct?

7 A. That's correct.

8 Q. Yeah. And so a POSITA would do that;
9 correct?

10 MR. JOHNSON: Objection,
11 speculation, incomplete hypothetical.

12 A. Can you -- Can you then repeat the
13 question?

14 Q. Yeah. It's really --

15 A. And you said a POSITA can do that.

16 Q. Yeah. It's really --

17 A. Do what?

18 Q. It's really the situation we talked
19 about where after Smith has shut down the
20 microwave -- Are you with me so far?

21 A. Uh-huh.

22 Q. -- and then the microwave has not been
23 damaged, correct, because it's pre-combustion,
24 correct, and if the user wanted to use that
25 microwave again, a POSITA would know how to

1 design that microwave so it could be reset to be
2 used again; correct?

3 MR. JOHNSON: Same objections,
4 speculation, incomplete hypothetical.

5 A. Can you point me in Smith to where this
6 is captured, or do you want me to read a little
7 bit?

8 Q. You can read what you like, but I'm just
9 asking that that microwave would be reusable after
10 the shutdown; correct?

11 MR. JOHNSON: Same objections,
12 speculation, incomplete hypothetical.

13 A. So that microwave is what is in Smith
14 or a general microwave?

15 Q. It's the microwave that has been shut
16 down in accordance with Smith, not damaged.

17 A. Okay.

18 Q. Correct?

19 A. Uh-huh.

20 Q. We talked about that.

21 A. Uh-huh.

22 Q. And if it's not damaged, it would be
23 logical that it would be used again; correct?

24 A. It is logical.

25 Q. And for it to be used again, it needs

1 to be reset so it can be functional; correct?

2 A. But a reset function can vary in terms
3 of the novelty. Like, a POSITA can ask the end
4 user to keep opening the door and closing it to
5 reset or asking in the manual to push a button
6 to reset, but a different POSITA can come up
7 with a more innovative reset function that can
8 also use time delay to reset automatically.

9 So there are -- And even the
10 resetting automatically can be achieved by
11 different methodologies in terms of the
12 controller. So there are ways to reset it
13 using a purely mechanical control, a hybrid
14 electromechanical, or purely electrical. It can
15 be analog, electrical. It can be digital.

16 Q. So there are various ways that the
17 POSITA could design the resetting of the
18 microwave to be usable again; correct?

19 MR. JOHNSON: Same objection,
20 speculation, incomplete hypothetical.

21 A. As I answered, I think I answered that
22 I can't speculate more than that. I would be
23 speculating if I answer more than what I
24 answered.

25 Q. You referred to Smith as being directed

1 at automatic cooking; is that correct?

2 A. Yes, that's my understanding or
3 recollection, I should say.

4 Q. What is your understanding, what does
5 automatic cooking mean?

6 A. I think my understanding is that
7 utilizing the automatic -- the so-called
8 automatic cooking sensor, which is a humidity
9 sensor, a POSITA would understand that utilizing
10 it in a cooking appliance, sense the automatic
11 cooking sensor, which is a water vapor sensor,
12 which is a humidity sensor, and a POSITA would
13 understand that the humidity sensor is sensing
14 the cumulative concentration of water vapor in
15 the cooking area, which is also an indication
16 of the dryout of the food itself, and that's
17 an indication of the food is drying out and
18 approaching the point where it may cause
19 combustion. This is how I understand it.

20 Q. But what is the meaning of automatic?
21 Does that mean there's no set time period?

22 MR. JOHNSON: Objection, beyond
23 the scope.

24 Q. I'm trying to understand what you mean
25 by automatic cooking.

1 A. I did not coin the term, but I am --
2 the way I read the amount of information in this
3 case, you know, is moisture sensors and water
4 vapor sensors like the ones that are disclosed
5 in Smith are of the type that used to be called
6 by POSITAs as automatic cooking, but at the end
7 of the day it's a humidity sensor.

8 And, specifically, as Smith
9 discloses, it senses the cumulative concentration
10 of water vapor in the cooking area of the
11 microwave, and that gives the entire system an
12 understanding of how the food is marching
13 towards the dryout.

14 I'm using my own words of
15 describing it. It's not all Smith.

16 Q. Does automatic cooking involve setting
17 a time period for the cooking?

18 A. I don't know. I never really designed
19 a cooking appliance to answer that question
20 accurately.

21 Q. So automatic cooking could encompass
22 setting a specific time period for the cooking;
23 correct?

24 MR. JOHNSON: Objection,
25 incomplete hypothetical, speculation.

1 A. I honestly don't know that.

2 Q. In the microwave oven that is disclosed
3 in Smith, do you expect that it has a user input
4 device that allows the user to put in a specific
5 time period for cooking?

6 A. Let me check one thing here, okay, to
7 answer your question, if you allow me, please.

8 Q. Yeah. Take your time.

9 A. I think Smith already discloses 23 as a
10 control panel, as marked in Figure 1 as 23,
11 number 23 in Figure 1.

12 Would that answer your question?

13 Q. Well, is the control panel a panel
14 where the user can put in a specific time period
15 for cooking?

16 A. And do other things, not only that, yeah.

17 Q. Well, at least it allows the user to put
18 in a specific time period for cooking; correct?

19 A. Not correct, because a control panel
20 encompasses more than that, so you cannot use --
21 I have a hard time saying "at least." That means
22 I can have a control panel that only allows to
23 put the time period. So, I mean, a POSITA would
24 know that a control panel has more than that.
25 So the word "at least" is the issue I have.

1 Q. I'm just going to finish this question.
2 I'm not saying that it's exclusive
3 to setting a time period. I just said it allows
4 the user to set a time period, although they
5 might be able to do other functions --

6 A. Right.

7 Q. -- as well; correct?

8 A. Correct.

9 MR. JOHNSON: Objection,
10 incomplete hypothetical.

11 MR. WONG: You want to take a
12 break?

13 MR. JOHNSON: Yeah, if we can.
14 Thanks.

15 (A recess was taken.)

16 MR. WONG: Okay. We can go back
17 on the record.

18 Q. Dr. Tanbour, during the break did you
19 speak to counsel about your testimony?

20 A. No.

21 Q. Back on Smith, which is Exhibit 8,
22 please, the sensor that is described in Smith --
23 Well, strike that.

24 In Smith, which is Exhibit 8,
25 there is a sensor that is described; correct?

1 A. I think I recall it is correct, yeah.

2 Q. And that sensor is used during automatic
3 cooking. Is that what you said?

4 A. I did not say that, no.

5 Q. Okay.

6 A. I said that it is called in the industry,
7 my understanding, is what is called in the industry
8 as automatic cooking or one of the automatic
9 cooking sensors that were known in the industry
10 for POSITA.

11 Q. And so that means that it's a sensor to
12 be used in automatic cooking; is that correct?

13 A. My understanding is that automatic
14 cooking sensors are humidity sensors, and Smith
15 is disclosing a humidity sensor that is in the
16 same category that we used -- that used to be
17 called in the industry automatic cooking sensors,
18 which are nothing but humidity sensors or water
19 vapor sensors.

20 Q. And so they can be used in situations --
21 those sensors are used in situations where there
22 could be a preset or set time period for cooking;
23 correct?

24 MR. JOHNSON: Objection to form,
25 speculation.

1 A. Are we speaking in the context of Smith
2 now?

3 Q. Yeah, we're talking about Smith. And
4 I think you called it a sensor for automatic
5 cooking; correct?

6 A. Right.

7 Q. And what I'm trying to understand is
8 what you mean by a sensor for automatic cooking
9 and how does it work.

10 A. Right. So the question -- I have -- In
11 my declaration, I already explained my opinion
12 about the Smith. If you allow, I can -- I can
13 refer to that.

14 My understanding is that -- Let
15 me just check before I say that, if you will
16 allow. Can you allow me just to read a little
17 bit from my declaration here?

18 If you see paragraph -- starting
19 from page 56, paragraph 157, and -- sorry,
20 paragraph 157, yes, on page 56, and paragraph
21 160 on page 57, paragraph 160 on page 57 states
22 that Smith does not disclose the reset function,
23 reset enable function.

24 Q. I don't believe I asked you anything
25 about a reset enable function.

1 A. Okay. So what was the question?

2 Q. I was asking you about automatic cooking.

3 A. You are trying to -- My understanding or
4 I understood your question as you're referring
5 to the reset function in the same meaning as
6 automatic cooking.

7 Q. No.

8 A. Okay. Then I misunderstood.

9 Q. Let's just start over.

10 A. Okay. Okay.

11 Q. Automatic cooking --

12 A. Right.

13 Q. -- what does that mean?

14 A. I'm going to tell you my understanding
15 of automatic cooking is using a humidity sensor
16 that senses the cumulative concentration of
17 water vapor in the cooking area.

18 So the dryout period for, for
19 example, cookies, if we are cooking cookies, is
20 different than the dryout period of steak in the
21 cooking area.

22 So I honestly -- I have a hard
23 time understanding how are you going to be asking
24 me to interchangeably use the automatic cooking
25 sensor and the preset time for cooking, do you

1 understand what I mean, because of the variation
2 of food that has different needs to dryout,
3 different times to dryout.

4 Q. Because, as you testified earlier,
5 automatic cooking can include using preset time
6 periods; correct?

7 A. I do not recall that I testified like
8 that. What I -- What I just testified or my
9 understanding of automatic cooking is it's
10 monitoring, a means to monitor the concentration
11 of water vapor and its accumulation in the
12 cooking area.

13 And I don't have -- I'm having a
14 hard time understanding how can this be one size
15 fits all when it comes to presetting the time
16 because different foods require different times
17 to dryout.

18 Q. Yeah. I'm not trying to do a one size
19 fits all, but in automatic cooking does the
20 user, when he starts -- when he or she starts
21 the microwave, does that correspond to a preset
22 time period?

23 A. I don't know, because the only -- the
24 only thing that I learned preparing for this
25 case about automatic cooking is the fact that

1 these moisture sensors or humidity sensors that
2 are disclosed in Smith are in the same category
3 used to be known by a POSITA in the industry that
4 used to be called automatic cooking sensors.

5 So maybe -- the only thing that I
6 am absolutely sure about is that Smith discloses
7 a moisture sensor, a humidity sensor that used
8 to be categorized in the industry by POSITAs as
9 one of these sensors that are used for automatic
10 cooking.

11 Q. I see.

12 So with respect to Smith, as we
13 discussed earlier, a user can put a set time
14 period into the microwave; correct?

15 A. I don't know if this is --

16 MR. JOHNSON: Hang on. Go ahead.

17 A. I don't know if this is exclusive to
18 Smith, honestly, because, I mean, you asked me
19 about microwaves in general.

20 Q. Well, okay, but before the break we
21 talked about Smith and Figure 1; correct?

22 A. Figure 1. Okay. Yes.

23 Q. Correct? You pointed that out?

24 A. Right.

25 Q. And you said that Item 23 is a user

1 input area?

2 A. I mean, he refers to it as control
3 panel.

4 Q. And in the control panel is your
5 understanding that a user could put in a time
6 period for cooking?

7 A. That's fair.

8 Q. And then the sensor that is described
9 in Smith, would it be functional during that
10 cooking period, whatever it is?

11 A. So how do you -- how do you define
12 functional? What does that mean?

13 Q. Is it operating? Is it working during
14 that period?

15 A. According to Smith, the sensor is
16 sensing during the cooking period, so it is
17 monitoring the cumulative concentration of water
18 vapor in the cooking area.

19 Q. It's monitoring the water vapor during
20 the cooking period; correct?

21 A. That's my understanding.

22 Q. Now, you believe that -- Strike that.

23 Your opinion is that the sensor
24 described in Smith is a humidity sensor; correct?

25 A. That's my recollection, yeah.

1 Q. Does it encompass other types of sensors
2 other than humidity sensors?

3 A. I can't recall now, but I can check if
4 you allow me.

5 Q. Yes, please.

6 A. I can read from Column 3 of Smith,
7 starting -- starting at line -- around line 14,
8 13, it says, "bracket 54 which is suitably
9 secured to cavity wall 28."

10 "Sensor 52" -- which is line --
11 line 13 of Column 3 of Smith, it says, "Sensor
12 52 in the illustrative embodiment of Figure 2 is
13 a gas sensor readily commercially available from
14 Figaro Engineering, Inc.," identifiable as Model T,
15 as in Tom; G, as in George; S, as in Sam, No. 186.

16 It continues to say, "This sensor
17 is responsive to the cumulative concentration of
18 water vapor," as I said before. That's my
19 language, as I said before. And to continue
20 reading, "and various organic gases," period.

21 Q. So the sensor is sensing water vapor as
22 well as other organic gases; correct?

23 A. Right. That's what Smith is disclosing
24 or teaching.

25 Q. We talked about Smith being directed at

1 shutting down the microwave before combustion.
2 Do you recall that?

3 A. This is how I understand it, yeah.

4 Q. Before combustion occurs, is there
5 smoke being emitted?

6 MR. JOHNSON: Objection, asked
7 and answered.

8 A. My training says that smoke is an outcome
9 of combustion. If there is no combustion, there's
10 no smoke yet.

11 Q. Let me direct your attention to Column 3,
12 line 51.

13 A. Of Smith?

14 Q. Of Smith, yes, I'm sorry, Exhibit 8.

15 A. Which line?

16 Q. Yes, Column 3, line 51.

17 A. Okay.

18 Q. Are you there?

19 A. Uh-huh.

20 Q. I'll just read it. "However, before
21 actually reaching the ignition point, the food
22 begins to char, smoke or smolder, resulting in
23 a second period of relatively rapidly increasing
24 gas concentration in the circulating air,
25 comparable to that rate of increase which

1 characterizes the normal cooking period.
2 This second period of rapidly increasing
3 concentration level, referred to hereinafter as
4 the 'pre-combustion' period, typically begins in
5 a matter of minutes before actual combustion in
6 the cavity." Do you see that?

7 A. Uh-huh.

8 Q. So at least the inventor here believed
9 there was smoke prior to combustion. Do you
10 agree with that?

11 A. I think you are talking -- he's talking
12 about the ignition point here, when the food
13 ignites, meaning catches fire. So that's -- from
14 a combustion point of view, that's a different
15 way of saying combustion.

16 It says -- The same sentence here
17 you read says "before actually reaching the
18 ignition point." So we are talking about now
19 ignition.

20 Q. Yeah. So, okay, let's break down what
21 we just looked at.

22 So it says before the ignition
23 point, before reaching the ignition point, the
24 food beings to char, smoke, or smolder; correct?

25 A. That's what it is saying, yeah.

1 Q. And it says "resulting in a second
2 period of relatively rapidly increasing gas
3 concentration in the circulating air." Do you
4 see that?

5 A. I do.

6 Q. And then the next sentence says, "This
7 second period of rapidly increasing concentration
8 level, hereinafter referred to -- referred to
9 hereinafter as the 'pre-combustion' period,
10 typically begins a matter of minutes before
11 actual combustion." Do you see that?

12 A. I see that, yeah.

13 Q. So at least the inventor here is
14 describing smoke before combustion; correct?

15 A. I think the inventor here -- I can't --
16 I can't make up what the inventor was thinking;
17 but the way I read it as a POSITA here, okay, is
18 that he is mixing between ignition, combustion,
19 pre-combustion, and post-combustion in this
20 statement.

21 He's mixing all over the place.
22 Because once the food ignites, when the food
23 ignites, it did -- it does have -- reach what
24 we call self-ignition point, meaning it doesn't
25 need even a source of spark or a pilot flame to

1 burn.

2 So he's using the word ignition,
3 combustion, pre-combustion all -- he's mixing
4 everything all over the place. I don't think --
5 I don't think a POSITA would look at this
6 statement and leave this without being
7 excessively confused, you know.

8 Q. So you don't understand what we just
9 read. Is that your testimony?

10 A. No, I understand that Smith, in these
11 two sentences you just read to me in Column 3,
12 has mixed ignition -- he put -- he put ignition
13 before pre-combustion. It looks like it.

14 So he said there is a second
15 period. So if the first period is ignition, how
16 can the second period be pre-combustion? I have
17 a hard time putting it together. Do you agree
18 with me? I don't have to ask you a question.
19 Sorry. I keep asking. I apologize.

20 Do you understand? I mean,
21 meaning in the first sentence, which can be
22 characterized as -- a POSITA reading this as the
23 first period, he is calling it -- he's allowing
24 himself to let the ignition exist, and the second
25 period is characterized by pre-combustion. So

1 how come -- how come pre-combustion can come
2 after ignition?

3 Q. With all due respect, I don't think
4 he's referring to the first period as the
5 ignition point. All he says is before reaching
6 ignition point, but he doesn't equate that to
7 the first period, I don't believe, does he?

8 A. It says, "This second period of rapidly
9 increasing concentration level, referred to
10 hereinafter as the 'pre-combustion' period."

11 Q. Yes, that's what it says.

12 A. Yeah.

13 Q. But that doesn't say anything about
14 ignition, does it?

15 A. Well, I think the sentence -- the
16 sentence, I read it here, it says before -- let
17 me just read it again. Okay?

18 "Before actually reaching the
19 ignition point, the food begins to char, smoke
20 and smolder, resulting in a second period."

21 So the second period of relatively
22 rapidly increasing gas concentration in the
23 circulating air, comparable to that rate of
24 increase which characterizes the normal cooking
25 period, this second period where it's already

1 the food charred, smoked and smoldered and
2 ignition happen already, is characterized as
3 pre-combustion. So you see where it is all over
4 the place?

5 Q. Yeah, let me just say that that section
6 that you read I don't believe defines when the
7 ignition occurs. All right? It just says even
8 before ignition point; correct?

9 A. That's correct. So how can a POSITA
10 read this -- this is what I struggle with, this
11 statement. How can a POSITA accept the existence
12 of smoke, which is a product of combustion, to
13 be characterized as possibly happening before
14 the pre-combustion?

15 Q. You'll see immediately above the
16 section we read there is a discussion of the
17 drying-out phase. Do you see that?

18 A. Right.

19 Q. Or period.

20 A. I do.

21 Q. I submit to you that that is the first
22 period, and then this is talking about a second
23 period. Is that your understanding?

24 A. Just let me read before.

25 Q. Yep.

1 A. Just a second. Allow me to go back.

2 Yeah, so he is interchangeably
3 using -- That's my struggle. Here the author,
4 Smith, is interchangeably using the first
5 period, if you want to call it, where before
6 actually reaching ignition the food begins to
7 char, smoke, and smolder.

8 And my training, in my training,
9 ignition means combustion already happened. How
10 can smoke, which is a product of combustion,
11 happen before ignition or before -- or during
12 the pre-combustion? That's why I feel that this
13 statement here is convoluted.

14 Q. So you don't agree with the statement
15 that it occurs -- that the char, smoke, or
16 smolder occurs before combustion. Is that what
17 you're saying?

18 A. At least the smoke.

19 Q. So there's no smoke before combustion,
20 is your testimony?

21 A. That's my understanding. That's my
22 training in combustion, yes.

23 Q. Let me turn your attention to Figure 3
24 of Exhibit 8. Are you familiar with Figure 3?

25 A. I recall looking at it, yes.

1 Q. Do you agree with the different cooking
2 phases that are described in Figure 3?

3 A. I see that the figure is identifying
4 one, two, three phases on the x-axis.

5 Q. Well, there's actually a phase where
6 there's a rapid decline in slope, which is not
7 labeled, correct, from about 750 to about 900;
8 is that right?

9 A. Well, it's kind of like it's an
10 engineering drawing convention here that we --
11 like a POSITA would look at the two arrows
12 pointing to the right at around the 750 and the
13 arrow pointing to the left at around 900 as
14 describing that era, the rapid decline you are
15 describing.

16 Q. And that section where it has the rapid
17 decline and it has the arrow "Pre-Combustion
18 Phase," is that the pre-combustion phase?

19 A. This is -- This is -- One POSITA can
20 read this chart as, yeah. So when we dimension
21 something in drawing, we either use arrows
22 outside the pointers or, if it is wide enough,
23 then we can use arrows pointing from within the
24 dimension, just like dimensioning in an
25 engineering drawing.

1 Q. Yes. I misread it.

2 So that section there where it
3 has the rapid decline and to the right it says
4 "Pre-Combustion Phase," that is the name of the
5 phase where that rapid decline occurs; correct?

6 A. This is -- A POSITA would read that.

7 Q. Yeah. And I think I was just looking --
8 So it shows three phases before combustion;
9 correct?

10 A. It shows the normal cooking phase,
11 drying-out phase, and the pre-combustion phase.

12 Q. And on the y-axis it refers to gas
13 sensor resistance; correct?

14 A. It refers to gas sensor resistance in
15 kilohms, yes.

16 Q. And is it your understanding this gas
17 sensor resistance is detecting vapor phase and
18 organic compounds?

19 A. I have to read the description of the
20 figure; but at least water vapor, I think, is
21 referring to the water -- because it is using
22 the drying-out phase, so it is referring to the
23 amount of moisture remaining in the food.

24 Q. But during the drying-out phase, is it
25 also organic emissions that are in the gas?

1 A. I need to read the description --

2 Q. Please.

3 A. -- of Figure 3, if you'll allow me,
4 please.

5 So the figure is specifically
6 talking about, believe it or not, a baked
7 potato. So this is so specific to one kind of
8 food, yeah, so let me just check in Figure 3.

9 So in the description, I think,
10 in the Smith -- both the brief description of
11 Figure 3 as well as the specification of the
12 patent, it's referring to this as an example for
13 a baked potato, and it is referring to it as a
14 baked potato being one of the foods used where
15 they overcooked or something like that.

16 But it is not disclosing any
17 information about the sensor, except that in one
18 paragraph, going back to the humidity sensor
19 that is commercially available as TGS 186, which
20 has been described as a moisture or water vapor
21 sensor.

22 Q. But you can't tell from Figure 3 what
23 this sensor is sensing; is that right?

24 A. If I read the description and if I can
25 direct you to Column 4, starting on line 4 of

1 Smith, it says, "The sensor resistance versus
2 time curve of Figure 3," and it goes down all
3 the way to the second paragraph, starting on the
4 same Column 4, line 16, "The resistance R_s of the
5 TGS 186 sensor varies with gas concentration
6 level in the air to which it is exposed in
7 accordance with," and then there's a formula,
8 and it shows the gas concentration as C .

9 And since Smith already refers to
10 TGS 186 as a humidity sensor in another location,
11 as I recall, when it was talking about the
12 Figaro brand, you know, so a POSITA reading that
13 would understand that this is -- the curve in
14 Figure 3 is -- the vertical axis refers to the
15 water vapor concentration that is affected -- I
16 mean that is calibrated as the gas sensor
17 resistance in kilohms.

18 Q. Let's talk about the Model TGS No. 186.

19 Look at Column 3, lines -- it's
20 around 13. It begins, "Sensor 52 in the
21 illustrative embodiment." Do you see that?

22 A. Yes.

23 Q. And there's a description there of the
24 Figaro Engineering, Inc., identifiable as Model
25 TGS No. 186. Do you see that?

1 A. Correct.

2 Q. And that's what you were referring to
3 just a minute ago; correct?

4 A. Yes.

5 Q. Okay. It says, "This sensor is
6 responsive to the cumulative concentration of
7 water vapor and various organic gases." Do you
8 see that?

9 A. I do.

10 Q. So it's not just a humidity sensor;
11 correct?

12 A. It says "and various organic gases."
13 So I cannot speculate if the TGS No. 186 is
14 capable of sensing the concentration of water
15 vapor alone or other various organic gases alone.
16 I cannot deduce from this statement.

17 Q. And am I correct that everything that
18 you know about the TGS No. 186 is contained
19 within this description?

20 A. I'm under oath, and I did some research
21 about it, you know, and I think I put in my
22 declaration that Smith -- first of all, Smith
23 prosecution history references the TGS 186 and,
24 also, other patents of Smith that came right
25 after January 29, 1985.

1 He has another generically named,
2 I can't recall it, that came in March of '85
3 that also refers to Figaro Engineering, Inc., T,
4 as in Tom; G, as in George; S, as in Sam, 186
5 moisture sensor or water vapor sensor.

6 And a POSITA, when they read the
7 description of TGS 186 by the inventor, he
8 started with water vapor. He's seeking water
9 vapor. He's showing a mashed potato that will
10 shed out water vapor when it is cooking. Or I
11 mean a baked potato. Sorry. That is -- I
12 didn't mean mashed potato. I mean baked potato,
13 just to be accurate.

14 So 186, TGS No. 186, has been
15 mentioned in the prosecution history as well as
16 other patents of Smith.

17 Q. But as you testified earlier, it refers
18 in Column 3 to water vapor and organic gases;
19 correct?

20 A. It reads water vapor and various -- and
21 various organic gases, but I cannot speculate if
22 TGS No. 186 can only sense water vapor alone,
23 water vapor and simultaneously other various
24 organic gases, which I believe is not the case.
25 It's usually, in terms of sensors that are

1 sensing, they are after certain things. They
2 are calibrated based on a -- kind of like if I
3 want to -- I don't want to speculate here, but I
4 believe that statement cannot tell me -- Smith
5 is not -- it does not teach me to say that it is
6 only water vapor alone, water vapor plus various
7 organic gases, or various organic gases alone
8 without the water vapor.

9 Q. Yeah. Right. It would just be
10 speculation as to which; correct?

11 A. Yes.

12 Q. Let me refer you to your declaration,
13 Exhibit 3, and paragraph 84, please.

14 A. 84?

15 Q. Paragraph 84, yes.

16 A. Okay.

17 Q. And just by way of background, you
18 recall that we spent time in Column 3 of the
19 Smith patent talking about the pre-combustion
20 phase and the first period emission point.

21 Do you recall that discussion?

22 A. Uh-huh.

23 Q. With that in mind, your first sentence
24 reads, "Smith described Smith's sensor 52
25 monitors for the 'drying out' period, and the

1 transition from long 'drying out' phase to
2 pre-combustion phase, i.e., 'before food begins
3 to char, smoke or smolder.'" Do you see that?

4 A. Yes.

5 Q. Now that we've gone through that prior
6 discussion, that sentence is incorrect; right?

7 A. If we respect -- I told you I did not
8 share my respect to his statement about putting
9 the smoke, the word "smoke," before the
10 pre-combustion period, that he called it a
11 second period. But that's stemming from there,
12 from my disrespect to his convoluted statement
13 of allowing the carriage before the horse.

14 Q. Right, but that's your description.
15 That's not Smith's description; correct?

16 A. My point is, you cannot have -- what I
17 meant here is you cannot have pre-combustion and
18 allow yourself to have smoke.

19 Q. Right. So where you say -- in paragraph
20 84, where you say "pre-combustion phase, i.e.,
21 'before food begins to char, smoke or smolder,'"
22 that's your interpretation. That's not Smith's
23 description; correct?

24 A. That's also -- This is Smith's
25 description that I believe is convoluted because

1 he's allowing himself to use the word "smoke"
2 before -- before the period he described as
3 pre-combustion.

4 I can read it again. Okay? So
5 paragraph 84, "Smith described sensor 52
6 monitors for the 'drying out' period, and the
7 transition from long 'drying out' phase to
8 pre-combustion phase, i.e., 'before food begins
9 to char, smoke and smolder.'"

10 That one is what Smith is
11 referring to as the pre-combustion phase.

12 Q. Let's take a look. Because I believe
13 you testified earlier that's not what he said,
14 but let's just take a look.

15 So Column 3, at line -- it begins
16 at line 51. It says, "However, before actually
17 reaching the ignition point, the food begins to
18 char, smoke or smolder, resulting in a second
19 period of relatively rapidly increasing gas
20 concentration in the circulating air, comparable
21 to that rate of increase which characterizes the
22 normal cooking period." Do you see that?

23 A. Yes.

24 Q. And it goes on to say, "This second
25 period of rapidly increasing concentration

1 level, referred to hereinafter as the
2 'pre-combustion' period, typically begins a
3 matter of minutes before actual combustion in
4 the cavity."

5 So the pre-combustion period is
6 not the same as the char, smoke, or smolder
7 period.

8 A. But you agree with me that he's
9 referring to smoke before -- that the smoke
10 happened before pre-combustion in reading this
11 statement?

12 Q. Well, what is your understanding of
13 what he says?

14 A. This is how I see it. I mean, he is --
15 he's allowing himself to put the possibility of
16 the food experiencing smoking, generating smoke,
17 which is a product of combustion, to be
18 happening during a period he characterized as
19 pre-combustion.

20 Q. Right. I misstated earlier.

21 So according to Smith, the char,
22 smoking, or smoldering occurs during the
23 pre-combustion period, correct, because that's
24 the same as the second period?

25 A. That's what I am struggling with.

1 That's why I feel that this is -- a POSITA
2 reading that will be not only confused but
3 disrespecting that, honestly.

4 Q. No, I understand, but at least that's
5 what Smith is writing here. Is that your
6 understanding?

7 A. Yes.

8 Q. Okay. So here he says that char,
9 smoke, or smolder is during the pre-combustion
10 period. In your sentence in paragraph 84, you
11 say it's before it begins. And all I'm pointing
12 out is I believe that's incorrect. That's not
13 what Smith describes.

14 A. Well, if you -- if you also transfer
15 his statement when it says "before," he used
16 also the "before" when it says -- just give me a
17 second here.

18 Again, line 51 of paragraph 3 of
19 Smith, "However, before approaches -- before
20 actually reaching the ignition point, the food
21 begins to char, smoke and smolder."

22 Q. Right.

23 A. And the word "before" here came from
24 that.

25 Q. Yeah, but your quote is "before food

1 begins to char, smoke." The "before" you just
2 read has to do with the ignition point.

3 A. Yeah.

4 Q. So that's not what he said.

5 A. It says, "Before" -- He says in Column 3,
6 starting line 1, "However, before actually reaching
7 the ignition point, the food begins to char, smoke
8 and smolder."

9 Q. Right. Before the ignition point it
10 begins to char, smoke, or smolder; right? That
11 what he --

12 A. Right.

13 Q. But your quote is, "Before food begins
14 to char, smoke." It's not what is contained in
15 Smith; correct?

16 A. It says, "This second period." So if
17 we go -- if we continue reading, "resulting in a
18 second period of relatively rapidly increasing gas
19 concentration in the circulating air, comparable
20 to that rate of increase which characterizes the
21 normal cooking period. This second period of
22 rapidly increasing concentration level, referred
23 to hereinafter as the 'pre-combustion.'" So I
24 was just referring to his definition of the
25 pre-combustion.

1 Q. Okay. Where in Column 3 do you find
2 the phrase that says "before food begins to
3 char, smoke, or smolder" in quotes? Where is
4 that phrase?

5 A. It's starting from 51, "However, before
6 actually reaching the ignition point, the food
7 begins to char, smoke and smolder."

8 Q. Yeah, but isn't that different than
9 what you quoted here?

10 A. I see this as a correction of what he
11 erroneously listed here. I think I agree it's
12 different.

13 Q. Yeah. So in paragraph 84 the quoted
14 language is not literally taken from Smith;
15 correct?

16 A. It's correcting what a POSITA should
17 expect Smith to understand, that smoke cannot
18 happen before combustion.

19 Q. Yeah. It's your correction, but it's
20 not quoted directly from Smith; correct?

21 MR. JOHNSON: Objection, asked
22 and answered.

23 MR. WONG: I don't believe it was
24 answered.

25 MR. JOHNSON: It's been asked

1 like ten times.

2 A. I honestly feel that this is what a
3 POSITA would understand, how erroneously Smith
4 was and convoluting Smith was in Column 3,
5 starting line 51.

6 Q. Yeah. So you put it in quotes as if it
7 were in Smith, but it's not in Smith; correct?

8 MR. JOHNSON: Objection,
9 mischaracterization.

10 A. I probably put it in quotes just to
11 emphasize it. Maybe I should have used italics.

12 (Exhibit 9 was marked for
13 identification.)

14 Q. I'm going to hand you a document that's
15 been marked as Exhibit 9, and it's U.S. Patent
16 8,446,048 B2 to Butt, et al.

17 Are you familiar with the document
18 that's been marked as Deposition Exhibit 9?

19 A. Yes.

20 Q. And can you describe your understanding
21 of what is described in Deposition Exhibit 9?

22 A. I believe in order for me not to
23 profess from my memory, I can read from what I
24 put in my --

25 Q. Sure.

1 A. -- declaration, if you allow me.

2 So starting with paragraph 85 on
3 page 29 of my declaration, Exhibit 3, "U.S.
4 Patent No. 8,446,048," between two brackets
5 "Butt," B-u-t-t, "Exhibit 1015 is titled
6 'Controller for a safety shut-off system' and
7 lists a May 21, 2013, issuance date.

8 "Butt discloses a controller
9 located in a standard electrical outlet box (or
10 socket and housing) that interrupts a supply of
11 electricity to an electrical appliance upon
12 detecting a triggering. Exhibit 1015," which is
13 the patent of Butt at Column 1, line 15 to 18,
14 and Column 2 at line 22 to 35.

15 "The trigger signal can be based
16 on a traditional wired or wireless smoke sensor
17 located in a home, a panic button, a tremor
18 detector (that detects earthquakes), or a lockout
19 passcode (like a wireless keypad for a garage
20 door opener)."

21 I go on on paragraph 86. I
22 continue saying, "Butt describes that it can
23 exist in wired and wireless embodiments. In
24 wired embodiments, the controller fits into a
25 standard size outlet box, and wires connect it

1 together with the standard smoke detector and
2 panic/reset button." And I'm referring to the
3 lines in the -- and paragraphs in the Butt
4 invention patent.

5 "Butt states that 'the wiring can
6 be performed by the user alone' due to the use
7 of standard size and no need to cut" -- I wrote
8 cry wall. It should be drywall. I apologize.
9 That's a typo -- "by a professional in a
10 completed home, or by a professional during the
11 construction of the home."

12 So I think these two paragraphs
13 at least summarize what Butt is teaching.

14 Q. So Butt describes a system that has a
15 smoke detector; correct?

16 A. Yes.

17 Q. And Butt also describes a reset button
18 for an appliance; correct?

19 A. Can you point me to where it is saying
20 that? I can't recall.

21 Q. Well, if you look, for example, at
22 Column 3, beginning at line 51 through 60, you
23 can read that, and does it describe resetting the
24 appliance for use where it refers to "restore
25 power"?

1 A. Okay. So if you repeat your question,
2 please.

3 Q. Before I do that, let me just refer you
4 to one other section. Column 6, line 53 through
5 line 60, please read that.

6 A. Okay.

7 Q. And one other section to read, which I
8 should have pointed out, right above that section
9 in Column 6 that I pointed out, if you would read
10 lines 48 through 53 just immediately above that
11 section.

12 A. Okay.

13 Q. So my question is, Butt describes a
14 reset feature for resetting an appliance after a
15 shutdown; correct?

16 A. But the location of that reset button,
17 you mentioned before in the previous question
18 that it is in the appliance.

19 Q. Let me --

20 A. So where is the location of the reset
21 button?

22 Q. If I did, I didn't intend to. Now, I'm
23 not talking about the location. I'm just asking,
24 does it describe a reset function for resetting
25 an appliance after shutdown of the appliance by

1 the smoke detector?

2 A. Let me just read my declaration on that
3 because I just want to make sure that I refresh my
4 memory on the holistic analysis of Butt. Okay?

5 What I am struggling with your
6 question is that Butt is more like -- it does
7 not describe what appliance is being shut down
8 to be reset, you know, and the patents at issue
9 are very specific to the combination appliance
10 microwave and refrigerator.

11 So can you rephrase your question
12 in a different way so I can answer?

13 Q. Well, the question wasn't specific to
14 any specific type of appliance. It was about
15 kitchen appliances in general.

16 So Butt discloses a reset function
17 for resetting a kitchen appliance after shutdown
18 caused by a smoke sensor; is that correct?

19 A. I can't honestly answer that question
20 because I can't recall if Butt specifically used
21 the word "kitchen appliance" instead of just
22 "appliance."

23 Q. Okay. Then let's start with appliance.

24 A. Okay.

25 Q. Does Butt disclose a reset function for

1 an appliance after shutdown by a smoke detector?

2 A. Butt describes a panic button or a
3 reset button that a user can activate to restore
4 power to that appliance that was cut by his
5 invention of a smoke detector speaking to a part
6 supplied in the wall, outlet to the wall, wall
7 socket.

8 MR. JOHNSON: Do you want to take
9 five minutes?

10 MR. WONG: Sure.

11 MR. JOHNSON: Let's go off the
12 record.

13 (A recess was taken.)

14 MR. WONG: Okay. Back on the
15 record.

16 Q. Dr. Tanbour, before the break we were
17 talking about Exhibit 9, which is the Butt
18 reference.

19 A. Yes.

20 Q. And we talked about the smoke sensor
21 shutting down an appliance. Do you recall that?

22 A. As long as -- I think you mean the smoke
23 sensor that is not placed within the appliance.
24 It is placed in the house.

25 Q. Yeah, I didn't say anything about where

1 it was located.

2 A. Right. Yeah.

3 Q. I just said it has a smoke sensor that
4 is used to shut down an appliance; correct?

5 A. Connect.

6 Q. And it can be used to shut down a
7 specific appliance; correct?

8 A. I don't think this is correct. And I
9 can explain.

10 Butt is about the wall outlet
11 itself that has -- receives signal from a
12 regular household smoke detector, whether wirely
13 or wirelessly.

14 And these outlets can have
15 different things hooked to them receiving power.
16 It can have a phone charger, a coffee maker and
17 another appliance or a washing machine, so any
18 kind of appliance, so that's why I don't think
19 your statement is completely correct.

20 Q. Let me direct your attention to Column 2
21 of the Butt reference, and let me direct your
22 attention to line 25. Do you see that?

23 A. Yes.

24 Q. And I'll just read it. "The controller
25 includes a housing having a cover with an

1 electrical socket, the socket configured to
2 receive a first electrical plug electrically
3 coupled to the appliance; and interrupter
4 circuitry contained within the housing,
5 electrically coupled to a power supply and to
6 the socket, configured to decouple the power
7 supply from the socket upon receiving a trigger
8 signal, the trigger signal being generated in
9 response to a safety hazard associated with the
10 electrical appliance." Do you see that?

11 A. I do.

12 Q. Now, that indicates that the shutdown
13 is related to a specific appliance; correct?

14 A. A POSITA would understand it as related
15 to an appliance, yeah.

16 Q. Right. Well, and that the shutdown
17 that is triggered by the smoke detector is a
18 shutdown directed at a specific appliance;
19 correct?

20 A. Incorrect, I think. And I can explain
21 why.

22 Because the smoke detector does
23 not -- is not placed within the appliance, is
24 not communicating with the appliance wirely or
25 wirelessly. It is telling the outlet to stop

1 providing power.

2 And if an appliance is connected
3 to that outlet by -- disclosed by Butt, then
4 that appliance is deprived of power. So that's
5 why I don't think your statement, sir, is
6 accurate describing what Butt is.

7 Q. So let's go back to the language in
8 Column 2 that we were discussing.

9 A. Uh-huh.

10 Q. And the language we just described
11 beginning at line 25 and ending at around line
12 32, that is discussing shutting down a specific
13 appliance; correct?

14 MR. JOHNSON: Objection, asked
15 and answered.

16 A. So the mechanism is to decouple the
17 power supply from the socket, as the paragraph
18 you're referring to describes, upon receiving
19 the trigger signal from -- the trigger signal
20 being generated in response to a safety hazard
21 associated with an electrical appliance.

22 Q. Right. And maybe we need to go to the
23 language above that section that we are referring
24 to.

25 At line 22 you see it says,

1 "According to a first aspect of the invention,
2 there is provided a controller for a system that
3 interrupts a supply of electricity to an
4 electrical appliance upon detecting a trigger."

5 Do you see that?

6 A. I do.

7 Q. And the trigger is the signal from the
8 smoke detector; correct?

9 A. The way I understand it is that the
10 trigger is the signal of the smoke detector sent
11 to the wall outlet of Butt.

12 Q. Yes.

13 A. And then that trigger activates what
14 Butt is referring to as interrupter circuitry
15 contained within the power outlet box of Butt.

16 Now, if an appliance is connected
17 to that, as he described, then electricity will
18 be deprived from that appliance.

19 So it's not -- honestly, it's not
20 a direct communication between the smoke detector
21 and the appliance. It's a different feed of a
22 wall outlet deciding whether or not to provide
23 electricity to whatever is plugged to it.

24 Q. Whatever is plugged to the outlet;
25 correct?

1 A. Exactly.

2 Q. But the trigger -- the smoke detector
3 is triggered by smoke from an appliance, from a
4 specific appliance; correct?

5 A. It says, "According to a first aspect."
6 Yeah, one of the aspects of that is smoke that can
7 be coming from an appliance, as Butt is teaching.

8 Q. Right, a specific appliance.

9 A. Right.

10 Q. Yeah.

11 Now, the reset button in Butt
12 does not have to be wall-mounted, does it?

13 A. Off the top of my head, I can't recall.
14 I can't be sure to answer this question.

15 Q. Let me refer your attention to Column 6,
16 paragraph -- I'm sorry, Column 6, line 16, the
17 line that begins "Figure 6." Do you see that?

18 A. Uh-huh.

19 Q. It says, "Figure 6 is an embodiment of
20 the controller 20 that can be connected to the
21 detector 14 and the panic/reset button 12 either
22 wired or wirelessly and that is not designed to
23 be flush-mounted on the interior of the wall.
24 In this embodiment, the relay of the controller
25 is coupled to a cord, one end of which is

1 adapted to be inserted into a standard power
2 outlet." Do you see that?

3 A. I'm having a hard time following.
4 Figure 6 doesn't have 14 and doesn't have 12. I
5 think maybe there is a typo here. I think maybe
6 it is referring to Figure 1A, I think, or maybe
7 1B. I don't know.

8 Q. The question, though, is, you see at
9 line 16, in that sentence it says that "the
10 panic/reset button either wired or wirelessly
11 and that is not designed to be flush-mounted on
12 the interior of the wall." Do you see that?

13 A. And that's which lines again?

14 Q. If you look at -- Well, you can read
15 all of line 16 through 19.

16 A. Okay.

17 Q. That sentence.

18 A. Okay. I see that, yeah.

19 Q. So you would agree that the panic/reset
20 button is not limited to being wall-mounted; is
21 that correct?

22 A. It says "flush-mounted on the interior
23 of the wall." So I think to complete my answer
24 is, looking at Figure 6 referred to, starting at
25 line 16 of Column 6 of Butt, I'm having a hard

1 time finding 12, 14, 44 that are referred to in
2 this paragraph you are pointing me to.

3 Q. So do you have an understanding as to
4 whether the panic/reset button has to be mounted
5 to a wall in the disclosure in Exhibit 9?

6 A. Can you point me to where that is in
7 Butt, please?

8 Q. Well, I pointed you to the section in
9 Column 6, but you didn't think that was clear.
10 I believe it says it's not designed to be
11 flush-mounted, and so now I'm just asking you
12 the question do you recall, do you have an
13 understanding of whether the panic/reset button
14 has to be mounted on a wall in Butt?

15 A. It says "flush-mounted on the interior."
16 It doesn't say -- It has to be mounted somewhere,
17 a POSITA reading that, but it says -- I mean,
18 the statement here is -- in my opinion, a POSITA
19 reading it will be probably more concerned about
20 whether it is flush-mounted or not flush-mounted,
21 is it popping out of the wall or not popping out
22 of the wall.

23 Q. That's what your understanding of
24 flush-mounted is, is whether it's -- whether the
25 panic/reset button extends away from the surface

1 of the wall or if it's embedded within the wall?
2 Is that your testimony?

3 A. Well, that's one way a POSITA can
4 understand this, is just it says "and not" --
5 "and that" -- starting from the word "and that
6 is not designed to be flush-mounted on the
7 interior of the wall."

8 So, I mean, there's a period
9 here. So the sentence is over. It's done. So
10 where is "not mounted" here? It's just
11 "flush-mounted."

12 So flush-mounted can be -- not
13 flush-mounted can be popping out of the wall a
14 little bit, recessed into the wall a little bit.
15 It can be interpreted this way.

16 (Exhibit 10 was marked for
17 identification.)

18 Q. I'm going to hand you a document that's
19 been marked as Exhibit 10, titled Quezada,
20 Q-u-e-z-a-d-a, Publication No. U.S. 2012/0276763.

21 Are you familiar with the document
22 that's been marked as Deposition Exhibit 10?

23 A. Yes.

24 Q. Can you describe what that is?

25 A. I think this is a standard electric

1 wall outlet, electric wall supply outlet that
2 includes a USB charging port that is -- it can
3 be accompanied by a regular 120-volt AC outlet.

4 Q. So in this, in Quezada, the inventors
5 here have substituted a USB port for what would
6 be a regular electrical socket in a home; is
7 that correct?

8 A. I don't think this statement is
9 accurate. I can explain.

10 Q. How would you describe it, please?

11 A. I mean, this is one embodiment that is
12 taught here, but I was struggling with the word
13 "replace" that you have because some electric
14 wall outlets, they have only a single 120 outlet.
15 So if you replace it, then it will not describe
16 what is disclosed in the embodiments here.

17 Q. So if it's a wall outlet that has two
18 sockets, it's replacing one of those sockets
19 with a USB port; is that correct?

20 A. According to embodiments of the patent,
21 several embodiments, also this is not correct
22 because there are embodiments with two 120-volt
23 outlets, and still the patent is teaching four
24 more USB outlets.

25 Q. You're right. But at least in one of

1 the embodiments you're substituting a USB
2 port with a, I'll call it, normal wall socket;
3 correct?

4 A. You mean substituting a normal 120-volt
5 socket with a USB port.

6 Q. That's correct.

7 A. The other way around, you mean.

8 Q. Let me just clarify.

9 In Quezada it discloses substituting
10 a normal 120-volt socket with a USB port; correct?

11 A. It can be or it can be introducing, adding
12 instead of substituting.

13 Q. Right. It can be more than that, but
14 at least one of the features is substituting the
15 USB port for a normal 120-volt socket; correct?

16 A. I don't remember if the word
17 "substituting" is used by Quezada. Is this your
18 interpretation of Quezada or --

19 Q. So how would you describe what is shown
20 in Figure 1 of Quezada?

21 A. So in order to be accurate, I will
22 describe it as Quezada is teaching a standard
23 120-volt outlet instead of having two standard
24 120-volt outlets, is teaching one outlet is
25 120-volt and the other one is -- he or she is

1 introducing a USB charger outlet, so avoiding
2 the word "replacing" or "substituting."

3 Q. And the use of the USB port, is your
4 understanding that's for charging devices that
5 can be charged with a USB connector?

6 A. Most likely that's the purpose of that,
7 yeah.

8 Q. Why do you say "most likely"? What
9 other purpose do you think it might have?

10 A. There are devices that can run, not
11 charge, on 5 volts. So they can be connected
12 here and start running.

13 Q. So it could be either possibly running
14 a device or charging --

15 A. Or charging.

16 Q. -- a device; is that correct?

17 A. Yeah.

18 Q. Let me direct your attention to Exhibit 5,
19 which is the '745 patent.

20 The '745 patent discloses a unit
21 that has 120-volt charging sockets; is that
22 correct?

23 A. I think it was referred to as an auxiliary
24 socket.

25 Q. Okay, an auxiliary socket, but an

1 auxiliary socket that is a 120-volt socket; is
2 that correct?

3 A. I think it is disclosing two of them,
4 if I'm looking at the figure -- for example,
5 Figure 13 of the '745, Figure 15 of the '745
6 patent and Figure 17 of the same patent, Figure
7 19 of the same patent and Figure 24, Figure 26,
8 and Figure 25 even and Figure 27.

9 All of them are teaching two
10 120-volt outlets, referred to in the patent, as
11 I recall, as auxiliary power outlets.

12 Q. And those auxiliary power outlets are
13 for charging; correct? I'm sorry, let me back
14 that up.

15 Those auxiliary power outlets are
16 for providing power to a device that is connected
17 to it; correct?

18 A. Correct.

19 Q. And the function of those 120-volt
20 auxiliary outlets is the same as the function of
21 the 120-volt sockets in Quezada; correct?

22 A. Incorrect.

23 Q. Okay. Could you please explain why
24 it's incorrect?

25 A. Quezada doesn't disclose any relays or

1 controls or anything that can shut off the power
2 supply to the 120-volt outlet disclosed. And as
3 I recall, the patent at issue, the '745, for
4 example, has means to control and even shut the
5 power supply to these auxiliary outlets in case
6 that overload is happening or a hazard due to the
7 smoke detection happens.

8 Q. Yeah, I didn't ask about the operation
9 of the microwave. I was asking if the auxiliary
10 sockets or plugs provide power to a device just
11 as the sockets in Figure 1 or in the Quezada
12 patent provide power to a device.

13 A. Again, I don't think this is correct.
14 That's what I was trying to explain.

15 Q. Let me ask it differently.

16 Do each of them provide power to
17 a device that is plugged into them?

18 A. The ones that are auxiliary in the '745
19 patent, they provide power that is subject to
20 the liking or the design of the control circuit
21 that is disclosed in the patent.

22 The ones that are in Quezada are
23 continuously supplying. There is no condition
24 or they are not up to the liking of any control
25 because there are not controls disclosed in

1 Quezada.

2 Q. So in the '745 patent, the plug, the
3 configuration of the plug, the, I'll call it,
4 three-hole plug, that's the same as what is
5 disclosed in Quezada; correct?

6 A. Configuration meaning the way -- the
7 shape of the plug that can be put in?

8 Q. That's correct.

9 A. That's correct, yeah.

10 Q. And, in fact, if the conditions are
11 appropriate in the appliance in the '745 patent,
12 you can connect the same device to the plugs, the
13 auxiliary plugs, in the '745 patent as you can
14 into the 120-volt sockets in Quezada; correct?

15 A. Again, I don't think so, according to
16 my understanding.

17 Q. Okay. And explain why you don't think
18 so.

19 A. Because I think, and I don't remember
20 where, but in the '745 patent, these auxiliary
21 outlets, they are meant to be some kind of like
22 reasonably low-power demand, like plugging a
23 phone charger, plugging a laptop transformer,
24 but the one in Quezada is -- it can be plugged --
25 it can be installed in a typical wall-mounted

1 receptacle that is only controlled by a home
2 panel circuit breaker, which is usually tens of
3 amps. You know what I mean?

4 Q. Where does it say in the '745 patent
5 it's only low-power devices that can be plugged
6 into those outlets?

7 A. I have to, honestly, refresh my memory
8 and read that.

9 Q. Okay.

10 A. If you go to Column 5 of '745 and go
11 down to line 64, it says "auxiliary low power
12 receptacles 11 and 12."

13 And these are, I believe, referred
14 to in Figure 3 of the patent. And Figure 3, if
15 you go back to Figure 3, it's a block diagram.
16 It refers to 11 and 12 as low-power receptacles.

17 Q. Is it your understanding that those
18 receptacles have to be low power?

19 A. I was trying to highlight the difference
20 between Quezada and these because you were trying
21 to tell me that any device can -- or if you refer
22 to your question -- I don't want to put words in
23 your mouth, but I was trying to be accurate to
24 making sure that these auxiliary outlets disclosed
25 in the '745, they are also -- it is teaching that

1 these are low-power receptacles, but the Quezada
2 is open for all, kind of like it's a -- it's
3 just a 120-volt outlet mounted on a house wall
4 in a standard -- it looked like a standard
5 electric box that a high-power or low-power
6 device can be plugged to, like, for example, a
7 range can be plugged to that receives -- a
8 typical electric range can consume 15 amps.

9 Q. But with respect to the section you
10 identified in Column 5, that is just one
11 embodiment of what is disclosed; correct?

12 A. It may be more than one embodiment,
13 yeah, but I agree at least one embodiment.

14 Q. It's one embodiment.

15 A. At least.

16 Q. Yeah, but the disclosure is not limited
17 to low-power -- What do you call it? Low-power
18 receptacles; is that correct?

19 A. I cannot recall all the claims. I have
20 to review them to answer that question, if you
21 allow me.

22 Q. Please.

23 A. Okay. So I can -- I can, for example,
24 use the Claim 13 on Column 26 of the '745 patent.
25 If we continue reading Claim 13, it's -- a POSITA

1 would understand "wherein the at least one
2 output device is in operative connection with
3 the at least one power control circuit, and
4 wherein the at least one control circuit is
5 operative to cause the at least one output
6 device to be inoperative when the magnetron
7 draws cooking power."

8 So I think there is a place where
9 it refers to auxiliary. Just give me a little
10 bit of time, please. Okay?

11 So if we go to the very beginning
12 of Claim 13, if I read, "The apparatus according
13 to Claim 1 wherein the microwave oven further
14 includes at least one output device including at
15 least one of a USB port, an inductance charging
16 pad, an auxiliary electric -- electrical outlet,
17 wherein the at least one output device," and so
18 on, as I read before.

19 So the auxiliary is listed here
20 that is referred to in one of -- at least one of
21 the embodiments as being a low-power receptacle.

22 Q. So let's look at Claim 13. And so
23 you're referring to where it says "an auxiliary
24 electrical outlet"; correct?

25 A. Right.

1 Q. It doesn't say low power, does it?

2 A. It doesn't say that in Claim 13.

3 Q. So you're reading that into the claim,
4 correct, low power?

5 A. It's in the specification and teaching
6 of the patent.

7 Q. For an embodiment; correct?

8 A. Right.

9 Q. But in the claim it doesn't say low
10 power; correct?

11 A. I did not read all the claims, so --
12 but at least until Claim 13, that's correct.

13 Q. At least Claim 13 does not say low
14 power; correct?

15 A. But, also, you see, that's why I may
16 have a hard time agreeing with you, is -- and I
17 can explain why, is that within Claim 1, the
18 connection between all these outlets and the
19 circuit, the control circuit, is establish and
20 claim, and these control circuits are capable of
21 depriving these outlets from power in case of --
22 in case of either operating the magnetron or
23 hazard or safety. So I'm having a hard time
24 agreeing with you, honestly.

25 Q. Well, if you look at Claim 13, which

1 you were discussing, do you see that?

2 A. Yeah.

3 Q. And it talks about an auxiliary
4 electrical outlet. Do you see that?

5 A. Right.

6 Q. It doesn't say low-power auxiliary
7 electrical outlet. The words "low power" don't
8 appear there; correct?

9 A. In that specific claim, but I did not
10 complete reading all the claims.

11 Q. But at least Claim 13 --

12 A. Right.

13 Q. -- doesn't say low power; correct?

14 A. I think -- Yeah.

15 Q. Yeah. And if you look at -- Let's check
16 another one, Claim 20. Do you see Claim 20? It's
17 in Column 28.

18 A. Okay. Yes.

19 Q. It also refers to an auxiliary electrical
20 outlet; correct?

21 A. Correct.

22 Q. But it also does not describe it as low
23 power; correct?

24 A. It depends on how a POSITA would
25 translate the word "auxiliary." Auxiliary -- As

1 a POSITA, auxiliary may be interpreted as not
2 that deadly necessary. So I would plug into it
3 things that are not crucially necessary.

4 So a POSITA will understand this
5 also, maybe, and relate it to the embodiments,
6 you know. That's the word "auxiliary." It
7 didn't say just power outlet, period. It says
8 auxiliary. Because most of the time auxiliary
9 is like an alternative, not highly necessary.

10 Q. But the words "low power" do not appear
11 in that claim.

12 A. I agree.

13 Q. Let me turn your attention to page 82
14 of your Exhibit 3 and paragraph 231.

15 A. What page again?

16 Q. It's paragraph 231. It's page 82.

17 A. Okay.

18 Q. And paragraph 231 refers to Claim 10 of
19 the '746 patent. Do you see that?

20 A. Yes.

21 Q. Sir, you have Exhibit 6 in front of you;
22 correct? That's the '746 patent.

23 A. Which column?

24 MR. JOHNSON: Claim 10.

25 Q. So do you see Claim 10 of the '746

1 patent?

2 A. Yes.

3 Q. And that is the claim that you're
4 addressing in paragraph 231 of Exhibit 3;
5 correct?

6 A. That's correct.

7 Q. And the phrase that is being discussed
8 there with respect to definiteness is the term
9 "continuously." Do you see there?

10 A. Yes.

11 Q. What is your understanding of what
12 "continuously" means as it is used in Claim 10?

13 A. I think this is what I wrote in my
14 declaration in the same paragraph you pointed me
15 to, paragraph 231.

16 I just threw it towards the end of
17 that paragraph. It says, "Regarding definiteness,
18 their issue appears to relate to the claim term
19 'continuously.' However, 'continuously' is not
20 a technical term. In my opinion, it is a term
21 that a POSITA would readily understand with
22 reasonable certainty. Petitioner's indefiniteness
23 argument should therefore be rejected."

24 And I think that's what the word
25 "continuously" in Claim 10 of the '746 that you

1 referred me to.

2 Q. But you don't really explain what it
3 means. You just say it's what it means to a
4 POSITA.

5 What does it mean to a POSITA?

6 A. It should mean the plain meaning of
7 continuously. That means that the sensor will
8 continue to monitor the smoke level for -- as it
9 says, for a predetermined time.

10 Q. So for a predetermined time.

11 Is it your understanding for a
12 predetermined time the smoke sensor would
13 monitor the level of smoke without interruption?

14 MR. JOHNSON: Objection, beyond
15 the scope.

16 A. So what was the question again?

17 Q. Well, I'm trying to understand what
18 continuously means.

19 A. Right.

20 Q. So does continuously mean that the
21 sensor would monitor the smoke during a defined
22 period of time without interruption?

23 MR. JOHNSON: Objection, beyond
24 the scope, asked and answered.

25 A. So can you define interruption?

1 Q. How does a smoke sensor sense smoke?

2 A. We already discussed that early in my
3 deposition, that it depends on the principle
4 operation of the smoke sensor at hand, you know.

5 So if we take a typical, say,
6 optical smoke sensor, okay, so as long as there
7 is time within the predetermined time, as it
8 is claimed, the smoke sensor will continue to
9 monitor. It says sensing. It continues to
10 sense the level of smoke continuously during
11 that period of predetermined time.

12 Q. And does continuously mean that it --
13 is it the same as constantly?

14 MR. JOHNSON: Objection, beyond
15 the scope, asked and answered.

16 A. You see, as a person who is too
17 analytical, the word "constantly," it's not
18 always interchangeable with continuously, so that
19 constantly can be associated with quantitative
20 content of the dialogue, meaning that the amount
21 of discussion is constant throughout the period
22 of time, but continuously is not quantitative.
23 It has to do with the function continues to
24 happen. Do you understand what I mean?

25 Q. I believe.

1 So what you're saying is
2 continuously doesn't necessarily mean
3 constantly; is that correct?

4 A. This is linguistically, according to my
5 understanding of English, you know, and I might
6 be wrong or off. I'm not a linguistic person,
7 but this is how I understand it.

8 Q. Right. I'm asking your understanding.
9 So continuously doesn't mean
10 constantly; is that correct?

11 MR. JOHNSON: Objection, asked
12 and answered, beyond the scope.

13 A. The way I understand continuously is
14 that the smoke sensor in this patent continues
15 to sense, it says sense, sense the smoke,
16 continues.

17 So continuous is from the word
18 continues. Constant is from -- Constantly is
19 from the word "constant," which has to do with
20 some kind of quantity is not changing. We're
21 talking about an action here done by the sensor
22 itself.

23 So the word "continuously," I see
24 it more a derivative of the word "continue" or
25 the verb "continue," which is kind of like an

1 actionable word that has nothing to do with any
2 quantitative content.

3 Q. Oh, I see. You mean it means that the
4 sensing continues.

5 A. Right.

6 Q. But not necessarily in any specific
7 interval or constantly or periodically. It just
8 means it continues; is that correct?

9 A. Well, it says here "for a predetermined
10 time."

11 Q. Right. Within that --

12 A. It's not forever. Yeah.

13 Q. I didn't want to interrupt you.

14 In that predetermined time the
15 sensing continues, but it doesn't indicate the
16 action of the sensing; in other words, whether
17 it's constant or if it's in intervals, et cetera?

18 A. I don't understand what you mean by the
19 action of the sensor being constant. Can you
20 explain?

21 Q. Yeah. Let me see if I can clarify it.

22 When the smoke sensor is sensing
23 the level of smoke, it, in effect, is analytically
24 taking a signal that is related to the level of
25 smoke; correct?

1 A. It is taking a signal, yeah.

2 Q. Yes. And so that signal, is it
3 obtained at some time interval or is it
4 constant; in other words, it continues without
5 interruption?

6 MR. JOHNSON: Objection, beyond
7 the scope, asked and answered.

8 A. You see, like, my training in
9 instrumentation, a typical sensor is like a
10 measurement device. Okay?

11 So it does have what we call time
12 constant. You probably -- You're familiar with
13 that, which is the time that where it reaches
14 wherever it's feeling it, the threshold, for
15 example, of the smoke.

16 And as long as that threshold
17 exists in the cooking area in a case like at
18 hand here in the '746, '745 patents, that signal
19 is always sent to the controller, indicating
20 that smoke level is already past the threshold,
21 and the magnetron is now deprived from having
22 power.

23 Once the magnetron is deprived
24 from having power, a POSITA understands that
25 smoke generation will start to slow down.

1 That's why a predetermined time is there, to
2 make sure that this happens, the decline of
3 the smoke generation indicative of a dangerous
4 condition.

5 Q. Dr. Tanbour, let's go to paragraph 232
6 of your declaration, Exhibit 3. Are you there?

7 A. Yes.

8 Q. And this has to do with the phrase in
9 Claim 14 of the '746 patent, "preset minimum
10 period after the magnetron becomes inoperative."

11 A. Okay. So that's Claim 14?

12 Q. Yes. What is your understanding of
13 what that phrase "preset minimum period after
14 the magnetron becomes inoperative" means?

15 A. I can read aloud my paragraph 223 and
16 beyond here. It says, "I understand that
17 Petitioner argues and Dr. Horenstein opines that
18 Claim 14 of the '746 Patent does not have
19 adequate written description, and/or is not
20 enabled, and/or is indefinite, specifically
21 related to a 'preset minimum period after the
22 magnetron becomes inoperative.' I note their
23 exact arguments vary between documents, and even
24 within the same document. I disagree."

25 And I continue to go to paragraph

1 233 of my declaration, saying, "The Petitioner" --
2 "Petitioner and Dr. Horenstein ignore the
3 specification of the '746 Patent, including
4 written description support for Claim 14 in
5 Column 4, lines 55 to 61," and I'm listing that
6 it's "When cooking power is demanded by the
7 microwave, the compressor is disabled by having
8 electrical power thereto withdrawn by the at
9 least one control circuit for a preset minimum
10 period. When power demand to the magnetron
11 ceases, refrigerator compressor power is
12 restored provided that the preset minimum period
13 has expired."

14 I continue to add in paragraph
15 234, the specification also describes using
16 undesirable rapid on/off cycles for the
17 compressor, with a POSITA -- which a POSITA
18 would understand or would maybe occur after a
19 magnetron becomes inoperative in light of the
20 specification. The claim term "preset minimum
21 period" is not a technical term, and a POSITA
22 would understand it with reasonable clarity, or
23 certainty, sorry, in light of the example
24 provided in the specification at Column 6, lines
25 34 -- 43-51.

1 And I'm going to read that because
2 it is probably the most explanation. It says
3 in Column 6, lines 43-51, "In another exemplary
4 arrangement, a clock function 21 included in
5 the at least one power control circuit 4 is
6 used to provide timed delays during which, for
7 example, refrigerator 3 would be prevented from
8 undesirably rapid on/off cycles. When the
9 compressor of the refrigerator 3 is disabled
10 during microwave cooking operation, a time delay
11 of 3 minutes" -- 3 minutes, I repeat -- "is
12 provided during which the compressor of the
13 refrigerator 3 will remain disabled, even if
14 microwave use is only for a short period."

15 So here there's a quantification
16 of what is erroneously described as indefinite.

17 Q. Let me ask, on that section that you
18 just read from your declaration, the three-minute
19 period that you refer to, it begins when the
20 microwave -- I'm sorry, it begins when the
21 compressor of the refrigerator is disabled;
22 correct?

23 A. Right.

24 Q. And then up above, in paragraph 233,
25 the quoted language, and it talks about a preset

1 minimum period, do you see that?

2 A. Yes.

3 Q. That preset minimum period begins when
4 the compressor of the refrigerator is disabled;
5 correct?

6 A. That's correct.

7 Q. Let me --

8 MR. WONG: Oh, I'm about to get
9 into a couple questions where you can't attend,
10 so if you can walk out, please.

11 (Mr. Hennings exited the
12 conference room.)

13 MR. JOHNSON: How much longer do
14 you think we have? It's getting close to 5:00.

15 MR. WONG: 15 minutes, unless
16 you've got questions.

17 MR. JOHNSON: Well, yeah, I might
18 have a couple.

19 Q. Would you refer to paragraph 249 of
20 your declaration, please.

21 In 249 you say, "Based on my
22 review of Petitioner's prior art references, as
23 I have detailed above, no other product in the
24 prior art had this combination of features,
25 which significantly improved the safety and

1 energy efficiency of these combination
2 microwave-refrigerator appliances." Do you see
3 that?

4 A. I do.

5 Q. What is your basis for saying
6 "which significantly improved the safety
7 and energy efficiency of these combination
8 microwave-refrigerator appliances"?

9 A. For example, when the combination
10 appliance teaches a smoke sensor being installed
11 inside the microwave to sense smoke as an
12 indicator of dangerous conditions, instead of
13 relying on a typical household smoke detector
14 20 feet or more away from the kitchen or cooking
15 area, that, honestly, brings the alarm system
16 and the safety control that detects smoke, which
17 is indicative of combustion already started, to
18 the very problem area, which is the cooking area
19 inside the microwave.

20 So that's what I meant by the
21 safety prong of my statement, which I believe
22 it's the crux of -- one of the crux of the
23 patents at issue.

24 When the compressor is deprived --
25 the compressor of the refrigerator is deprived

1 from electricity during the time when the
2 microwave oven is working or demanding power,
3 the food will not spoil during that period of
4 time when the compressor stops for a period of --
5 a short period of cooking in the microwave.

6 So that also allows single-plug,
7 controlled, safe operation of a combination of
8 microwave and refrigerator while not allowing
9 the compressor to work over simultaneously with
10 the microwave. So that's what I meant by the --
11 referring to the efficiency.

12 There's also an energy efficiency
13 benefit in the disclosed combination appliance
14 in the patents at issue that is also related to
15 restoring the power to the compressor based on a
16 smart way of managing the power distribution and
17 intake between the microwave and the refrigerator
18 instead of delegating just to an end user, who
19 end users can vary in their skill sets.

20 So this can be -- can receive the
21 smart control capability from the controller,
22 and that can generate a much more efficient way
23 of operating the combination appliance.

24 Q. The smart control you're talking about,
25 is that disclosed in the '745 patent?

1 A. I used the word "smart." I didn't mean
2 what is a smart appliance, you know. I didn't
3 mean that. I meant that a control circuit is a
4 more reliable way of managing the power demand
5 between -- interchangeably between the microwave
6 and the refrigerator in the combined appliance.

7 It's a more efficient way of doing
8 it than a human person who can be prone to human
9 error or mishandling or running the combined
10 appliance manually.

11 Q. Did you look at any data that confirmed
12 your observation about energy efficiency?

13 A. Well, I don't have data, but I can
14 understand that if a combined appliance placed
15 in a dormitory, for example, with frequent usage
16 of the microwave, then in these frequent uses
17 of the microwave we guarantee depriving the
18 compressor from sucking more energy, at the very
19 end of the month, I mean, we will get a smaller
20 electricity bill, which is -- which is a more
21 efficient way of operating a combined appliance.

22 Q. But you didn't see any data that
23 confirmed your opinion here; is that right?

24 A. I don't need to see. It's very logical.

25 Q. Yeah, I'm not asking about logic. I'm

1 just asking, did you see any data?

2 A. I can generate the data if you give me
3 a scenario because the power consumption from the
4 refrigerator is not a secret. So I can easily
5 calculate the monthly savings.

6 Q. I'm not asking -- I just want to know,
7 before you provided this opinion, did you see any
8 data that indicated improved energy efficiency,
9 data, other than your observations?

10 A. I think the data that I have seen is
11 in the form of the volumes of these combined
12 appliances being ordered by college dormitories
13 around the country, and they're indicative of
14 that these colleges and dorms are very satisfied
15 with not only the safe operation of a product
16 like MicroFridge, but also the energy savings
17 that can be reaped from delegating the control
18 of power consumption or power demand to a
19 control circuit instead of the end user or the
20 students in the dormitory.

21 Q. So is your testimony you believe the
22 demand from the MicroFridge product was based on
23 energy efficiency?

24 A. That's not what I said. I said that
25 the data that I looked at and the volumes

1 emphasizes the energy efficiency of the combined
2 appliance; but, also, I saw more data about
3 colleges demanding the MicroFridge that teaches
4 or -- teaches the patents at issue because of
5 the smoke sensor and the safety feature provided
6 by having the smoke sensor as well as the power
7 management safety aspect between the microwave
8 and the refrigerator.

9 Q. So you refer to the volume of
10 MicroFridges that were either leased or sold.

11 Is that what you're referring to?

12 A. I don't recall the number, but I recall
13 that I looked at these numbers, yeah.

14 Q. Right, the volume of those units. But,
15 again, that volume in and of itself does not
16 reflect what the energy efficiency is; correct?

17 A. I can't agree with the statement
18 because colleges -- and I was an associate dean.
19 Okay? I can answer you. I think colleges all
20 are leaning to save energy. So when they source
21 leased appliances for their dorms, they factor
22 in safety, and they factor in energy efficiency.

23 Q. But you don't have data that is directly
24 tied to an improvement in energy efficiency; is
25 that correct?

1 A. That's not correct.

2 Q. And is it not correct for the reasons
3 you explained earlier?

4 A. Yes.

5 MR. WONG: No further questions.
6 I pass the witness.

7 MR. JOHNSON: Okay. Can you give
8 us five minutes, five or ten or so, to go
9 through some redirect issues, see what we have?

10 MR. WONG: Okay.

11 MR. JOHNSON: Okay. We'll be
12 back. Thanks.

13 (A recess was taken.)

14 CROSS-EXAMINATION

15 BY MR. JOHNSON:

16 Q. Dr. Tanbour, I have a few questions for
17 you on redirect examination, and I just want to
18 take you through a few sections of your report
19 to confirm them.

20 So if we could, let's turn to
21 page 48 of your declaration. I apologize. It's
22 not a report, your declaration.

23 And here we're talking about the
24 Smith reference, which was marked as Exhibit 8
25 today, I believe.

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1 The first question I have for you,
2 I guess, is does Smith teach a smoke sensor?

3 A. I recall it doesn't.

4 Q. What type of sensor does Smith teach?

5 A. It teaches what I already testified as
6 a humidity sensor, or he referred to it as a
7 commercial -- commercially available T, as in
8 Tom; G, as in George; S, as in Sam, 186 sensor.

9 Q. And when Smith says that it teaches
10 sensing both water vapor and various organic
11 gases, does that mean that that sensor is not a
12 humidity sensor?

13 A. A POSITA may not understand it this
14 way. Yeah, so the answer --

15 Q. Would a POSITA understand that to still
16 be a humidity sensor?

17 A. This is how a POSITA would understand
18 it.

19 Q. So is that a yes?

20 A. Yes.

21 Q. And you talk about Smith not teaching a
22 smoke sensor in paragraph 131 of your declaration,
23 I believe; is that correct?

24 A. That's correct.

25 Q. And that paragraph, do you believe is

1 that true as you sit here today?

2 A. Absolutely.

3 Q. And then the next portion of Smith that
4 I wanted to talk to you about generally is, do
5 you believe Smith teaches or discloses a reset
6 function as part of a control circuit in Smith?

7 A. I don't think it does.

8 Q. And would you agree with Dr. Horenstein
9 that there is no disclosure of a reset relay in
10 Smith?

11 A. I believe so.

12 Q. There was a lot of discussion today,
13 also, about what I think was referred to as
14 automatic cooking; is that right?

15 A. That's correct, yeah.

16 Q. And in automatic cooking, is it fair to
17 say that a user says "cook my food" as opposed
18 to "cook my food for two minutes"?

19 A. That's correct.

20 Q. So when somebody selects automatic
21 cooking, they're selecting that in lieu of
22 setting a predetermined time for a cooking
23 interval; is that correct?

24 A. That's reasonable.

25 MR. JOHNSON: Give me two seconds.

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No additional questions for you,
Dr. Tanbour. Thank you.

THE WITNESS: Thank you.

MR. WONG: No further questions,
Dr. Tanbour. Thank you very much.

THE WITNESS: Thank you.

(Deposition concluded at 5:04 p.m.)

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SIGNATURE PAGE

I, EMAD Y. TANBOUR, Ph.D., the witness in the foregoing deposition, do hereby certify that I have read the foregoing pages of typewritten material and that the same is, with the corrections noted on the attached page, if any, a true and correct transcription of my deposition upon oral examination given at the time and place herein stated.

EMAD Y. TANBOUR, Ph.D.

Subscribed and sworn to before me
this __ day of _____, 2024.

Notary Public

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I have read the entire transcript of my deposition taken on the 13th day of September, 2024, or the same has been read to me. I request that the following changes be entered upon the record for the reasons indicated. I have signed my name to the signature page and authorize you to attach the same to the original transcript.

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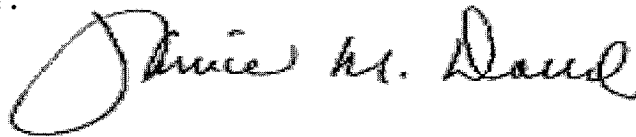
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C E R T I F I C A T E

I, the undersigned, a Registered Professional Reporter and Notary Public, do hereby certify that I acted as the Registered Professional Reporter in the foregoing matter at the time and place indicated herein; that I took in shorthand the proceedings had at said time and place; that said shorthand notes were reduced to typewriting under my supervision and direction, and that the foregoing pages are a full and correct transcript of the shorthand notes so taken; that said deposition was submitted to the witness for signature as requested and that any changes, if any, requested by the witness are attached hereto.

I further certify that I am neither attorney nor counsel for, or related to or employed by any of the parties in the foregoing matter, and further that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 18th day of September, 2024.



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and NOTARY PUBLIC

1 rsjohnson@fredlaw.com

2 September 18, 2024

3 RE: College Products Inc v. Intirion Corp

4 DEPOSITION OF: Dr. Emad Tanbour (# 6881842)

5 The above-referenced witness transcript is
6 available for read and sign.

7 Within the applicable timeframe, the witness
8 should read the testimony to verify its accuracy. If
9 there are any changes, the witness should note those
10 on the attached Errata Sheet.

11 The witness should sign and notarize the
12 attached Errata pages and return to Veritext at
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14 According to applicable rules or agreements, if
15 the witness fails to do so within the time allotted,
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18 Yours,

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Page 226

Intirion Corporation v. College Products, Inc.
ERRATA SHEET
EMAD Y. TANBOUR, PH.D. DEPOSITION

[illegible]

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct

Dated: 10/3/2024

s/Emad Y Tanbour
Emad Y. Tanbour, Ph.D.