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

PROVISUR TECHNOLOGIES, INC.,  
Petitioner,  
v.  
WEBER FOOD TECHNOLOGY GMBH,  
Patent Owner.

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Case IPR2024-00235  
Patent No. 8,529,321

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DEPOSITION OF CHARLES REINHOLTZ, Ph.D.  
November 15, 2024

Reported by: Jason T. Meadors, RPR, CRR, CRC

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**Provisur EX1036**  
**IPR2024-00235**  
**U.S. Patent No. 8,529,321**

1                   Pursuant to Notice and the Federal Rules of  
2 Civil Procedure, the deposition of CHARLES REINHOLTZ,  
3 Ph.D., taken by Petitioner, was held at  
4 717 17th Street, Suite 1400, Denver, Colorado, 80202,  
5 on Friday, November 15, 2024, at 9:00 a.m., before  
6 Jason T. Meadors, RPR, CRR, CRC, in the State of  
7 Colorado.

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1 APPEARANCES

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19

20 Also present: Graeme Gillespie

21

22

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Exhibit 4 Cognex In-Sight Manual 193

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10 Exhibit 1003 Declaration of John M. Collins, 16

Ph.D., in Support of Petition for

11 Inter Partes Review of U.S. Patent

12 No. 8,529,321

13 Exhibit 1004 US Patent No. 5,514,032 13

14 Exhibit 1005 US Patent No. 4,979,269 14

15 Exhibit 1006 US Patent No. 6,929,540 14

16 Exhibit 1007 US Patent No. 6,198,834 14

17 Exhibit 1018 US Patent No. 4,226,540 69

18 Exhibit 2007 Declaration of Professor Charles 13

19 Reinholtz, Ph.D. In Support of

20 Patent Owner's Response to

21 Inter Partes Review of U.S. Patent

22 No. 8,529,321

1                   MR. SHEELER: Good morning. I'm Keaton  
2 Sheeler from the law firm Wilkie Farr & Gallagher  
3 representing petitioner, Provisur. Also attending via  
4 Zoom is my colleague, Mitchell Feldhake, also from  
5 Wilkie Farr & Gallagher, also representing petitioner.

6                   Would patent owner like to make their  
7 appearances?

8                   MR. HART: Sure. Paul Hart with Erise IP for  
9 patent owner. Also here from Erise IP is Graeme  
10 Gillespie.

11                   CHARLES REINHOLTZ, Ph.D.,  
12 having been first duly sworn, testified as follows:

13                   EXAMINATION

14 BY MR. SHEELER:

15           Q     Good morning. Can you please state your name  
16 for the record?

17           A     Yes. Charles Frederick Reinholtz.

18           Q     And is there any reason you might not be able  
19 to provide full and truthful testimony today?

20           A     No.

21           Q     Do you understand that you're here today to  
22 provide testimony in connection with the proceeding at

1 the Patent Trial and Appeal Board, IPR Number  
2 2024-00235, regarding US Patent Number 8,529,321?

3 A Yes, I do.

4 Q And you understand that the IPR is between  
5 Weber Food Technology, GmbH, and Provisur Technologies,  
6 Inc.?

7 A Yes, I know there's been some back-and-forth  
8 about Textor or Weber, but I use those interchangeably.  
9 So that's my understanding.

10 Q Perfect. You've preempted my next question.

11 A Okay.

12 Q But if I refer to Weber Food Technology GmbH  
13 as Weber, you'll understand who I'm referring to?

14 A I think so, yes.

15 Q Okay. But also, there's been a name change  
16 in this proceeding as well. And if I refer to them as  
17 "patent owner," you'll understand who I'm referring to?

18 A Yes.

19 Q And if I refer to Provisur Technologies as  
20 "Provisur" or "petitioner," you'll understand who I'm  
21 referring to?

22 A Yes.

1           Q     Okay. Have you been asked to perform any  
2     work for Weber in relation to the parallel District  
3     Court proceeding regarding the '321 patent in the  
4     Western District of Missouri?

5           A     No.

6           Q     Okay. Have you read any briefs, materials,  
7     or other documents from that parallel proceeding?

8           A     Yes. There are, I think, a few documents  
9     that have been cited in this proceeding, and my  
10    recollection may not be completely clear. If you want  
11    more detail, I think we can find it in my declaration.

12                   But my recollection is that there were a  
13    couple of hearings regarding scheduling that were  
14    cited, I think, by both parties in the case. And  
15    perhaps a scheduling order for that case that was  
16    cited. So I think, of those three documents, I've  
17    reviewed, they were all brief, 10 pages or less, I  
18    think.

19           Q     Do you recall reading any expert declarations  
20    from that proceeding?

21           A     No.

22           Q     Did you speak with any experts from that

1 case?

2 A No.

3 Q Okay. Did you speak with any Weber employees  
4 in your preparation for today?

5 A No. Not in regard to this case. I did work  
6 on an earlier case with Weber, and I talked to  
7 employees. But that was 2020 time frame.

8 Q You're referring to the first litigation  
9 between Provisur and Weber, Provisur won?

10 A I don't know it by that. I know it's an  
11 earlier litigation.

12 Q Have you spoken with any Weber employees with  
13 respect to your involvement regarding the '321 patent?

14 A No.

15 Q Okay. How many times have you had your  
16 deposition taken before?

17 A I don't have an exact count. On the order of  
18 55 or 60.

19 Q Okay. How many times have you had your  
20 deposition taken in connection of litigation between  
21 Provisur and Weber?

22 A I don't have an exact count. I think four in

1 total.

2 Q Okay. And you're very familiar with the  
3 rules of deposition, I assume.

4 A I think so. It never hurts to review,  
5 though, if you would like to go over those.

6 Q I think that would be a good idea.

7 Today, I'll be asking questions. You'll be  
8 answering those questions. Please give verbal answers  
9 just so the record's accurate. Does that make sense?

10 A Yes.

11 Q Okay. If you don't understand my question,  
12 please ask for clarification. If you answer, I will  
13 assume you understood it. Is that fair?

14 A Yes.

15 Q Okay. Take a break whenever you'd like. I'd  
16 just ask that we finish any pending question before we  
17 do so. Regardless, we can take a break roughly every  
18 hour.

19 A Yes, that sounds good.

20 Q What did you do in preparation for today's  
21 deposition?

22 A I began working on responding to the IPR

1     sometime, I think, about August, mid-year somewhere. I  
2     think August, maybe a little earlier than that.

3                 So I consider everything that I've done  
4     leading up to today's preparation -- everything I've  
5     done with regard to the '321 patent is preparation for  
6     that. So of course, I read the declaration. I  
7     reviewed the patent. I reviewed the petition,  
8     Dr. Collins' declaration, and a number of other things.

9                 Q     You said you reviewed Dr. Collins'  
10    declaration. Do you believe you reviewed every exhibit  
11    cited in that declaration?

12                A     Yes. I, at least, opened every exhibit and  
13    looked at it. Some were more significant than others,  
14    so I spent more time with key references. But I looked  
15    at everything.

16                Q     And you believe you reviewed all the exhibits  
17    in their entirety?

18                A     I think so. Maybe the file history, I -- I  
19    didn't -- I certainly didn't read every word in the  
20    file history. There's a lot of redundancy in that. So  
21    that's one of the exhibits. So I may have skipped over  
22    some passages in that. Some things are redundant. But

1 I think I reviewed everything pretty thoroughly.

2 Q Okay. Did you review any of the briefs and  
3 papers in this proceeding, other than Dr. Collins', of  
4 course?

5 A Well, could you clarify what you mean by  
6 "briefs and papers"?

7 Q Did you review the petition or decision on  
8 institution?

9 A I reviewed the petition. I have not reviewed  
10 the institution decision.

11 Q Okay. And in preparation for today, did you  
12 meet with any attorneys?

13 A Yes. Again, I consider everything I've done  
14 to date preparation. But yesterday, I met with Paul  
15 Hart, who's with us this morning, for probably five  
16 hours or maybe six.

17 Q And beginning with what you consider your  
18 full preparation, did you meet with any attorneys other  
19 than yesterday? And for approximately how long?

20 MR. HART: Object to form.

21 A Again, and I consider the preparation as a  
22 continuum from when I started the case. And I did have

1 video meetings earlier in the case. Probably in  
2 August. I don't remember the details of those. But in  
3 the last few days, the last week, I've only met with  
4 Mr. Hart.

5 Q (By Mr. Sheeler) Approximately how many  
6 video preparation sessions did you have with attorneys  
7 in connection with this proceeding?

8 A The video preparation sessions is not the way  
9 I would describe those. These were discussions, and I  
10 don't remember the number. But I do think I probably  
11 had a couple of sessions where we discussed my opinions  
12 and reviewed material, probably in August. So it's  
13 been a long time.

14 Q Would you say you met with attorneys more  
15 than 10 times? Less than 10 times?

16 A I would say with respect to the '321  
17 proceeding, probably less than 10 times. But there may  
18 have been a two-minute phone call. I just haven't  
19 tallied those, so I don't know. Probably less than 10,  
20 though.

21 Q Okay. I see you have some documents in front  
22 of you. What are those?

1           A     I think I have five documents. I have my  
2     declaration. Not the exhibits to it, but the full copy  
3     of my declaration.

4           Q     Which I believe is Exhibit 2007 in this  
5     record, right?

6           A     That's correct, yes. EX 2007, and I have  
7     through page 62 with my signature dated 22 August 2024.

8           Q     Okay.

9           A     And then I have the patent that's at issue in  
10    this case. I'll refer to it, and I suspect you will as  
11    well. It's the '321 patent. I have a full copy of  
12    that.

13          Q     I believe -- withdraw. Continue, please.

14          A     And none of the other documents I have appear  
15    to be labeled with an exhibit number. I know they're  
16    exhibits to my report and Dr. Collins's report. But  
17    they don't bear their numbers.

18          Q     Maybe I can assist you with that. The next  
19    document you have, US Patent Number --

20          A     They are here. I'm sorry. Yeah. I'm just  
21    not paying attention. Yeah, they're at the bottom. So  
22    I have Exhibit 1004, which is the Young patent.

1           Q     And by the Young patent, you mean US Patent  
2     number 5,514,032?

3           A     Correct.

4           Q     Okay. Could you find the patent number and  
5     exhibit number for the remaining three documents you  
6     have there?

7           A     I can. Yeah. So I was looking -- when I  
8     made the comment that they don't bear exhibit numbers,  
9     I was looking at the '321 Patent, the Weber. And that  
10    one doesn't. But the other ones do.

11                So we just discussed Young.

12                Then we have Norrie, which is US Patent  
13    8,529 -- sorry. I'm looking at the wrong place. It's  
14    US patent -- start over -- US Patent number 4,979,269.  
15    Exhibit 1005.

16                And I have US Patent 6,929,540 to Johnson,  
17    et al. And that is Exhibit 1006.

18                And then I have US Patent 6,198,834 to Belk,  
19    B-e-l-k, et al. That is Exhibit 1007.

20           Q     Okay. And you're referring to the patent at  
21    issue here as the '321 Patent. If I do the same, I'll  
22    assume you understand what I'm referring to?

1           A     Yes.

2           Q     And if I refer to Exhibits 1004 through 1007  
3     by their inventor names or exhibit numbers, you'll  
4     understand what I'm referring to?

5           A     I should. If I don't, if I have any  
6     confusion, I'll ask you to clarify.

7           Q     Okay. Thank you. And are you familiar with  
8     the term, "person of ordinary skill in the art," or  
9     "POSA"?

10          A     Yes, I am. Yes.

11          Q     What's your understanding of a POSA?

12          A     A POSA is a person of skilled artisan at the  
13     time of the invention. So someone who would be  
14     generally familiar with the technology; not necessarily  
15     an expert, but someone of ordinary skill in the art.

16          Q     Okay. Did you apply a definition of POSA in  
17     this proceeding?

18          A     I did, yes.

19          Q     Okay. What was that definition? And feel  
20     free to refer to your report, if necessary.

21          A     (Examines a document.)

22          Q     Do you recall if you adopted or contested the

1 POSA definition offered by petitioner and used by the  
2 Board at the institution decision?

3 A I did adopt that. I did not contest it, and  
4 I applied that definition.

5 Q Just for clarity, I'm handing you now a copy  
6 of Exhibit 1003, which is the declaration of John  
7 Collins in Support of the Petition for Inter Partes  
8 Review of the '321 Patent. Go to page 15 of that,  
9 please.

10 A I'm there.

11 Q Okay. You see, it says, "Level of ordinary  
12 skill in the art"?

13 A I do.

14 Q In paragraph 42, there's a definition of a  
15 POSA, right?

16 A Yes.

17 Q And this is the definition of the POSA you  
18 applied.

19 A That's correct.

20 Q Okay. Great. You can put that to the side  
21 for now.

22 Would a POSA under that definition be capable

1 of making software changes to a food processing  
2 machine?

3 MR. HART: Object to form.

4 A I think it depends on the context. Perhaps,  
5 but I think I need more information about what kind of  
6 software changes, what software we were talking about  
7 changing.

8 Q (By Mr. Sheeler) Could you describe the  
9 invention disclosed by the '321 Patent?

10 MR. HART: Object to form.

11 A I provide a summary of the '321 Patent  
12 starting on page 12 of my declaration. And I'd be  
13 happy to read through that, but I think that is a very  
14 nice summary of the key aspects of the invention.

15 Q (By Mr. Sheeler) Sure. Could you read  
16 through the most pertinent portion, or summarize in  
17 your own words?

18 MR. HART: Object to form.

19 A (Examines an exhibit.) I think the pages  
20 that I cited, so it's paragraph -- starting on page 12,  
21 paragraph 24, 25, 26, those describe some of the key  
22 aspects that I -- especially those that I considered in

1 my analysis.

2 But of course, the patent is defined by the  
3 claims and the full specifications. So I'm reluctant  
4 to provide a very brief summary. I think this is a  
5 pretty concise summary of the '321 patent.

6 Q (By Mr. Sheeler) I understand that. I'm not  
7 asking for you to define the total scope of the patent.  
8 But just in layman's terms, if you could describe the  
9 invention to me.

10 MR. HART: Object to form.

11 A Well, it says here, starting in paragraph 24,  
12 The '321 patent presents a novel apparatus for  
13 separating at least a portion of a fat cover from a  
14 flesh component of a meat product in an automated  
15 process that overcomes many of the drawbacks of  
16 conventional systems with significantly lower economic  
17 effort. And that's just taken directly from the  
18 abstract of the patent.

19 And then there's a discussion about what the  
20 meat product comprises, some conventional techniques  
21 for trying to determine where the lean and fat  
22 separation line occurs on pro base systems. I think

1 all of that's important.

2 Q (By Mr. Sheeler) Okay. Would a POSA be  
3 capable of modifying the software, just generally, of  
4 an apparatus for separating a fat cover?

5 MR. HART: Object to form.

6 A I think it depends.

7 Q (By Mr. Sheeler) What does it depend on?

8 A It depends on the details of the software;  
9 how significant the changes are; how voluminous the  
10 software is; what language the software is written in;  
11 what access the engineer or the POSA has to the full  
12 scope of the software. So it depends on a lot of  
13 factors.

14 Q Do you qualify as a POSA under the  
15 definition?

16 A Yes.

17 Q Can you explain why you qualify as a POSA  
18 under the definition?

19 A Sure. Yeah. I have -- I have a mechanical  
20 engineer, Ph.D. -- bachelor's, master's, and Ph.D., in  
21 mechanical engineering. I've worked in the processing  
22 industry, a 40-plus year career, dealing with food

1 processing. But a number of other processes that use  
2 the kind of camera systems that are used in this, the  
3 kind of probes that are used in this art, the sensors,  
4 the kinds of control systems, and motors, the  
5 conveyors, the cutters. I've dealt with all of that  
6 through my career.

7 So I have many years of experience dealing  
8 directly with food processing and also with processes  
9 that are parallel to or overlap significantly with food  
10 processing -- the food processing industry.

11 Q Would you be capable of modifying the  
12 software of a fat separation apparatus to adjust its  
13 blades?

14 MR. HART: Object to form.

15 A It depends.

16 Q (By Mr. Sheeler) Okay. What information  
17 would you need to answer that question?

18 MR. HART: Object to form.

19 A Probably more information than -- I haven't  
20 considered this question. More information than I  
21 probably would, sitting here today, think of.

22 But certainly, the language that the software

1 is written in is -- is key. The -- what kind of a  
2 system, computer, for example, the software is executed  
3 on. Is it a microcontroller? Is it programmable logic  
4 controller? Is it a mainframe computer?

5 What access I would have to that software to  
6 be able to modify it? Would I have information about  
7 the -- the original authors of the software, author or  
8 authors of the software? How well commented the code  
9 is. I think there are a lot of factors that go into  
10 consideration of modifying code. And then, of course,  
11 there's a whole other side of what -- what is the  
12 modification that needs to be executed to the code.

13 And that's -- this is why your question is a  
14 very broad, undefined question. Could you change  
15 software. Well, you'd have to know what changes were  
16 planned to be made, what the algorithms were, how would  
17 those be implemented in software.

18 Q (By Mr. Sheeler) I understand. That makes  
19 sense.

20 Broadly, understanding it's broad, would a  
21 POSA be capable of a software change that modifies the  
22 functions?

1 MR. HART: Object to form.

2 A It depends.

3 Q (By Mr. Sheeler) Okay. Would it be beyond  
4 the skill of a POSA to modify the software of a fat  
5 separation apparatus?

6 MR. HART: Same objection.

7 A It depends.

8 Q (By Mr. Sheeler) Okay. Would it be beyond  
9 the skill of a POSA in all cases to modify the software  
10 of a fat separation apparatus?

11 MR. HART: Object to form.

12 A What are all the cases?

13 Q (By Mr. Sheeler) Any modification to the  
14 software.

15 MR. HART: Same objection.

16 A Again, it depends on the details.

17 Q (By Mr. Sheeler) Okay. Every modification  
18 requires details to know if a POSA could make it.

19 MR. HART: Is that a question? Sorry.

20 Q (By Mr. Sheeler) Does every modification  
21 require details to know whether it would be beyond the  
22 skill of a POSA?

1 MR. HART: Object to form.

2 A I suppose that, given that the POSA had  
3 access to writing the code, whatever language and --  
4 whatever access was needed. Do you -- does the POSA  
5 sit at a monitor and write lines of code by typing it?  
6 That's one common way to create code. But it's, of  
7 course, highly dependent on language.

8 And if the POSA -- the POSA may be a skilled  
9 programmer that doesn't know the language that the code  
10 was written in, and so could a POSA make a change? I  
11 suppose you could go in and change a comment, for  
12 example, or do something that makes the software  
13 dysfunctional.

14 But to do something meaningful, positive to  
15 the software, to make a change that would implement  
16 something, I think it completely depends on what that  
17 change is and what -- what kind of software and all the  
18 other factors that I've already talked about.

19 Q (By Mr. Sheeler) I understand. I'm not an  
20 engineer. I have no knowledge of code. I don't  
21 qualify as a POSA. So I just need to walk through what  
22 exactly are the boundaries of what would be within a

1 POSA's skill, according to your opinion.

2 Can you think of a positive functional change  
3 that would be within the scope of a POSA?

4 MR. HART: Object to form.

5 Q (By Mr. Sheeler) Or a neutral functional  
6 change that would be within the skill of a POSA?

7 MR. HART: Same objection.

8 A Again, it depends on the language the  
9 software is written in, the programmer's expertise or  
10 knowledge of that language. There are many -- as you  
11 know, there are many common languages to program and  
12 control machines.

13 There are various versions of the C  
14 programming language. There are older machines still  
15 have FORTRAN, BASIC, Pascal, running on them. There  
16 are versions of programmable logic controller code.  
17 And all of these are vastly different from one another.

18 So for a POSA to make a change to code  
19 requires -- any kind of a positive change requires the  
20 knowledge of -- of that particular language.

21 Q (By Mr. Sheeler) So you can't think of an  
22 example of a positive change that would be within the

1 scope of a POSA, sitting here today.

2 MR. HART: Object to form.

3 A It depends. Not without more information  
4 about what -- what we're talking about doing. You're  
5 asking a very broad question, and I can't say  
6 universally that a POSA could make a change to software  
7 in every case.

8 Q (By Mr. Sheeler) Not asking about every  
9 case. Could a POSA -- can you please give me an  
10 example of any change a POSA could make that would not  
11 be beyond a POSA's skill?

12 MR. HART: Object to form.

13 A Not without more information.

14 Q (By Mr. Sheeler) Okay. I recall you just  
15 testified about a POSA's capability depends upon the  
16 knowledge of the various languages.

17 Does the POSA definition that you adopted  
18 specify knowledge of specific languages as a  
19 requirement?

20 A No.

21 Q If a POSA was familiar with the programming  
22 language and had access to all the tools required to

1 program a machine, would a POSA be capable of  
2 reprogramming a fat trimming machine to change the  
3 position of the blade in any respect?

4 MR. HART: Object to form.

5 A I didn't understand a couple of words you  
6 said. I think you maybe said fat shearing machine?

7 Q (By Mr. Sheeler) Fat trimming machine.

8 A Fat trimming.

9 Q I'll restate the question.

10 If a POSA had knowledge of the programming  
11 language that a fat separation apparatus was using and  
12 had all the tools required to make modifications to the  
13 software, would a POSA be capable of modifying the  
14 software to change the blade position?

15 MR. HART: Object to form.

16 A To change the blade position. I think,  
17 again, it depends on the details.

18 Q (By Mr. Sheeler) Would it be beyond the  
19 skill of a POSA to program an image-sensing system to  
20 recognize the difference between fat and meat?

21 MR. HART: Object to form.

22 A Again, it depends a lot on the particular

1 tools being used. There are a number of image  
2 processing tools. And there are a number of different  
3 cameras and lighting techniques. And so a POSA would  
4 not necessarily be familiar with all of those systems.

5 They may generally understand that you could  
6 use a vision system to sense or detect the location of  
7 certain features in an object, but may not have the  
8 extensive background needed to do image -- image  
9 processing software. That can be pretty complicated.

10 Q (By Mr. Sheeler) Well, was it known in the  
11 art by the time of the '321 patent to program imaging  
12 systems to just recognize the difference between meat  
13 and fat?

14 A Yes, there are examples of systems that use  
15 optical imaging to discern the difference between meat  
16 and fat. At least, I think there are at least a few  
17 references that describe that. But the details become  
18 important, of course, and the kind of product that  
19 you're looking at; the kind of machine; the kind of  
20 camera that's being used. So there are a lot of  
21 details that would go into whether a POSA would  
22 actually be able to implement that.

1           Q     Sure. I appreciate the clarification, and I  
2     think we'll definitely look at some specific examples.  
3     But it was known in the art by the time of the '321  
4     patent to program image sensing systems to detect a  
5     difference between fat and meat.

6           MR. HART: Object to form.

7           A     I -- I think so. You're asking now a pretty  
8     particular question. Detect the difference between fat  
9     and meat is the premise of your question?

10          Q     (By Mr. Sheeler) That's right.

11          A     I'd have to think more about that and the  
12     references.

13          Q     Does Exhibit 1004, the Young patent, detect  
14     the difference between fat and meat?

15          A     I would have to review the reference again to  
16     see if there is any disclosure, that there's a  
17     detection between the difference. It does detect a fat  
18     and meat separation line.

19          Q     Okay. What about Exhibit 1005, the Norrie  
20     patent? Does that detect fat versus meat? And  
21     perhaps, if helpful, you can refer to Norrie claim 1.

22          A     (Examines an exhibit.) I don't think Norrie

1 explicitly says or uses the words that you used, the  
2 difference between fat and meat, but to sense -- Norrie  
3 does sense the thickness of a fat layer. And to do  
4 that, presumably, you have to be able to determine the  
5 difference.

6 I wouldn't just say detect. It's a -- more  
7 than just detecting. It's really detecting and  
8 processing information. But I think Norrie does --  
9 must have a foundation that allows for the discerning  
10 the difference between what's fat and what's meat.

11 Q Okay. So Norrie detects and processes the  
12 difference between fat and meat. Is that fair?

13 A I would say Norrie senses the -- takes an  
14 image of the -- or multiple images of the food product  
15 and can determine the difference between fat and meat.

16 Q Okay. So by the time of the '321 patent, it  
17 was known in the art to take an image or multiple  
18 images of a food product and determine the difference  
19 between fat and meat.

20 A I think that's a correct statement.

21 Q Okay. Let's talk about the field a little  
22 bit and your knowledge of it.

1           Before your involvement in the litigation  
2   between Provisur and Weber, had you ever heard of any  
3   of the parties: Weber, Provisur, Textor, or Formax?

4           A     I'm not certain of that. I think perhaps,  
5   but I don't have a clear recollection.

6           Q     Okay. Have you heard of the North American  
7   Meat Association or the American Meat Association?

8           A     I don't have a specific recollection.

9           Q     Okay. Do you believe the North American Meat  
10   Association is known in the field?

11           MR. HART: Object to form.

12           A     I just don't have an opinion on that.

13           Q     (By Mr. Sheeler) Okay. Do you know if any  
14   industry associations promulgate standards for food  
15   processing machines?

16           A     I haven't considered that as part of the  
17   proceedings that we're discussing today, but I do think  
18   there are standardizing organizations for this type of  
19   equipment. I don't recall the specific names of those.

20           Q     Okay. But you haven't considered any  
21   industry standards as a part of this proceeding?

22           A     I can't recall considering any. Of course,

1 I'm responding to the petition and to Dr. Collins. And  
2 I don't recall them talking about industry standards or  
3 relevant related to industry standards. If you could  
4 point me to something. I have considered his report or  
5 his declaration and the petition.

6 Q Okay. Before your involvement in this  
7 litigation, had you ever seen a meat processing  
8 skinning machine, or a skinner?

9 A And when you say before my involvement in  
10 this litigation, are you asking about this proceeding  
11 that we're talking about today?

12 Q Thank you for the clarifying question.

13 When I say, "before your involvement" in this  
14 proceeding, I meant before your involvement in any of  
15 the litigations between the parties, Provisur and  
16 Weber, had you ever seen a skinning machine or a  
17 skinner?

18 A I cannot recall specifically seeing one, but  
19 I have done a number of industry tours in my long  
20 career, and I may just not remember. So it's possible.  
21 But I don't have a specific recollection of that.

22 Q Do you have an understanding of what a

1 skinner is?

2 A I think the term probably speaks for itself.  
3 It's not a term that I recall using in this particular  
4 proceedings, but it may have come up and I just don't  
5 recall.

6 Q Okay. What is a skinner?

7 A Well, a skinner would imply -- again, I don't  
8 have the definition in front of me; I don't recall it  
9 being a term, a key term in this case. But a skinner  
10 would be a device that would remove skin or, in the  
11 case of a pig, the rind or the leather part of the  
12 animal.

13 So I think that's -- I think the term speaks  
14 for itself, but I don't have the definition in front of  
15 me. I don't think one's been offered in this case that  
16 I recall.

17 Q I think you're right. But generally, a  
18 skinner would be, in the case of a pig, a device that  
19 removes skin or rind?

20 A I suspect that's a correct definition. But,  
21 again, it hasn't been something that I've been asked to  
22 consider in this case.

1 Q Okay. What is rind?

2 A The rind is just the outer layer, the skin  
3 part, of the animal.

4 Q Okay. Have you ever seen a derinder?

5 A I can't recall.

6 Q What is a derinder?

7 A Again, it's not a term that I recall being at  
8 issue in this case, but from the term, I would  
9 understand it to be a machine that removes the rind  
10 from the meat or the fat --

11 Q Is a derinder --

12 A -- fat part of the animal.

13 Q Is a derinder different from a skinner?

14 A I don't know the answer to that. I don't  
15 think it's come up in the case. I haven't been asked  
16 to consider it.

17 Q Okay. Do you know if the '321 patent refers  
18 to a skinner or a derinder?

19 A I don't recall off the top of my head. The  
20 patent, of course, talks about the rind as part of the  
21 product.

22 Q Just sitting here today with the information

1    you've considered for your declaration, do you have any  
2    opinion on whether a skinner and a derinder are  
3    different?

4                   MR. HART: Object to form.

5           A     I just haven't considered that.

6           Q     (By Mr. Sheeler) So you have no opinion,  
7    sitting here today, just with the information you've  
8    looked at for your declaration, whether a skinner and a  
9    derinder are different.

10                  MR. HART: Object to form.

11           A     Well, they're two different terms. They  
12    sound like different things, so there are probably some  
13    fundamental differences, but I haven't been asked to  
14    consider that. It's not part of my opinion, that I  
15    recall.

16           Q     (By Mr. Sheeler) Okay. It's not part of  
17    your opinion whether a skinner and a derinder are  
18    different today.

19                  MR. HART: Object to form.

20           A     I don't think I've been asked to offer an  
21    opinion on that, and I can't recall anything that I've  
22    said about that.

1           Q     (By Mr. Sheeler) I understand. I'm not  
2 asking if you were asked to offer an opinion. I'm not  
3 an engineer. I just want to know if you have an  
4 opinion on whether the term "skinner" and the term  
5 "derinder" are different.

6                     MR. HART: Object to form.

7           Q     (By Mr. Sheeler) And if you have no opinion,  
8 please let me know.

9           A     I haven't -- I haven't formed an opinion on  
10 that. I don't think it's been an issue in the  
11 litigation, that I can recall.

12          Q     Okay. What about the term "defatter"?

13          A     Heard that term, yes.

14          Q     What is a defatter?

15          A     Generally, a defatter is a device that  
16 separates fat from meat product.

17          Q     Is a defatter different from a derinder?

18          A     There, I think -- again, I have not  
19 considered the derinding term or the skinning term. I  
20 don't think it's been part of the issues that have been  
21 raised in this case. But the -- once removed, the '321  
22 patent, I think has a pretty good explanation. It

1 says, Meat products essentially comprise three  
2 products, namely, rind, fat, and flesh: The pieces of  
3 meat to be processed or carved into these three  
4 components, depending on demand in the meat processing  
5 industry.

6 So you may take the fat and the rind off  
7 together, and that may be considered a defatting  
8 process. I think it probably would be. Or the rind  
9 may be taken off separately or the rind may be taken  
10 off after the rind-fat layer has been removed.

11 Q Does the '321 patent disclose a defatter,  
12 then?

13 A I think that's probably the -- one of the  
14 fields of invention that the examiner searched on.

15 Q Sorry. I don't think -- I don't think I  
16 understood that answer.

17 Does the '321 patent disclose a defatter?

18 A I think that is part of the field of the art  
19 of the '321 patent.

20 Q Okay. So, yes.

21 MR. HART: Object to form.

22 A I think the field of art includes defatters.

1    Whether the patent says -- this patent discloses a  
2    defatter, I can't recall those words. We could look  
3    through the full written description of the patent if  
4    you'd like to look for that.

5            Q    (By Mr. Sheeler) Sure. How about you look  
6    at column 3, line 64 through 67 of Exhibit 1001, the  
7    '321 patent.

8            A    (Examines an exhibit.) Okay. I think this  
9    is a nice description. It says, The apparatus shown in  
10   figure 1 includes a cutting device 10 for the  
11   separation of a fat cover from a flesh component of a  
12   meat product. Such a cutting device is also called a  
13   derinding machine or a defatting machine.

14           Q    Okay. So does the '321 patent disclose a  
15   defatter?

16                   MR. HART: Object to form.

17            A    I think the words speak for themselves. It's  
18   figure 1 is showing an embodiment of an invention that  
19   is a defatting machine.

20           Q    (By Mr. Sheeler) So it's your opinion the  
21   '321 patent discloses at least a defatting machine.

22                   MR. HART: Object to form.

1           A     (Examines an exhibit.) The patent talks  
2     about -- so the passage we just read, there's a  
3     discussion at the bottom of column 3 that you pointed  
4     me to that talks about the apparatus shown in figure 1.

5                     And it says, Such a cutting device 10 is also  
6     called a derinding machine or a defatting machine. And  
7     the cutting device 10 includes in a manner known per se  
8     a cutter bar not shown in the figure for the separation  
9     of fat cover.

10                    So I think it's pretty clear that this is a  
11     machine that's designed to take fat off of the meat  
12     product.

13           Q     (By Mr. Sheeler) Okay. That's helpful. But  
14     I think I just want to be sure about your opinion.

15                    So is your opinion the '321 patent discloses  
16     a defatting machine?

17                    MR. HART: Object to form.

18           Q     (By Mr. Sheeler) Or a defatter?

19                    MR. HART: Object to form.

20           A     I think it does disclose a defatting machine.  
21     It discloses some very particular features of a  
22     defatting machine and a particular process for using

1     that machine. But I do think it discloses a defatting  
2     machine.

3           Q     (By Mr. Sheeler) Is it your opinion that the  
4     '321 patent discloses a derinding machine or a  
5     derinder?

6           MR. HART: Object to form.

7           A     I think the patent speaks for itself. The  
8     device shown in figure 1, device 10, is called a  
9     derinding machine or a defatting machine.

10          Q     (By Mr. Sheeler) I appreciate that, but I  
11     want to know your opinion.

12                 Is it your opinion that the patent discloses  
13     a derinding machine or a derinder?

14          MR. HART: Object to form.

15          A     My opinion is that the statement is accurate  
16     that, figure 1 shows a derinding machine. That's an  
17     embodiment of the patent.

18          Q     (By Mr. Sheeler) So the statement is  
19     accurate. So you agree with the statement on column 3,  
20     line 64, of the '321 patent that it is also called a  
21     derinding machine or a defatting machine.

22          MR. HART: Object to form.

1           A     I have no reason to disagree with that.

2           Q     (By Mr. Sheeler) That statement says,  
3     Derinding machine or a defatting machine. Is there a  
4     difference between those terms, in your opinion?

5                     MR. HART: Object to form.

6           A     I don't think that has been at issue in this  
7     case. I haven't considered what, if any, difference  
8     may be interpreted in the art between derinding machine  
9     or defatting machine. So I don't have an opinion  
10    whether they're necessarily exactly the same thing.  
11    This is a general description of what kind of a machine  
12    this is. It's not definitional, in my opinion.

13          Q     (By Mr. Sheeler) Got it. So you have no  
14    opinion, sitting here today, whether a defatting  
15    machine and derinding machine are different.

16                     MR. HART: Object to form.

17          A     My opinion is that it has not been an issue  
18    in the case. I haven't had to consider that as part of  
19    my analysis. There may be some differences between  
20    them, but the machines we're talking about tend to take  
21    off fat and rind both.

22          Q     (By Mr. Sheeler) You have not considered,

1     today, whether or not a derinding machine and a  
2     defatting machine are different. And therefore, today,  
3     you do not have an opinion whether a derinding machine  
4     and a defatting machine are different, correct?

5                 MR. HART: Object to form.

6             A     Well, I -- no, that's not correct. Let's try  
7     that again.

8             Q     (By Mr. Sheeler) Do you have an opinion on  
9     whether they are different terms today, derinder and  
10    defatter?

11                MR. HART: Object to form.

12            A     I do not have an opinion on any differences  
13    there may be between derinding machine and a defatting  
14    machine. It has not been an issue that's been raised  
15    in this proceeding. And I haven't considered it. If  
16    there are differences, I don't -- I don't know the -- I  
17    don't know the definition as they're used in the  
18    industry of those two terms.

19            Q     (By Mr. Sheeler) Thank you. Before your  
20    involvement in any of the litigations between Provisur  
21    and Weber, had you ever seen a Weber skinner?

22            A     Perhaps. I don't have a specific

1 recollection of that.

2 Q Are you familiar today with any Weber  
3 skinners?

4 MR. HART: Object to form.

5 A It's not something I've considered, so, no,  
6 I'm not familiar with Weber skinners.

7 Q (By Mr. Sheeler) Are you familiar with a  
8 machine called the ASD 460?

9 A (Examines an exhibit.) Dr. Collins makes  
10 reference to a video and a brochure that are  
11 Exhibit 1010 and 1011 to his declaration. And I have  
12 reviewed the -- the brochure and watched the video. So  
13 to that extent, I have seen the operation of that  
14 machine in a video and I've read about it in a  
15 brochure.

16 I think that's probably the extent of my  
17 knowledge of that machine. It wasn't part of forming  
18 my opinion in the case. But I have seen the material  
19 that Dr. Collins refers to.

20 Q Understood. So it's your recollection that  
21 your knowledge of the ASD 460 is limited to those  
22 exhibits cited by Dr. Collins which you have

1 considered.

2 A I don't know that I would say limited. I may  
3 have seen this in person or in another context. I  
4 don't know for certain. But I definitely reviewed  
5 those two exhibits.

6 Q Are you familiar with Weber slicing machines,  
7 such as the weSLICE?

8 A I have seen those machines, I believe, in  
9 person, and I've considered them, I think, in past  
10 litigation between those parties. And again, it hasn't  
11 been part of anything that I've had to consider in  
12 forming my opinions in this proceeding.

13 Q Do you believe that the Weber weSLICE is a  
14 defatter or a derinder?

15 MR. HART: Object to form.

16 A I just don't have an opinion on that.

17 Q (By Mr. Sheeler) How would a POSA know  
18 whether a device qualifies as a defatter or a derinder?

19 MR. HART: Object to form.

20 A I think a POSA would study the device and  
21 understand the intent of the device. So, for example,  
22 the weSLICEr certainly can remove fat. Whether it

1 would be considered in any context a defatting machine,  
2 I haven't considered. I have -- you're presenting me  
3 with very abstract -- a situation of how would you know  
4 if something qualifies. I think you would study the  
5 information available around it.

6 Q (By Mr. Sheeler) I understand it's abstract.  
7 I'm trying to understand it myself. But the weSLICE  
8 does remove fat when it processes a meat product,  
9 correct?

10 MR. HART: Object to form. Lack of  
11 relevance.

12 A I just don't have a clear recollection.

13 Q (By Mr. Sheeler) Okay. Are you familiar  
14 with any other Weber slicers that you recall their  
15 operation clearly?

16 MR. HART: Object to form. Lack of  
17 relevance.

18 A Not that I would comment on today without  
19 more study. It hasn't been a part of this proceeding.  
20 I haven't considered it recently. I'd need more time  
21 to think about it and to review material.

22 Q (By Mr. Sheeler) But you did testify that

1 the weSLICE does remove fat when in operation.

2 A Well, maybe I said it in a way that wasn't  
3 clear. But it's a machine that can cut and remove  
4 material, right, and so some of that material certainly  
5 can be fat. Some of it can be meat. Every meat  
6 product has fat and lean intermixed together at some  
7 point.

8 So I think fundamentally, a machine that cuts  
9 a meat product is going to cut through fat and  
10 therefore separate one component of the meat from the  
11 other, from one part of the meat from another. So in  
12 that sense, it's definitely removing a part that has  
13 some fat in it from another part that may also have  
14 some fat in it. But it's a cutting machine.

15 Q Okay. I just want to make sure I understand  
16 the distinction, but I'm a little unclear.

17 But earlier, you used the word "intent." And  
18 you just testified that any machine that processes a  
19 meat product is going to cut through fat and therefore  
20 remove fat. Is that right?

21 MR. HART: Object to form.

22 A You lost me with the intent part of your

1 question.

2 Q (By Mr. Sheeler) I'll rephrase it.

3 Any machine that cuts a meat product will  
4 remove fat, correct?

5 MR. HART: Object to form.

6 A Well, it will separate -- if it cuts the meat  
7 into two or more pieces, both of those pieces will have  
8 a lean meat product and some fat in it. I don't think  
9 any piece of meat is completely free of fat. And so  
10 in -- as a part of this case, I haven't considered it  
11 as part of that proceeding.

12 But I think I can say generally, that's  
13 something that separates a piece of meat into two will  
14 be separating parts of fat and parts of lean from one  
15 another, and I think that's a broad statement that's  
16 probably universally true.

17 Q (By Mr. Sheeler) Okay. Thank you. I'm a  
18 little less confused.

19 But just because -- withdrawn.

20 Is every machine that separates a meat  
21 product into two a defatter because it's cutting  
22 through and separating fat?

1 MR. HART: Object to form. Lacks relevance.

2 I've been giving you a lot of leeway here. I  
3 have no idea how any of this is relevant to this case.  
4 If this is an attempt to seek testimony to use in the  
5 litigation proceeding that Dr. Reinholtz is not a part  
6 of, I'm going to shut that down. So if we can get  
7 quickly to the issues of this proceeding at this time,  
8 I would appreciate it.

9 MR. SHEELER: I think this is an issue.  
10 Dr. Reinholtz could not tell me what a defatter or a  
11 skinner was for 10 minutes. It is relevant. It's in  
12 the patent. It describes the specification. I need to  
13 know what these claims mean. I'm entitled to ask about  
14 them.

15 I appreciate and note your objection. You're  
16 free to move to exclude if you feel this is irrelevant.  
17 I'll ask you not to make speaking objections. But I  
18 appreciate that.

19 MR. HART: I'm trying to keep us on track  
20 here. He's testified multiple times that he has not  
21 defined those terms. He's not considered those terms.

22 You're asking about products that are

1 potentially at issue in the litigation -- I'm not  
2 sure -- that he has not considered as part of this  
3 case, asking him to define terms that are not in the  
4 claims and that he has not opined on in this case.

5           It does seem like a fishing expedition.  
6 Again, we've been going an hour. I've given you a lot  
7 of leeway. We haven't asked a single question that  
8 appears to be all that relevant in this case. So that  
9 is my concern here, that we're not going to spend all  
10 day seeking testimony relevant to a different  
11 proceeding that he's not prepared to talk about today.

12           MR. SHEELER: Counsel, looking at the  
13 real-time, I just asked him about whether the defatting  
14 machine, if it's separating fat. That's in claim 1 of  
15 the patent. And again, these speaking objections are  
16 improper. But I note. We can move on. I know we've  
17 been going about an hour. I have a few more questions  
18 and we can take a break.

19           MR. HART: Sounds good.

20           Q     (By Mr. Sheeler) Let's see. Were machines  
21 that had computer-controlled blades, defatting machines  
22 specifically, known at the time of the '321 patent?

1           A     What do you mean when you say,  
2     "computer-controlled blades"?

3           Q     The '321 patent teaches blades that are  
4     controlled by, I believe, a controller; is that  
5     correct?

6           A     I would say it this way: That the '321  
7     patent teaches movement of a blade under computer  
8     control.

9           Q     Okay. Did the '321 patent invent movement of  
10    a blade under computer control?

11          A     In a particular context, it did. But in  
12    general, machines were known that controlled the  
13    position. In some cases, one degree of freedom of  
14    blade movement. In other cases, multiple degrees of  
15    freedom of blade movement under computer control.

16          Q     Were computer-controlled -- was  
17    computer-controlled blade movement well-known at the  
18    time of the '321 patent?

19          A     It was in the prior art. Whether that makes  
20    it well-known, I'm not certain.

21          Q     When's the first time you can recall that a  
22    computer-controlled blade was available in the prior

1 art?

2 MR. HART: Object to form.

3 A I haven't considered that.

4 Q (By Mr. Sheeler) I'll withdraw the question.

5 You agree that computer-controlled blades  
6 were available in the prior art at the time of the '321  
7 patent.

8 A We have references such as Norrie that have  
9 very simplistic movement of a -- of a cutting blade  
10 under computer control. So it was definitely known.

11 Q Okay.

12 MR. SHEELER: Would now be an okay time for a  
13 break, Doctor?

14 THE WITNESS: Sure.

15 MR. SHEELER: Can we go off the record?

16 THE REPORTER: We're off the record.

17 (Recess 10:01 a.m. to 10:09 a.m.)

18 (Mr. Gillespie not present.)

19 THE REPORTER: We're on the record.

20 Q (By Mr. Sheeler) The '321 Patent discloses  
21 contact with imaging or contact with sensing. Is that  
22 correct?

1           A     I think broadly, that's correct. I'm not  
2     sure that that exact terminology is used. But even in  
3     the claims, there is a limitations. They talk about  
4     determining -- determination of the thickness of the  
5     fat cover takes place in a contactless manner.

6           Q     This might be a simple question. But what  
7     does it mean to contactlessly sense, determine or  
8     measure something?

9           A     The obvious answer, making a measurement  
10    without contacting the object or the product that is  
11    being measured.

12          Q     Were contactless imaging devices known at the  
13    time of the '321 Patent?

14          A     Broadly in -- yeah, in many fields, yes,  
15    contactless imaging was known.

16          Q     Was contactless imaging known in this field?

17          A     In the general field of the art of  
18    the '321 Patent, there are camera systems that are  
19    contactless systems that can be used to take certain  
20    types of measurements or discern different quality of  
21    product, yes.

22          Q     And by yes, you mean, those systems were

1 known at the time of the '321 Patent.

2 A I don't know how I could be clearer than what  
3 I just said.

4 Q I suppose I'm trying to just clean up my  
5 questions for the record.

6 A Okay.

7 Q Apologies if it's repetitive.

8 But in the field of the '321 Patent, at the  
9 time of the '321 Patent, contactless imaging or sensing  
10 systems were known.

11 A Yes. There were contactless imaging or  
12 sensing systems that were broadly known in the field  
13 for a number of different applications.

14 Q What is an LED?

15 A LED is shorthand for an acronym for  
16 light-emitting diode.

17 Q Are LEDs -- strike that. At the time of  
18 the '321 Patent, were LEDs well-known?

19 A Light-emitting diodes were known, broadly, at  
20 the time of the '321 Patent, yes.

21 Q At the time of the '321 Patent, was it known  
22 in the art to contactlessly measure the thickness of a

1 meat product or a width or length?

2 A Contactlessly measure the width, you said?

3 Q The thickness, width, or length of a meat  
4 product.

5 A I think it's fair to say that there were  
6 prior references that talked about contactless  
7 measurements, generally, of meat products.

8 Q Are there references that disclose the  
9 contactless measurements of thicknesses of meat  
10 products or thicknesses of pieces of meat products?

11 MR. HART: Object to form.

12 A I think that's a correct statement. I  
13 probably need to look at the specific references.  
14 It's, again, a general question, but I think there are  
15 a few prior art references that talk about taking  
16 dimensional measurements of meat or fat products using  
17 contactless sensors.

18 Q (By Mr. Sheeler) Could you please look at, I  
19 believe it's, claim 1 of Exhibit 1005, the Norrie  
20 patent?

21 Claim 1 reads, in part, column 5, line 20,  
22 Means for sensing the thickness of said back fat; is

1     that right?

2           A     It does say that, yes.

3           Q     So Norrie teaches the sensing of the  
4     thickness of fat.

5           A     I think that's correct. Here, it doesn't  
6     talk about contactless, but it does say means for  
7     sensing the thickness of said back fat.

8           Q     Is it your opinion that Norrie's means for  
9     sensing is not contactless?

10           MR. HART: Object to form.

11           A     This claim doesn't appear to require  
12     contactless sensing.

13           Q     (By Mr. Sheeler) Does that -- does claim 1  
14     of Exhibit 1005 to Norrie disclose contactless sensing?

15           MR. HART: Object to form.

16           A     (Examines an exhibit.)

17           Q     (By Mr. Sheeler) Maybe I can be helpful. If  
18     you look at column 3, line 51, of Norrie. I believe it  
19     describes Norrie's sensing means.

20           A     (Examines an exhibit.) Now, you have a  
21     question pending. And then a commentary to ask me to  
22     look at part of column 3 that doesn't seem helpful in

1     answering your question.

2           Q     Is it your understanding that claims are read  
3     in light of the specification?

4           A     Yes.  Of course.

5           Q     Does Norrie's specification teach contactless  
6     sensing?

7           A     I think it's correct to say that it does.  
8     But the claim that you referred me to, so going back to  
9     the original question that I think is still pending, I  
10    do not see in claim 1 a requirement for contactless  
11    sensing.  And I don't -- I don't limit the claim to  
12    simply the preferred embodiment or any particular  
13    disclosure.

14                So I don't know that claim 1 is limited to  
15    contactless sensing.  I don't read it that way at first  
16    blush.  But I probably need more time to think about  
17    it.

18           Q     Is it your opinion that claim 1 does not  
19    disclose contactless sensing?  I understand it's not  
20    limited to that.

21                MR. HART:  Object to form.

22           A     (Examines an exhibit.)  I do not think claim

1 1 discloses contactless sensing.

2 Q (By Mr. Sheeler) Why not?

3 A Perhaps you're seeing something I'm not.

4 It's a -- it's not a terribly long claim, but there are  
5 a lot of limitations here, and I don't see a limitation  
6 that says contactless sensing.

7 Q It's your opinion that Exhibit 1005, the  
8 Norrie patent, does not disclose contactless sensing  
9 because the word "contactless" does not appear in the  
10 claim.

11 MR. HART: Object to form.

12 A Yeah, that's incorrect.

13 Q (By Mr. Sheeler) Could you please explain  
14 why line 21, column 5, does not disclose contactless  
15 sensing?

16 MR. HART: Object to form.

17 A You're referring me to line 21 of column 5?

18 Q (By Mr. Sheeler) Spacing is slightly off.  
19 It could be line 20.

20 A Line 20 says, Means for sensing the thickness  
21 of said back fat. And then it's got hyphenated  
22 between, so BE is in that -- the line, I think you're

1 referring to. I don't see contactless in that claim.

2 Q Is it your understanding that contactless  
3 needs to be in this claim for contactless sensing to be  
4 taught by Norrie?

5 MR. HART: Object to form.

6 A No. Things can be taught generally in a  
7 patent that aren't necessarily claimed.

8 Q (By Mr. Sheeler) Okay. So does Norrie teach  
9 contactless sensing of the thickness of fat?

10 A (Examines an exhibit.) I think it's correct  
11 to say that Norrie does teach contactless sensing of  
12 the thickness of fat using a video camera.

13 Q Okay. When did Norrie issue?

14 A Norrie issued December 25th, Christmas Day,  
15 of 1990.

16 Q So contactless sensing of fat -- withdrawn.  
17 Contactless sensing of the thickness of fat  
18 has been known since at least December 25, 1990.

19 A I think that's a correct statement.

20 Q Okay.

21 A Not necessarily in the context, of course, of  
22 the '321 Patent, just to clarify.

1           Q     Thank you.

2                     You testified earlier you qualify as a POSA,  
3     correct?

4           A     Yes.

5           Q     Is a POSA -- when is the first time that you  
6     are aware of contactless sensors in this field of art?  
7     To the best of your recollection.

8           A     Well, I've known about contactless sensors  
9     for my entire career. They're not really dependent  
10    on -- they come in many forms. They're not really  
11    dependent, in most cases -- I can't give any case where  
12    they're dependent on a particular field of art.

13                    We have a wide variety of sensors and I've  
14    known about that can sense -- without contacting, and  
15    they've been available for 50 years or more.

16           Q     Is teaching of technology that's been  
17    available for 50 years or more well-known?

18                    MR. HART: Object to form.

19           A     I think it depends on what that teaching is,  
20    specifically.

21           Q     (By Mr. Sheeler) The teaching of contactless  
22    sensing? Is that well-known?

1           A     Well-known but also very broad. So how you  
2 go about doing that contactless sensing may not be  
3 well-known.

4           Q     Understood. Can you look back at  
5 Exhibit 1003, Dr. Collins' declaration. And if you  
6 could look at, I believe it's paragraph 44. Yes.  
7 Paragraph 44.

8           A     (Examines an exhibit.) Okay. I'm at the  
9 beginning of paragraph 44. It's a pretty long  
10 paragraph.

11          Q     Well, you previously reviewed this  
12 declaration in its entirety, right?

13          A     I did. But of course, I haven't memorized  
14 it. So I would need to review this again if you want  
15 to ask me specific questions, or I may need to review  
16 it again.

17          Q     Of course. We might get to that in a moment.  
18 And it's correct you testified earlier that you  
19 reviewed every reference cited by Dr. Collins in his  
20 declaration.

21          A     I believe that I did. Some, in much more  
22 depth than others, but I believe I looked at every

1 reference.

2 Q Could you please read paragraph 44? You  
3 don't need to read it into the record.

4 A (Examines an exhibit.) Okay. I've completed  
5 the paragraph 44.

6 Q Thank you. Do you see the second sentence of  
7 paragraph 44, Dating back to the '80s, food processing  
8 equipment used machines to automate the labor-intensive  
9 and difficult process of manual fat removal?

10 A I do see that.

11 Q Do you agree with that sentence?

12 A I haven't formed an opinion. I have not  
13 disagreed with that. I have not checked every date  
14 that may be in these citations to see if the 1980s is  
15 correct. But I have no -- sitting here today, I have  
16 no basis for disagreement with it.

17 Q Do you agree that fat separation machines and  
18 skimmers have been known since at least the '90s, like  
19 Exhibit 1005, Norrie?

20 MR. HART: Object to form.

21 A I think it's correct to say that in 1990,  
22 Norrie disclosed a apparatus for separating back fat

1 from loin.

2 Q (By Mr. Sheeler) Do you agree that manual  
3 fat cover removal was difficult and time-intensive?

4 A Those are relative terms. I think the art  
5 probably characterizes the fat removal as difficult and  
6 labor-intensive. But many operations are. So I don't  
7 ascribe any particular numerical value to the level of  
8 difficulty there. But I think it's a broad, very  
9 general, statement that I don't disagree with.

10 Q It is your opinion that automatic fat removal  
11 provides economic benefits, correct?

12 MR. HART: Object to form.

13 A It has the potential to, certainly.

14 Q (By Mr. Sheeler) Would you please look at  
15 paragraph -- sorry. One moment. Paragraph 99 of  
16 Dr. Collins' report. Do you see that Dr. Collins  
17 provided a chart of the elements of the '321 Patent  
18 that he believes Young discloses?

19 A (Examines an exhibit.) Could you ask that  
20 question again?

21 Q Do you see that Dr. Collins has provided a  
22 chart summarizing the elements of the '321 Patent that

1 he believes are disclosed by Young?

2 MR. HART: Object to form.

3 A I don't think this table is that specific.

4 He cites a very abbreviated portion of the claim

5 language and then cites to Young, where he thinks that

6 particular phrase may be supported.

7 Q (By Mr. Sheeler) You understand it is

8 Dr. Collins' opinion that Young discloses every element

9 of the relevant claims of the '321 Patent.

10 A I think that was his opinion when he wrote

11 this declaration. I'm not sure today that that would

12 be his opinion.

13 Q But you understand that's the opinion in this

14 declaration.

15 A That is the opinion he expressed in the

16 declaration. Correct.

17 Q Do you disagree that Young teaches every

18 element of the '321 Patent?

19 MR. HART: Object to form.

20 A Yes, I disagree.

21 Q (By Mr. Sheeler) Okay. What elements --

22 withdrawn.

1           In your opinion, what elements is Young  
2   missing or fails to teach from the '321 Patent?

3           MR. HART: Object to form.

4           A     I have -- so first of all, I'll start by  
5   saying I haven't considered every single limitation.  
6   I've focused on certain critical limitations that are  
7   clearly not disclosed in Young or any of the prior art.

8           And so on page 21 of my declaration, I begin  
9   a discussion of why Young doesn't anticipate or render  
10  obvious the claims of the '321 Patent.

11          Q     (By Mr. Sheeler) And in that opinion, what  
12  elements from the claims of the '321 Patent are missing  
13  from Young's teachings?

14          MR. HART: Object to form.

15          A     I've highlighted them here in bold on page  
16  21, in paragraph 37. So claim 1 of the '321 Patent  
17  recites a measurement device for automatic  
18  determination of the thickness of the fat cover. Young  
19  doesn't disclose or need for any reason to determine  
20  the thickness of the fat cover.

21                The claim goes on to require, wherein the  
22  determination of the thickness -- which was not done by

1 Young -- of the fat cover takes place in a contactless  
2 manner. The claim also requires a cutting device that  
3 is coupled to the measurement device for automatic  
4 separation of the fat cover from the flesh component in  
5 dependence on the thickness. Young doesn't do that  
6 because Young doesn't measure thickness.

7 And I'll try to be real careful here. I  
8 think there's a possibility when I say "in dependence,"  
9 it could be interpreted like Independence Day. It's  
10 two separate words. In dependence. That'll probably  
11 happen other times today.

12 And then further, it says, This cutting  
13 device is controlled by a control unit for control of  
14 the position of the cutting blade, again, in  
15 dependence -- in dependence on the thickness. Young  
16 doesn't do that.

17 Q So just to make sure I understood that. It's  
18 your opinion that Young doesn't disclose the  
19 determination of the thickness of the fat cover. Is  
20 that correct?

21 A Correct. I think that's probably now also  
22 Dr. Collins' opinion, so he states in his deposition.

1           Q     And it's also your opinion that Young doesn't  
2     disclose automatic separation of the fat cover in  
3     dependence on the thickness.

4           A     Correct. That's the second part of the claim  
5     that's not disclosed by Young, at least.

6           Q     Okay. Are there other parts of the claim you  
7     specifically believe Young does not teach?

8           A     I just read three of them. So it doesn't  
9     determine the thickness of fat cover. It doesn't have  
10    automatic separation of the fat from the flesh  
11    component in dependence on the thickness. And it  
12    doesn't have a control unit for control of the position  
13    of the cutting blade in dependence on the thickness.

14          Q     Okay. Thank you. That was helpful.

15                Does Young have a control unit?

16          A     Yes, I think it's fair to say Young has a  
17    control unit or a controller of some type.

18          Q     Okay. So that third limitation that you  
19    believe Young is missing, a control unit to control the  
20    position of the cutting blade in dependence on the  
21    thickness. The issue there is the in dependence of the  
22    thickness. You believe Young fails to disclose that.

1           A     I do, but I don't take the words of a  
2     limitation in isolation. So it doesn't have that full  
3     limitation. Doesn't practice that limitation or teach  
4     it.

5           Q     Does Young have a cutting blade?

6           A     Young does have a cutting blade, yes.

7           Q     Okay. We briefly talk about the '321 Patent  
8     in general. Did you consider and review its  
9     prosecution history?

10          A     I did.

11          Q     Okay. Did you consider the Christiansen  
12     reference that was cited by the examiner during  
13     prosecution?

14          A     I did review the Christiansen reference, yes.

15          Q     We discussed earlier that the '321 Patent  
16     refers to its apparatus as a derinding or a defatting  
17     machine, right?

18          A     At least in the reference to figure 1, yes.

19          Q     Can the teachings of the '321 Patent be used  
20     in other kinds of meat processing machines?

21                   MR. HART: Object to form.

22          A     I do not have -- I've not provided an opinion

1 on that. I haven't thought about it. I don't -- in  
2 the current moment, I don't have an opinion that it  
3 can't be applied somewhere else. But I -- I really  
4 haven't considered that.

5 Q (By Mr. Sheeler) Okay. One of the  
6 limitations you believe is missing is the determination  
7 of the thickness of the fat cover, right?

8 A Yes. Young does not teach the determination  
9 of the thickness of the fat cover, correct.

10 Q What is the thickness of the fat cover?

11 MR. HART: Object to form.

12 A It would be a measurement, a dimensional  
13 measurement, in inches or centimeters or millimeters  
14 that would be descriptive of the distance from the -- a  
15 lean portion through the fat portion to the edge of the  
16 fat.

17 Q (By Mr. Sheeler) Okay. The '321 Patent,  
18 column 1, line 20, beginning with, It is necessary,  
19 through line 21, the end of that same sentence.

20 A Where are you starting me? Sorry.

21 Q Column 1, line 20, starting with, It is  
22 necessary.

1           A     Okay. (Examines an exhibit.) Okay. I'm  
2     with you.

3           Q     So in that example, the thickness is the  
4     height of the fat cover that's being measured.

5           A     Here, it's talking about the size or the  
6     height. Those are both pretty general terms, but yes.

7           Q     What does it mean to determine the thickness?

8           A     To determine the thickness would -- it would  
9     be required to have a dimensional measurement of that  
10    that was produced by the processing system. So some  
11    kind of a sensor, in this case, the patent's talking  
12    about a prior art that uses probes, but something that  
13    would determine a dimensional measurement of a  
14    thickness or a height.

15          Q     If a device doesn't calculate thickness but  
16    takes measurements that can be used to calculate  
17    thickness, would that fall under the claims of  
18    the '321 Patent?

19               MR. HART: Object to form.

20          A     Could you repeat that question? I'd like to  
21    have it again.

22          Q     (By Mr. Sheeler) If a device doesn't

1 calculate thickness but it takes measurements that can  
2 be used to calculate thickness, would that fall under  
3 the claims of the '321 Patent?

4 A If it doesn't determine the thickness, I  
5 don't think it falls under any of the claims of  
6 the '321 Patent.

7 Q If a device measures a fat/meat ratio on a  
8 meat product, does that teach the claims of  
9 the '321 Patent?

10 MR. HART: Object to form. Relevance.

11 A If it just does that, no, clearly not.

12 Q (By Mr. Sheeler) Okay. So I am handing you  
13 what's previously marked in this proceeding as  
14 Exhibit 1018. It is a patent of Barten, to Barten,  
15 B-a-r-t-e-n, US Patent number 4,226,540.

16 Please look at column 3, line 63, of Barten.

17 A Column 3. What line?

18 Q Line 63.

19 I'll withdraw that question for a moment. Do  
20 you recall this patent?

21 A I do, yes.

22 Q Did you review this patent?

1           A     I did, yes.

2           Q     Did you review it yesterday?

3           A     No.

4           Q     Now let's look at column 3, line 63.

5                     Do you see how that column says, With the  
6 different features of quality which are to be  
7 determined by means of the invention, for example, with  
8 analysis of a swine half, preferred importance is  
9 attributed to the so-called meat/fat ratio.

10          A     I do see that.

11          Q     Is it your opinion that Barten teaches  
12 determination of the thickness of the fat cover?

13                     MR. HART: Object to form. Relevance.

14          A     It's certainly not in that passage. I'd have  
15 to review Barten again. I just don't recall opining on  
16 this or Dr. Collins opining on that question. So I  
17 haven't considered it.

18          Q     (By Mr. Sheeler) Can you describe,  
19 generally, the invention of Barten?

20                     MR. HART: Object to form.

21          A     I think the best way to do that is to review  
22 the abstract, and the abstract says, A method and

1 apparatus is disclosed for the contact-free  
2 determination of features of quality of a test object  
3 selected from meat products. And then it goes on to  
4 talk about certain embodiments.

5 So it's clearly looking at quality of some  
6 subset of meat products, test objects that are selected  
7 from meat objects or meat products.

8 Q (By Mr. Sheeler) So it's contactlessly  
9 making determinations about some set of qualities of  
10 meat products, is the general invention of Barten.

11 MR. HART: Object to form.

12 A You used the word "said." I'd stick with the  
13 words that are here. Determination of features of  
14 quality of a test object selected from meat products.

15 Q (By Mr. Sheeler) Could you read the last  
16 sentence of the abstract?

17 A Okay. I've read it.

18 Q That sentence reads, With the method and  
19 apparatus disclosed, quality features such as the fresh  
20 condition, color, and meat/fat ratio of the meat may be  
21 determined.

22 Is it your opinion Barten discloses the

1 determination of the meat/fat ratio?

2 MR. HART: Object to form. Relevance.

3 A That's -- determine. . . determination of  
4 meat/fat ratio is one of the examples in this sentence  
5 of the quality features of meat. So I think it's  
6 disclosed.

7 Q (By Mr. Sheeler) Do you think that Barten  
8 discloses determining the meat/fat ratio of meat?

9 A (Examines an exhibit.) I don't recall Barten  
10 that clearly to be able to say something that specific.  
11 I think the abstract tells us that Barten is  
12 determining quality features. And meat/fat ratio is  
13 one of those quality features.

14 Q Okay. So to summarize, your opinion is that  
15 Barten teaches determining quality features such as  
16 meat/fat ratio.

17 MR. HART: Object to form.

18 A Correct. Now, what Barten means by quality  
19 features, I will have to review further and see just  
20 how the meat-fat ratio plays into that quality feature  
21 term.

22 Q (By Mr. Sheeler) And would the determination

1 of meat/fat ratio teach the determination of the  
2 thickness of the fat cover?

3 MR. HART: Object to form. Relevance.

4 A I don't see how you determine a thickness,  
5 based on the -- on the fat ratio.

6 Q (By Mr. Sheeler) Okay. You can put that  
7 aside.

8 Turn back to the '321 Patent itself. Does  
9 the '321 Patent disclose sensor or imaging devices that  
10 can measure the interior of the fat cover?

11 MR. HART: Object to form.

12 A It's a broad question. I can say that the --  
13 there's a discussion of the prior art that uses probes  
14 to sense interior -- at least changes in meat to fat or  
15 fat to meat as the probe is inserted through the --  
16 through the layer of fat.

17 Q (By Mr. Sheeler) Looking at claim 1, does  
18 claim 1 require sensor or imaging devices that can  
19 measure the interior of the fat cover?

20 MR. HART: Object to form.

21 A (Examines an exhibit.) I do not see the word  
22 "interior" in the claim. So I would not say the claim

1 is limited to measuring interior.

2 Q (By Mr. Sheeler) Is it your opinion -- I'll  
3 strike that.

4 It's your opinion claim 1 of the '321 Patent  
5 doesn't require measuring the interior of the fat  
6 cover.

7 MR. HART: Object to form.

8 A I'm not quite sure what you mean by  
9 "interior." It has to determine -- it requires the  
10 determination of the thickness of the fat cover. And  
11 so the edge of the fat is -- may be viewed on the face  
12 of the meat. But it's determining something that is  
13 away from the, say, the face of the meat. I don't  
14 consider that to be interior, necessarily.

15 Q (By Mr. Sheeler) You don't consider that to  
16 be interior. So it's your opinion the '321 Patent  
17 doesn't require the determination of the interior -- or  
18 of the thickness of the interior of the fat cover.

19 MR. HART: Object to form.

20 A So the meat product is a three-dimensional  
21 artifact that has an exterior surface and interior  
22 surfaces that can -- or interior portions that can be

1 examined, for example, by probes. But I don't think  
2 that is required in the claims of the '321 Patent. No  
3 interior measurement is required.

4 Q (By Mr. Sheeler) Thank you. Claim 1 of  
5 the '321 Patent also says, wherein, at least one travel  
6 profile is stored in the control unit. Is that  
7 correct?

8 A Yes, that's correct.

9 Q What is a travel profile?

10 A I haven't opined on that or formed an opinion  
11 regarding what the construction of travel profile  
12 should be. It wasn't part of my analysis.

13 Q Sorry if I wasn't clear. I'm not asking  
14 about the construction. Travel profile is a required  
15 element of the '321 Patent; is that right?

16 A It is. Yes.

17 Q So we need to know what a travel profile is  
18 to determine whether Young and Norrie, for example,  
19 teach the '321 Patent's teaching; is that right?

20 A No. Because we can see that Young doesn't  
21 determine the thickness of the fat layer. So  
22 therefore, Young does not teach the limitations

1 required in the '321 Patent. Whether the travel  
2 profile was practiced or not, I haven't disputed that.  
3 Dr. Collins and petitioners believe that it is. I  
4 haven't disputed it, but I haven't considered it.

5 Q Okay. Is it true for all four of the  
6 references by the petitioner, Exhibits 1001 through --  
7 I'm sorry, 1004 through 1007, Young, Norrie, Johnson,  
8 Belk, you haven't considered or disputed whether they  
9 disclose a travel profile?

10 A I don't think they all do disclose a travel  
11 profile. But I haven't disputed it. I don't think  
12 that Dr. Collins has claimed, for example, that Belk  
13 teaches a travel profile. So I don't know that that's  
14 been an issue in the case.

15 Q Do you dispute that Norrie teaches a travel  
16 profile?

17 A No, again, I haven't provided any opinion on  
18 that, so I haven't disputed it nor have I tried to  
19 determine that it does.

20 Q Have you provided an opinion or disputed that  
21 Johnson teaches a travel profile?

22 A No, I haven't disputed it, and I haven't --

1 haven't provided an opinion that it does or doesn't  
2 teach a travel profile. I haven't disputed it.

3 Q So you have no opinion what a travel profile  
4 is.

5 A I haven't had to form an opinion or try to  
6 provide a construction for the meaning of travel  
7 profile.

8 Q And again, I'm not asking for a construction.  
9 Its meaning is understood by a POA as to its ordinary  
10 meaning. Have you formed an opinion as to the ordinary  
11 meaning?

12 MR. HART: Object to form. Mischaracterizes.

13 A I have not considered the travel profile as  
14 part of my analysis.

15 Q (By Mr. Sheeler) Okay. Thank you. Are meat  
16 products irregularly shaped?

17 A That's, again, a very broad question. In  
18 some cases, yes.

19 Q Why do you say "in some cases"? Are they  
20 regularly shaped in some cases?

21 A Well, a can of Spam is a meat product and  
22 it's pretty regularly shaped. So you've asked a very

1 broad, open-ended question. I don't know what you're  
2 looking for, but meat products are pretty broad. Some  
3 have a regular shape, depending on how they've been  
4 formed, for example.

5 Q What kind of meat product would be typically  
6 processed by a machine performing the teachings of  
7 the '321 Patent?

8 A (Examines an exhibit.) I think any meat  
9 product that falls within the broad description,  
10 potentially, could fall within the '321 Patent. So  
11 meat products that include rind, fat, and flesh. I  
12 think a lot of the examples that we see in the art talk  
13 about a side of pork, pig. But I don't necessarily  
14 think the '321 Patent is limited to that. It seems  
15 broader.

16 Q Okay. Let's just set an example. Are sides  
17 of pork irregularly shaped?

18 A Yes.

19 Q Okay. Sides are pork vary from pig to pig,  
20 right?

21 A Yes. Well, dimensionally, there are -- no  
22 two animals are identical, so they'll have different

1 thicknesses of fat layers. They'll have different  
2 overall dimensions. I think maybe even a different  
3 number of ribs in some cases.

4 Q And the distribution or contour of the fat on  
5 a pig side would vary.

6 A I think that is a very broad but accurate  
7 statement.

8 Q Okay. Looking at claim 1 one more time, I  
9 believe, the '321 Patent, it has a limitation reading,  
10 A cutting blade whose position is variable relative to  
11 a product support. Do you see that?

12 A I do.

13 Q What is a product support?

14 A I haven't formed an opinion on product  
15 support. But I think, broadly, we can see product  
16 supports on maybe conveyors that are flat or curved, or  
17 it could be a platen that carries the product along.  
18 So I think there are a number of examples of product  
19 supports. I don't think -- I haven't disputed or  
20 formed an opinion on product support.

21 Q You don't dispute that at least Young,  
22 Norrie, and Johnson teach a product support.

1           A     I think it's correct to say that those three  
2 references teach a product support.

3           Q     What does it mean in that limitation when it  
4 says, A cutting blade whose position is variable  
5 relative to a product support?

6           A     A cutting blade is the component that  
7 separates portions of the product, maybe fat, from lean  
8 or maybe through some layer of the fat. So it would  
9 be, I think, commonly understood, a term that may be  
10 curved or acute or straight. The claim doesn't limit  
11 that. It clearly has to have a cutting edge.

12                     And variable positions or variable means that  
13 the position of the blade can change relative to the  
14 product support. So that may mean the product support  
15 can be moved or the blade can be moved, but there has  
16 to be an ability to change the relative position of the  
17 product support and the blade.

18           Q     Does it need -- strike that.

19                     To meet the limitation, the cutting blade  
20 whose position is variable relative through product  
21 support, is that limitation met by a blade that does  
22 not vary during operation but varies before operation?

1 MR. HART: Object to form.

2 A I need more time to consider that. I haven't  
3 thought through that.

4 Q (By Mr. Sheeler) What information would you  
5 need?

6 A I'd need time to consider it.

7 Q Just using your expertise as a POSA, looking  
8 at that term, as you sit here today, is it your  
9 understanding that a blade that varies before operation  
10 but not during operation would meet that limitation?

11 MR. HART: Object to form.

12 A Yeah, I'm just not prepared to provide an  
13 opinion on the fly. I'd need more time to think about  
14 it.

15 Q (By Mr. Sheeler) How much time do you think  
16 you would need to form an opinion on that question?

17 A I don't know the answer to that. But I'd  
18 like time to consider it and think about it. I would  
19 probably not think about it in one session. Usually, I  
20 don't form my opinions in one burst.

21 I usually review material and think about how  
22 a claim is interpreted in light of the full

1 specification and the drawings and the teachings of the  
2 patent and the intrinsic record of the patent.

3 And I think you know the file history is  
4 pretty long here. So it probably would take me a while  
5 to think through that.

6 Q Okay. Do you see that claim 2 reads, The  
7 apparatus of claim 1 wherein the determination of the  
8 thickness of the fat cover takes place optically.

9 A I do.

10 Q Earlier, you testified that the '321 Patent  
11 did not invent contactless determination or sensing.

12 Was contactless optical determination or  
13 sensing known at the time of the '321 Patent?

14 A That's a pretty long question.

15 Q It is.

16 A And maybe, could you break that into parts?

17 Q Sure.

18 A And attack it in pieces.

19 Q Was optical determination or sensing known at  
20 the time of the '321 Patent?

21 A Broadly, yes.

22 Q Was contactless optical determination or

1 sensing known at the time of the '321 Patent?

2 A Yes.

3 Q Okay. Claim 3 reads, The apparatus of claim  
4 1 further comprising a light detector for the detection  
5 of light reflected at the meat product. Do you see  
6 that?

7 A I do.

8 Q Were light detectors known at the time of  
9 the '321 Patent?

10 A Yes. Broadly, light detectors were known.

11 Q Would a POSA have been aware of a light  
12 detector at the time of the '321 Patent?

13 A I think a POSA would have generally been  
14 aware that light detectors or a type of sensor that can  
15 be used to detect a number of different properties or  
16 qualities, maybe not in the context of the patent, but  
17 certainly, broadly, it was known.

18 Q At the time of the '321 Patent, would a POSA  
19 have been aware of optical sensing or determination?

20 A Again, this is a very broad question that,  
21 yes, people with skill in the art -- a person of skill  
22 in the art in this field would be aware of different

1 kinds of optical noncontact sensors.

2 Q Would a POSA at the time of the '321 Patent  
3 been aware of cameras?

4 A Everybody would have been aware of cameras.

5 Q That's a very fair answer.

6 Would a POSA have been aware of cameras used  
7 to detect the thickness of a fat cover?

8 A I think the example we have that describes, I  
9 think, generally, what you're talking about is Norrie.  
10 Very simplistic device. But Norrie does talk about  
11 detecting the thickness of a fat cover, and I may be  
12 paraphrasing Norrie, but broadly, I think it's using an  
13 optical sensor to determine the thickness.

14 Q Would a POSA designing a defatter or a  
15 derinder want to be able to determine the thickness of  
16 the fat cover?

17 MR. HART: Object to form.

18 A No, not necessarily.

19 Q (By Mr. Sheeler) If you look at the  
20 '321 Patent, column 1, line 18.

21 A Yes.

22 Q Line 18 through 20 reads, To be able to

1     separate the rind and the fat, i.e., the fat cover from  
2     the flesh component of a meat product and automated  
3     process, it is necessary to know the thickness of the  
4     fat cover.

5                 So is it your opinion, when designing a  
6     derinder, that a POSA would not want to know the  
7     thickness of the fat cover?

8                 MR. HART: Object to form.

9                 A     The '321 Patent, in this statement, clearly,  
10    Young does not detect the thickness of a fat cover.  
11    And yet is able to perform a fat, rind separation from  
12    the meat. This statement is in the context, I think,  
13    of the prior art of record here that the patent is  
14    talking about pro-based devices.

15                So clearly, it's not generally true that you  
16    have to determine the thickness to be able to do the  
17    defatting operation.

18                Q     (By Mr. Sheeler) In at least some cases when  
19    designing a derinder, a POSA would want to know the  
20    thickness of the fat cover?

21                A     I think it depends on the process.

22                Q     Okay. Claim 1 in the second-to-last and very

1 last line discusses a product feed. What is a product  
2 feed?

3 A (Examines an exhibit.) Again, I haven't been  
4 asked to provide an opinion on this limitation, so I  
5 haven't formed an opinion. But broadly, I can say that  
6 a product feed is the device that moves the food  
7 product or the meat product relative to other  
8 components in the machine. So it's a relative feed  
9 motion of the meat product.

10 Q Could a conveyor be a product feed?

11 A As long as it's moving the product relative  
12 to, for example, the cutting blade. Then, yes. But it  
13 may be that the cutting blade moves relative to the  
14 product. I still think that could satisfy the product  
15 feed. I don't know. I'd have to think more about it.  
16 I haven't formed an opinion or made a comment about  
17 this limitation.

18 Q Generally, were product feeds known at the  
19 time of the '321 Patent?

20 A Yes.

21 Q Would a POSA be aware of a product feed at  
22 the time of the '321 Patent?

1           A     Yes, of course.

2                   MR. SHEELER: I think we've been going for  
3 roughly an hour. Is this a good time for a break?  
4 Keep going? Up to you.

5           THE WITNESS: Take a break?

6           MR. SHEELER: Can we go off the record?

7           THE REPORTER: We're off the record.

8                   (Recess from 11:12 a.m. to 11:20 a.m.)

9           THE REPORTER: We're back on the record.

10          Q     (By Mr. Sheeler) Back, Dr. Reinholtz.

11                   Would you please look at your report, still  
12 on paragraph 24. And the report is marked  
13 Exhibit 2007, just for the record.

14          A     Okay. I'm there.

15          Q     Okay. Paragraphs 24 and 25, you discuss some  
16 of the benefits taught by the '321 Patent; is that  
17 right?

18          A     (Examines an exhibit.) I think that's a fair  
19 statement. At least in paragraph 24. It's really more  
20 focused on the disadvantages of the prior art system.  
21 But a benefit of the '321 Patent is not sticking probes  
22 into the meat product.

1           Q     The '321 Patent benefits by removing some  
2     disadvantages. Is that fair?

3           A     I think that's correct.

4           Q     Okay.

5           A     In part.

6           Q     And in paragraph 24, on the third and fourth  
7     line, you state that, The '321 Patent's teachings  
8     overcomes many of the drawbacks of conventional systems  
9     with significantly lower economic effort; is that  
10    right?

11          A     Correct.

12          Q     What does lower economic effort mean?

13          A     It's a quote from the abstract of the patent,  
14    and I think it's a way to say that it can be  
15    implemented at low cost. The invention of  
16    the '321 Patent can be implemented at low cost relative  
17    to some of the conventional systems that are cited.

18          Q     It's your opinion that the '321 Patent can be  
19    implemented at lower costs compared to previous  
20    systems?

21          A     I haven't looked at all previous systems. I  
22    take at face value what the patent teaches, and that's

1 that compared to conventional systems that have  
2 drawbacks, that this overcomes a number of those. And  
3 I interpret significantly lower economic effort to  
4 simply mean a relative lower economic cost.

5 Q Okay. What factors would a POSA understand  
6 would influence cost?

7 I should be clear. I suppose I'm talking at  
8 this moment a cost of the apparatus itself and not the  
9 cost of the end product.

10 A Okay. That -- so it's a very broad question,  
11 again. It would be hard to separate out the benefits  
12 due to the cost of the apparatus or being a lower cost  
13 compared to the overall cost of the process and  
14 subsequent processes.

15 And so many things -- many, many things  
16 factor into that. The cost of labor. The cost of  
17 components that go into the machine itself. The  
18 maintenance costs of the machine. The stoppage time,  
19 for example, if there's a window that a camera has to  
20 look through and it becomes soiled and the camera can't  
21 see clearly, that could be some downtime for the  
22 machine.

1           In these machines, cleaning is a  
2   significant -- and sanitation and safety are  
3   significant factors that play into the cost as well.  
4   So there can be things like lawsuits that end up  
5   costing a company a lot of money because a machine was  
6   more difficult to clean. So there are just too many  
7   factors. I'm sure I'm just brushing the surface.

8           Q     But just to make sure I understand all that,  
9   a POSA would care about sanitation and safety, stoppage  
10  time, and costs of components? Is that fair?

11          A     Yes. And many other things. Cost of labor.  
12  Cost of installation. The life -- the life return on  
13  investment of a machine or a sub component of a  
14  machine. Lots of factors play in.

15          Q     Would a POSA care about throughput?

16          A     Yes.

17          Q     How does the '321 Patent facilitate having  
18  lower economic effort, in your view?

19          A     It could in many ways. It's a -- it's a  
20  simple overall system with relatively -- compared to,  
21  for example, compared to Young, relatively fewer  
22  components and relatively lower complexity. So the

1 cost of the machine and the sensors are probably less.

2 We don't have all the data. These are not  
3 devices. These are patents and how they're practiced  
4 will affect the overall cost. But compared to, for  
5 example, Young, Weber -- the '321 Patent teaches a  
6 relatively simple, efficient process.

7 Q Not in all cases, there are many different  
8 factors. But it is your opinion that generally, fewer  
9 components and lower complexity reduces the cost of a  
10 machine.

11 A I think as a trend, that's certainly true.  
12 But there are many exceptions to that.

13 Q Okay.

14 A One very expensive component or something  
15 that needs to be handled in a particular way using  
16 radioactive material, may complicate the -- it's a  
17 component of the machine, perhaps, but it may  
18 complicate the operation and handling of the machine.

19 Q You mentioned sanitation as something a POSA  
20 would consider. Is that the same or different as  
21 hygiene?

22 A Well, they're certainly related. I would put

1 it all under the umbrella of safety. And safety goes  
2 to -- and it's always the most important consideration.  
3 It's safety of the people operating and maintaining the  
4 machine. It's the safety of the consumers that consume  
5 the products. And it even goes beyond that. So I  
6 always think about that as the highest overall  
7 priority.

8 Q And safety of the consumers is primarily  
9 sanitation and hygiene and -- withdrawn. Let me try to  
10 rephrase that.

11 For safety of the consumer, sanitation and  
12 hygiene are important considerations. Is that fair?

13 A Yes, certainly.

14 Q Is there anything else that would contribute  
15 to the safety of the consumer?

16 A Yes.

17 Q Okay.

18 A It's as simple as thinking about giving a two  
19 year old a hot dog, right, the shape of the product,  
20 everything is a concern, right? So how a typical  
21 consumer might use a product -- and I'm talking at a  
22 very high level.

1           In general, when we design products or  
2 processes, it's incumbent on the designers to think  
3 about, to the extent possible, every possible outcome  
4 of the -- of the product they're producing.

5           And that could be a listeria or it could be  
6 the shape of the product lends itself to a child  
7 choking on it. So there's more to it than that, but  
8 those are some examples.

9           Q     When designing a machine, a POSA would want a  
10 machine to be safe, meaning at least hygienic,  
11 sanitary, and not dangerous to the consumer? Is that  
12 fair?

13          A     Well, the machine itself may present a danger  
14 to a consumer in the sense that if a part fell off and  
15 got into the product, I guess you could consider that a  
16 machine failure that directly related to consumer  
17 safety. It tends to be the machine more -- we're more  
18 concerned -- the larger concerns or the greater number  
19 of concerns, they're all important. But the greater  
20 number of concerns have to do with the people operating  
21 and maintaining the machines.

22          Q     You mentioned machine complexity, on average,

1 drives up prices; is that right?

2 A It typically -- there's a correlation between  
3 the number of components and the price. But there are  
4 exceptions for expensive components. So it's not a  
5 rule. It's a trend.

6 Q Is there a correlation or effect of machine  
7 complexity on machine reliability?

8 A Typically, yes.

9 Q What is the correlation between machine  
10 reliability -- or between machine complexity and  
11 machine reliability?

12 A Again, as a general trend, the more complex  
13 the machine, the less reliable it is. But of course,  
14 there are many exceptions to that.

15 Q Would a POSA designing a defatter or derinder  
16 care about reliability?

17 A Yes.

18 Q Earlier, I asked you about throughput. What  
19 is throughput?

20 A It probably can be framed in a number of  
21 different contexts. But generally, one measure of  
22 throughput, for example, would be how many sides of

1     pork could be processed by a machine in a given time  
2     increment. So can you process 50 per hour or 200 per  
3     hour? That would be at least one measure of  
4     throughput.

5           Q     Okay. Would a POSA care about the quality of  
6     the end product produced by the machine when designing  
7     a machine?

8           A     Yes.

9           Q     When designing a defatter or derinder, would  
10    a POSA care about the sale price of the end product  
11    after processing by the machine?

12          A     Typically, yes. There are many factors that  
13    will affect that. But price is a consideration.

14          Q     Okay. The '321 Patent discusses insertion  
15    measurement devices or probes, right?

16          A     It does.

17          Q     Do you agree with the '321 Patent that  
18    insertion measurement devices, or probes, are  
19    disadvantageous?

20          A     Generally, yes. There may be some instances  
21    where there is no disadvantage. But I think generally,  
22    when you penetrate a meat product, it reduces the

1 quality of the products, which is a disadvantage to do  
2 that.

3 Q Generally, probes are disadvantageous because  
4 it reduces the quality of the meat product; is that  
5 right?

6 A The meat can be damaged by the insertion of  
7 the probe, and that may reduce the quality, yes.

8 Q Understood. Are there any other  
9 disadvantages to probe measurement systems that you're  
10 aware of, sitting here today?

11 A (Examines an exhibit.) I don't recall it  
12 being discussed in the '321 Patent, and I may just be  
13 forgetting some passage here. But probes also have the  
14 disadvantages that they can become contaminated. So  
15 depending on the type of sensor they use, they may  
16 require cleaning and maintenance more frequently than a  
17 noncontact sensor.

18 Q Understood. On column 1, I believe it is  
19 line 31 of the '321 Patent -- it's line 32 and 33. It  
20 reads, In particular, since the sensor has to be  
21 inserted at multiple sites.

22 Is it your opinion that probes have to be

1 inserted at multiple sites and that this is a greater  
2 risk of damaging the meat product?

3 MR. HART: Object to form.

4 A (Examines an exhibit.) All of the -- all of  
5 the prior art that I've seen teaches inserting probes  
6 at multiple sites. So I don't see any exception to  
7 that. And that's certainly -- that's a disadvantage of  
8 the probe, even a single penetration is somewhat of a  
9 disadvantage. But all the systems I've seen use  
10 multiple probes.

11 Q (By Mr. Sheeler) Okay. Thank you.

12 Can you turn back to Exhibit 1004, the Young  
13 patent. I know we've talked about this a little bit  
14 already.

15 But do you agree that Young is in the same  
16 field of art as the '321 Patent?

17 MR. HART: Object to form.

18 A I think at least it's pertinent prior art.  
19 So I haven't objected to it. Whether it's exactly the  
20 same field. Young has some different goals. It's a  
21 very complex system. But it's a relevant prior art,  
22 pertinent prior art, to be sure.

1           Q     (By Mr. Sheeler) And a POSA in the field  
2 would be aware of Young?

3           A     Yes.

4           Q     At a high level, how is Young different from  
5 the '321 Patent?

6                     MR. HART: Object to form.

7           A     Well, I think most relevant to in the  
8 validity analysis. Young does not teach a thickness  
9 determination. Young uses a line, a fat/lean  
10 separation line, as a reference and cuts based on a  
11 distance from that -- a set distance from that  
12 reference line or reference curve. So that's the most  
13 important fundamental difference.

14                     But it -- beyond that, Young is a fairly  
15 complex, intricate system with lots of degrees of  
16 freedom of the knife, for example. So there are  
17 differences between the two -- two references. But the  
18 key one for the analysis I performed is this failure  
19 to -- or that Young doesn't measure -- there's no  
20 reason for Young to measure thickness. Young does not  
21 measure thickness. And that permeates other  
22 limitations of the claims.

1           Q     (By Mr. Sheeler) Do you agree that Young's  
2 knife is more complex and has more functionality than  
3 the '321 Patent?

4           MR. HART: Object to form.

5           A     (Examines an exhibit.) The preferred  
6 embodiment in Young is very complex compared to the  
7 preferred embodiments or preferred embodiment taught in  
8 the '321 Patent. I think the claims of -- I haven't  
9 done this analysis, but I don't see a restriction in  
10 the claims that limit how complex the control of the  
11 motion of the knife may be. Or the cutting blade. So  
12 it has to be a variable relative to the product  
13 support.

14                 That can mean a single degree of freedom of  
15 motion or it could mean, as Young has multiple degrees  
16 of freedom of motion. So I don't think the claims  
17 limit to a single degree of freedom.

18          Q     (By Mr. Sheeler) Do you agree that Young  
19 teaches a cutting device on the cutting blade?

20          A     Yes.

21          Q     Do you agree that Young teaches an apparatus  
22 for separation of a fat cover of a meat product from a

1 flesh component of the meat product?

2 A (Examines an exhibit.) A part of the  
3 apparatus taught by Young separates lean from fat based  
4 on the fat/lean separation line and some offset  
5 distance from that. There's more to Young than that.  
6 It's talking about cutting through the ribs and  
7 following the contour of that cut along -- so there's  
8 more to Young and how it -- what it is separating. But  
9 it does separate fat from lean along this offset line  
10 from the fat/lean cut line, at least for a portion of  
11 the meat product.

12 Q Do you dispute that Young teaches an  
13 apparatus for separation of a fat cover?

14 A I have not disputed that, no.

15 Q What does separation of a fat cover mean?

16 A Separate means to divide into two or more  
17 components. So when you separate a fat cover, you  
18 divide it and make it a separate piece from the  
19 component it's being separated from.

20 Q Okay. Do you agree that Young teaches a  
21 measurement device?

22 A (Examines an exhibit.)

1 MR. HART: Object to form.

2 A It does not teach a device for measuring the  
3 thickness of the -- the fat layer as required by the  
4 '321 Patent.

5 Q (By Mr. Sheeler) Okay. But I don't think  
6 that was quite the question.

7 Thickness notwithstanding, does Young teach a  
8 measurement device?

9 MR. HART: Object to form.

10 A That depends perhaps on how you define a  
11 measurement device. It doesn't measure the thickness  
12 of the fat layer, which is what's required in  
13 the '321 Patent. And there may be some context that  
14 Young could be considered to be taking a measurement.  
15 I'd be happy to spend more time looking at Young, but I  
16 wouldn't characterize it as a measurement device in the  
17 sense of the '321 Patent.

18 Q (By Mr. Sheeler) Do you dispute that Young  
19 teaches a measurement device?

20 A I dispute that it teaches a measurement  
21 device that's capable of making the required  
22 measurements of the thickness of the fat cover as

1 required by the '321 Patent.

2 Q Understood. But notwithstanding the  
3 measurements, do you dispute that Young teaches a  
4 measurement device?

5 MR. HART: Object to form.

6 Q (By Mr. Sheeler) It might be useful if you  
7 look at figure 2. I believe numbers 196 through 198  
8 are different cameras.

9 A (Examines an exhibit.) Yes. I'm familiar  
10 with the three cameras. But that doesn't tell us it's  
11 a measurement device.

12 Q Is it your opinion Young's disclosed cameras  
13 are not measurement devices?

14 MR. HART: Object to form.

15 A I would not characterize them as measurement  
16 devices. They could, in some context, cameras can be  
17 used, of course, as part of a measurement system. But  
18 a camera alone, I would not call that a measurement  
19 device. Maybe Young does. I'd have to read the  
20 disclosure. But it's certainly not measuring what's  
21 required in the '321 Patent in any context.

22 Q (By Mr. Sheeler) Understood. What does it

1 take to be a measurement device?

2 MR. HART: Object to form.

3 A Well, in the '321 Patent claims, what's  
4 required is a measurement device for automatic  
5 determination of the thickness of the fat cover. So in  
6 the context of the '321 Patent, it has to determine a  
7 thickness of the fat cover.

8 Q (By Mr. Sheeler) But -- withdrawn.

9 Dr. Reinholtz, not in the context of  
10 the '321 Patent. In the context of the knowledge of a  
11 POSA, would a POSA understand that Young teaches a  
12 measurement device?

13 MR. HART: Object to form. Lacks relevance.

14 A If you're asking me to provide an analysis  
15 outside the context of the '321 Patent; is that  
16 correct?

17 Q (By Mr. Sheeler) I'm asking you to provide  
18 an analysis in the context of the knowledge of a POSA.  
19 Would a POSA understand that Young teaches a  
20 measurement device?

21 MR. HART: Object to form. Lacks relevance.

22 A Not in the context of the '321 Patent.

1 Q (By Mr. Sheeler) Look at figure 13 of Young,  
2 Exhibit 1004. If you look at 13 --

3 A Hold on. I'm not there yet. 13. Okay.

4 Q 13, 258. Can you please read that.

5 A (Examines an exhibit.) Yes. Calculate  
6 height, length, and width of pork side.

7 Q So a POSA in this field, it is your opinion,  
8 would understand that a device which calculates a  
9 height and a length and a width is not a measurement  
10 device.

11 MR. HART: Object to form.

12 A Correct. It's not a measurement device in  
13 the context of the requirements of the claims of  
14 the '321 Patent.

15 Q (By Mr. Sheeler) I'm not asking if it meets  
16 the claims. I'm asking you for if it meets the  
17 singular notation measurement device.

18 MR. HART: Asked and answered. Object to  
19 form.

20 A Yeah, I will not answer a question in a  
21 limited context. I'm looking at the claims, and it  
22 doesn't -- these -- these are calculations of

1 dimensions that are not what's required in  
2 the '321 Patent. And that's really the question at  
3 issue here. Not in some abstract way could these be  
4 viewed as a measurement device.

5 Q (By Mr. Sheeler) So is your opinion that  
6 Young does not teach a measurement device?

7 A Does not teach a measurement device in the  
8 context of the '321 claims, correct.

9 Q Is your opinion that the '321 claims require  
10 a measurement device to measure thickness of the fat  
11 cover?

12 A That's correct.

13 Q Okay. Do you agree that Young teaches a  
14 control unit?

15 A I think so. I haven't disputed that. I  
16 haven't done a detailed analysis but it seems to have a  
17 control unit or controller as part of the system.

18 Q Do you agree that Young teaches a cutting  
19 device coupled to the measurement device?

20 MR. HART: Object to form.

21 A Not the measurement device of  
22 the '321 Patent, because that measurement device has to

1 produce a fat thickness. And Young doesn't do that.

2 Q (By Mr. Sheeler) Understood. Do you agree  
3 Young teaches a measurement device?

4 MR. HART: Object to form.

5 A Not in the context of the '321 Patent.

6 Q (By Mr. Sheeler) I apologize. That was  
7 misspeaking.

8 Do you agree Young teaches a cutting device?

9 A Again, not in the context of the '321 Patent.  
10 Because the '321 Patent, that limitation requires that  
11 the cutting device is coupled to a measurement device  
12 for automatic separation of the fat cover from the  
13 flesh component in dependence on the thickness  
14 determined by the measurement device. So in the  
15 context of the 321, Young doesn't teach that.

16 Q Understood. Do you agree Young teaches a  
17 cutting blade?

18 A Yes. There's a cutting blade in Young.

19 Q Do you agree Young's cutting blade is coupled  
20 to a controller or computer?

21 A I do agree that that's true, but again, not  
22 in the context of the full limitation of the claim.

1 Q I'm not asking about the limitations.

2 A No, but that's not --

3 MR. HART: Please let the witness answer.

4 A My answer is -- I think the question at hand  
5 is not in some abstract way, can I take a few words out  
6 of a claim and see if it's found in an earlier patent.

7 The question really is, does the patent, does  
8 the Young patent or any other prior art patent, teach  
9 the limitation we're talking about that includes a  
10 cutting device, that includes other requirements as  
11 well? And Young doesn't teach that limitation.

12 Q (By Mr. Sheeler) Understood. I'm just  
13 specifically asking about the cutting blade limitation.  
14 You agree that's taught by Young, correct?

15 A No. The cutting blade limitation -- it's not  
16 a blade. It's a cutting device. And that limitation  
17 is not just the words "cutting device." It is a  
18 cutting device that has a number of other requirements  
19 and that's not found in Young.

20 Q Doctor, can you please look at claim 1.  
21 There's two different cutting limitations. One is  
22 cutting device and the other is cutting blade. I'm

1 asking about the cutting blade limitation.

2 A I do agree that Young teaches and I  
3 apologize, I was looking at the previous limitation. I  
4 agree that Young -- well, I haven't disputed, I haven't  
5 really done the analysis, but I haven't disputed that  
6 Young teaches a cutting blade with a variable position  
7 relative to the product support.

8 Q Thank you. Do you dispute that that cutting  
9 blade is connected to a controller?

10 MR. HART: Object to form.

11 A And that limitation doesn't have anything  
12 about connected to a controller, so the limitation  
13 above is the one that talks about, dependent on the  
14 thickness. That's the one that really invokes control,  
15 a control requirement.

16 Q (By Mr. Sheeler) I understand. I'm asking  
17 about your understanding of how Young works; how the  
18 pieces are connected; and how a POSA would understand  
19 the device. Cutting device notwithstanding, it's  
20 Young's cutting blade connected to Young's controller?

21 MR. HART: Object to form.

22 A Right, and I want to be careful that my

1 answers are not taken out of context, right? I'm here  
2 and I'm sworn to tell the whole truth, not just a piece  
3 of extracted information from one patent; sure, there's  
4 a cutting blade in Young. But it doesn't meet the  
5 control limitation requirements of the '321 Patent.

6 Q (By Mr. Sheeler) Are Young's cameras  
7 connected to a controller? I know that the claim of  
8 the patent reads Control Unit. I'm asking about a  
9 controller.

10 A (Examines an exhibit.) I'm looking at figure  
11 9 of Young on page -- well, sheet 11 of 15, and it  
12 shows three cameras, 196, 197, and 198, that  
13 communicate with a box that's called Vision System that  
14 has a real-time processor in it. So that's some form  
15 of processor -- I'm not sure that's a controller.

16 And then that box communicates with a host  
17 PC, and the host PC box then communicates with a motion  
18 controller. So there is this indirect coupling to a  
19 Vision System processor to a host PC and then  
20 ultimately to a motor controller.

21 Q Okay. Thank you. Does figure 2 of Young  
22 show a controller?

1           A     (Examines an exhibit.)

2           Q     Maybe if you refer to column 5, line 62, of  
3     Young.

4           A     (Examines an exhibit.) It looks like, from  
5     the material you just referred me to is helpful, it  
6     says, An electronic control system 170 -- which is  
7     pointing kind of generally to the cabinet -- includes.

8                     And it has a number of things: a motion  
9     controller for controlling the motion of the platen,  
10    the scribe saw, the loin knife. In addition to -- it  
11    appears, in addition, it houses that cabinet, houses  
12    separate imaging -- a separate -- interesting phrasing,  
13    Separate imaging system is included to determine  
14    critical dimensional data for individual pork sides  
15    enabling control system 170 to optimize the loin  
16    separation process based upon the dimensions of a  
17    particular side of pork.

18          Q     Does figure 2 of Young show a controller?

19          A     It shows an electronic control system 170.

20          Q     On column 5, line 64 of Young, does Young  
21    refer to an electronic control system 170 as a  
22    controller 170?

1           A     It does, yes.

2           Q     So would you agree figure 2 of Young shows a  
3 controller?

4           A     It does, yes.

5           Q     Okay. Do you know if Young contemplates  
6 modifications or alterations to its controller?

7                   MR. HART: Object to form.

8           A     I recall from Dr. Collins's declaration, he  
9 cites something in Young. Seems like to me,  
10 boilerplate language. But, yes, I do think there's  
11 something there. I'd like to find it and just review  
12 his -- his citation to that.

13          Q     (By Mr. Sheeler) If it's useful, you might  
14 be searching for column 20, line 17, of Young.

15          A     (Examines an exhibit.) So starting at line  
16 17, it says, in Young, Various modifications and  
17 changes may be made to control system 170 consistent  
18 with the invention.

19                   For example, and it talks about additional  
20 imaging and motion functionality may be included to  
21 provide more sophisticated profiles using the preferred  
22 scribe saw and loin knife assemblies.

1           Also, design of control system 170 may be  
2   modified to incorporate different accessory components  
3   on apparatus 10. Other modifications will be  
4   appreciated by one skilled in the art.

5           So it's kind of a boilerplate statement that,  
6   yes, you could change things and still keep the spirit  
7   of the invention of Young.

8           Q     Do you agree that Young teaches that  
9   controller 170 may be modified to include additional  
10  imaging functionality?

11          A     (Examines an exhibit.) But there are no  
12  details that I can recall being disclosed in Young of  
13  how this would be done. But it does have that  
14  boilerplate statement. You could add additional  
15  imaging and motion functionality.

16          Q     What do you mean by, boilerplate statement?

17          A     A boilerplate is an expression that means  
18  that it's something like a -- a common or template of  
19  language that you see in a lot of patents that you  
20  could change the invention without modifying the spirit  
21  of the invention. To me, the paragraph we just  
22  reviewed looks like boilerplate language.

1           Q     Is it your understanding that the  
2     anticipation and obviousness analysis places -- finds  
3     that boilerplate statements do not provide teachings in  
4     a patent?

5                     MR. HART: Object to form.

6           A     No. But what's clear is Young doesn't teach  
7     this fat thickness measurement. That's the discerning  
8     missing feature in all the limitations that incorporate  
9     that. And so, yeah, you could add functionality of  
10    some unknown kind, to Young. I think that certainly  
11    would be considered by a person of skill in the art,  
12    whether that statement is there or not.

13          Q     (By Mr. Sheeler) Okay. Could you look at  
14    column 17 of Young? I believe it's line 21.

15                    Do you see where it says, "Controller 172 is  
16    preferably an IBM compatible personal computer, such as  
17    the type based upon an Intel 486 or Pentium  
18    microprocessor. It would be appreciated, however, that  
19    other computer systems, either commercially available  
20    or custom-designed, may be used in the alternative.

21          A     I do see that.

22          Q     Do you agree Young teaches that custom

1 computer design systems can be used in its apparatus?

2 MR. HART: Object to form.

3 A As an alternative, yeah, that statement says  
4 you don't have to use a Pentium Intel 486 Pentium  
5 processor to practice the invention. That seems --  
6 again, kind of a boilerplate of common sense that I  
7 don't think a person in the art would restrict the  
8 invention to an IBM compatible personal computer that  
9 uses an Pentium 486 or Intel processor.

10 Q (By Mr. Sheeler) So you agree that  
11 custom-designed computer systems may be used in Young's  
12 apparatus.

13 MR. HART: Object to form.

14 A I agree that those words are in column 17. I  
15 need to refresh my memory of what controller 172 is?  
16 Yes. Again, so if we turn to page -- sheet 11 of 15,  
17 if you look right at the heart of that page, 172 looks  
18 like an IBM Pentium computer -- old IBM Pentium  
19 computer, right? So this language is telling us that  
20 the host PC could be replaced by a custom system of  
21 various design.

22 Interesting, it doesn't comment on the

1 imaging, the vision system that's to the right of that  
2 or the motion controller that's to the left of that.  
3 It seems like a pretty narrow statement, but it is  
4 focused on that.

5 Q (By Mr. Sheeler) Would you look at column  
6 16, line 64, of Young? Bottom right of the page.

7 A (Examines an exhibit.) Okay. I see that.

8 Q So controller 172 is a component of  
9 controller 170. Is that right?

10 A Yes. And the passage you just asked me to  
11 read from column 17 is saying that one of the three  
12 components could be modified to be a custom computer or  
13 something other than an Intel 486 or Pentium processor.

14 Q And the three components of controller 170  
15 are controller 172, motion controller 180, and image  
16 visioning system 190?

17 A Correct.

18 Q And Young contemplates adding additional  
19 imaging functionality?

20 MR. HART: Object to form.

21 A Yes, but I don't want to conflate that with  
22 necessarily modifying box 190 to achieve that.

1 Q (By Mr. Sheeler) Understood.

2 MR. SHEELER: It's now --

3 MR. HART: Now's a great time to break for  
4 lunch.

5 MR. SHEELER: Off the record?

6 THE REPORTER: We're off the record.

7 (Recess from 12:05 p.m. to 12:50 p.m.)

8 THE REPORTER: We're back on the record.

9 Q (By Mr. Sheeler) Welcome back, Doctor.

10 During any of the previous breaks, did you  
11 discuss the substance of your testimony with counsel?

12 A No.

13 Q Okay. Before our break, we were talking  
14 about Young. Could you turn to Young, column 2, line,  
15 I believe, 25?

16 A On 25?

17 Q I believe so.

18 A Okay. I'm there.

19 Q On that line, it reads in part, US Pat, No.,  
20 4979269 to Norrie?

21 A Correct.

22 Q And that's the Norrie we've discussed a

1 little bit today; is that right?

2 A Yes, that's right.

3 Q Okay. So Young cites to Norrie as a machine  
4 that is known in the field.

5 A It cites to Norrie -- it's obviously the  
6 citation is to a document, not a machine. But it does  
7 cite to Norrie as a publication.

8 Q Okay. And we briefly talked about Norrie  
9 earlier. Could you turn to Norrie Exhibit 1005?

10 A Sure. I have it now.

11 Q How is Norrie different from the '321 Patent?

12 MR. HART: Object to form.

13 A I haven't considered that. I've looked at  
14 the proposed combination of Norrie with Young as  
15 petitioners have proposed. So I haven't really  
16 considered separately what all the differences are. So  
17 I'm not prepared to talk about that.

18 Q (By Mr. Sheeler) Do you believe Norrie  
19 teaches all the elements of the '321 Patent?

20 A Well, I have reason to think not because  
21 petitioners and Dr. Collins didn't use it as a primary  
22 reference. But I didn't do the analysis myself.

1           Q     Do you believe Norrie is missing any elements  
2     of the '321 Patent?

3           A     Very likely, yes, but I haven't formed an  
4     opinion on that.

5           Q     Okay. You haven't formed an opinion on  
6     whether Norrie is missing my elements of  
7     the '321 Patent.

8           A     I haven't done an analysis myself to look at  
9     claim limitation by claim limitation. Obviously,  
10    Dr. Collins has not done that either. So I'm  
11    responding to petitioners and Dr. Collins here.

12          Q     Okay. What elements do you believe that the  
13    proposed combination of Young and Norrie is missing  
14    from the '321 Patent elements?

15          A     (Examines an exhibit.) I would say it this  
16    way: The petitioners and Dr. Collins propose -- they  
17    recognize, Dr. Young -- Dr. Collins clearly recognizes  
18    that Young does not teach measurement of the fat  
19    thickness, so petitioners are trying to use Norrie to  
20    fill in gaps in Young.

21                   But clearly, Young -- everything in Norrie is  
22    redundant of Young. The cameras and the functionality

1 are redundant. So it really doesn't add anything to  
2 the combination.

3 Q Okay. So your opinion is that Young and  
4 Norrie, the proposed combination, teaches all the  
5 elements, but it's redundant and a POSA would not be  
6 motivated to make the combination.

7 MR. HART: Object to form. Drastically  
8 mischaracterizes the testimony.

9 A I would not say it that way. So I disagree  
10 with you.

11 MR. SHEELER: That is a drastic speaking  
12 objection. I'm trying to be --

13 MR. HART: It's a fairly egregious  
14 question --

15 MR. SHEELER: I don't think so, Paul, and  
16 it's not proper procedure. If you feel that way, you  
17 can take the proper mechanism to do so.

18 MR. HART: I will, but I would ask you not to  
19 intentionally mischaracterize the witness's testimony  
20 in such a drastic way. It's not a useful --

21 MR. SHEELER: I think if we read back his  
22 answer and my question, they would be extremely subtle.

1 But I'm going to ask the question in a different way.

2 Q (By Mr. Sheeler) Doctor, it's your opinion  
3 that everything in Norrie is redundant and Young, the  
4 cameras and functionality are redundant, so it doesn't  
5 add anything to the combination. Is that right?

6 A The proposed combination that's been advanced  
7 by petitioners and Dr. Collins does not add anything,  
8 and Dr. Collins admits that in his deposition. He  
9 says, for example, he's asked the question, Is there  
10 any technical reason to add Norrie's cameras -- camera  
11 54 to Young's system? Answer. I don't see why. I  
12 think they could use the existing cameras of Young.

13 So there's no motivation, or no reason to use  
14 Young's camera system. And later, he's asked about the  
15 functionality, and he says, Norrie frankly is redundant  
16 of what's already disclosed in Young. It's clear,  
17 Norrie doesn't add anything. There's no reason or  
18 motivation to combine those.

19 Q Okay. Thank you. I think that helps. I  
20 appreciate Dr. Collins' opinion. But I wanted your  
21 opinion.

22 Is it your opinion a POSA would not make the

1 proposed combination?

2 A I agree with Dr. Collins and what he said in  
3 his deposition. That Norrie -- Norrie's camera is  
4 redundant of cameras that are already existing in  
5 Young. Norrie's functionality doesn't add anything to  
6 Young. And there's really no detail about how this  
7 combination would be made.

8 So there's really not very much to comment on  
9 in terms of a -- the specifics of a combination. It  
10 just hasn't been proposed by Dr. Collins or petitioner.

11 Q Well, let's take those one at a time. I  
12 think that's a couple different reasons.

13 Just, first, do you believe a POSA would make  
14 or be motivated to make the proposed combination of  
15 Young and Norrie?

16 A Well, again, I'm not really sure what the  
17 proposed combination is. It's a vague reference that  
18 you could use. Norrie's camera and functionality, not  
19 quite even sure what that means. But, no, there's no  
20 motivation to take Norrie's camera, because it's  
21 redundant of Young's camera. There's no functionality  
22 that Norrie adds. So there's no motivation to adopt

1 Norrie's functionality either.

2 Q Okay. So you believe a POSA would have no  
3 motivation to combine the proposed combination.

4 A I'm not really sure I even know what the  
5 proposed combination is, but I can say with certainty  
6 that Young's -- Norrie's camera and imaging  
7 capabilities, what the petition says, that those are  
8 redundant to everything that's in Young already.

9 Q Do you believe you can't answer the question  
10 whether a POSA would be motivated to make the proposed  
11 combination or not?

12 A No, I already answered that question.

13 Q Is the answer no? I don't understand your  
14 answer. I'm sorry.

15 A There's no reason to combine, as Dr. Collins  
16 states, and as I have stated, there's no reason to add  
17 Norrie's teaching to Young because it's redundant. The  
18 camera is redundant. The function amount of the  
19 imaging system is redundant. So there's no motivation.

20 And furthermore, there are no meaningful  
21 details to even consider what the combination would  
22 look like. The petitioners and Dr. Collins just

1 haven't employed that.

2 Q Okay. So is your opinion that there's no  
3 reason to add Norrie's teaching to Young because  
4 Norrie's teachings are redundant and the camera is  
5 redundant and therefore, there's no motivation to  
6 combine. Do you agree with that?

7 MR. HART: Object to form.

8 A Furthermore, I generally agree to that. I'm  
9 not sure I would adopt your exact words. But I've  
10 already stated, I think, pretty clearly for the record  
11 why a person of skill in the art, why I think this, why  
12 Dr. Collins thinks this, that you wouldn't add anything  
13 to Young by adopting Norrie. There are no details of  
14 how you would make the combination. And Young teaches  
15 away from Norrie.

16 There are lots of reasons a person of skill  
17 in the art wouldn't try to combine these, even -- even  
18 accepting that the details of the combination haven't  
19 been provided by the -- the petitioners or Dr. Collins  
20 in this case.

21 Q (By Mr. Sheeler) I understand that. I want  
22 to go through those one by one. And there's reasons to

1 not combine one by one. But first, I want to be clear.  
2 It's your opinion a POSA would not make this  
3 combination.

4 A My opinion that the combination hasn't been  
5 described in any meaningful detail. So I don't even  
6 know what the proposal is, other than a vague reference  
7 to adopting a camera and functionality or capabilities  
8 from Norrie and Young.

9 So first of all, there's not much to comment  
10 on regarding the details. But whatever is proposed is  
11 redundant. And there's just no motivation to make a  
12 combination.

13 Q Is it your opinion the proposed combination  
14 isn't described in enough meaningful detail to give  
15 proper specificity?

16 MR. HART: Object to form.

17 Q (By Mr. Sheeler) And Dr. Collins, I'm  
18 reading back your testimony.

19 A I think --

20 Q Excuse me, Dr. Reinholtz. My apologies.

21 A You read back -- I don't remember saying  
22 specificity.

1           Q     I'll ask. Is it your opinion that the  
2 proposed combination doesn't have sufficient detail?

3           A     Yes. Paragraph 48, I talk about that. I  
4 understand that to satisfy its burden of proving  
5 obviousness, a petitioner cannot simply provide  
6 conclusory statements. Rather, the petitions must --  
7 probably should say "should" -- must articulate  
8 specific reasoning based on evidence of record to  
9 support the legal conclusion.

10                     It's just a very short description in the  
11 petition of how suggesting these could be combined but  
12 without providing any meaningful detail about how to do  
13 it.

14           Q     And that portion of paragraph 48 that you  
15 just read from your report. Is that still your opinion  
16 today?

17           A     I think that's an interpretation of a law  
18 that's been provided to me. You have to be specific.  
19 You can't have conclusory statements or not sufficient.  
20 You have to say why you would make the combination and  
21 specifically what the combination is, what you take  
22 from the references and how you would combine those,

1 and that's all missing.

2 Q Okay. So you do still agree with that  
3 statement today that you just read.

4 A Yes.

5 Q Okay. I'm handing you a copy of the decision  
6 Granting Inter Partes Review. Earlier, you testified  
7 you have not read this document before; is that  
8 correct?

9 A That's correct.

10 MR. SHEELER: We'll mark -- actually, we'll  
11 refer to that as paper 10 already filed in this  
12 proceeding.

13 Q (By Mr. Sheeler) Please turn to page 12 of  
14 paper 10, the Decision Granting Inter Partes Review.  
15 The second paragraph of page 12, the Board wrote, Weber  
16 faults Provisur for failing to provide sufficient  
17 detail --

18 A You lost me. Sorry. Second paragraph of  
19 page 12?

20 Q Second paragraph of page 12, around the  
21 fourth or fifth line?

22 A Okay.

1 Q Beginning with the sentence, In doing so.

2 A I got it.

3 Q Weber faults Provisur for failing to provide  
4 sufficient detail regarding, "how Young is modified by  
5 Norrie." But as Provisur's expert credibly explains,  
6 one of ordinary skill in the art, reading Young,  
7 immediately would have been drawn to Norrie's fat  
8 measurement device, given Young's explicit foresight of  
9 adding imaging functionality in order to further  
10 optimize separation of the fat from the loin.

11 I won't finish the sentence there.

12 But at the very end of that paragraph, it  
13 continues, The reasoning provides more than enough  
14 detail as to how and why one of ordinary skill in the  
15 art would have modified Young's imaging system with  
16 Norrie's teaching.

17 Give you time to review that page, if you'd  
18 like.

19 A (Examines a document.) I don't know what you  
20 want me to review. I don't think there's a question  
21 pending.

22 Q Well, the question pending was: Do you see

1 that sentence or those sentences that I read?

2 A I do.

3 Q Okay. Is it still your opinion that  
4 petitioner Provisur has failed to provide sufficient  
5 detail on how Young would be modified with Norrie's  
6 teaching, despite the Board finding to the contrary on  
7 granting institution?

8 MR. HART: Object to form.

9 A Well, first of all, I haven't had an  
10 opportunity to review this document in full. And so  
11 I'm reluctant to comment on it. I see the paragraph  
12 above the one you cited, the -- the Board -- the last  
13 sentence of the paragraph above the one you were  
14 citing, the last sentence of that says, On the current  
15 record. So at the time, they found Dr. Collins'  
16 testimony credible. There's more information for the  
17 Board to consider now, and I am confident that they  
18 will reach a different conclusion.

19 So I think the Board took a perhaps a look at  
20 the evidence that was in front of them, but it's not  
21 complete. And when the complete record is there, I  
22 don't think they'll come to this conclusion.

1 Q (By Mr. Sheeler) Your -- withdrawn.

2 You stated that the Board made this decision  
3 on the evidence filed with the petition. And now you  
4 believe it'll come to a different conclusion now that  
5 there is more evidence; is that correct?

6 MR. HART: Object to form.

7 A I didn't say it quite that way, but we  
8 clearly have Dr. Collins admitting that Young's camera  
9 is redundant of -- I mean, sorry, that Norrie's camera  
10 is redundant of what's already in Young. We have  
11 Dr. Collins admitting that it doesn't -- Young's  
12 imaging system doesn't add any functionality to Young.  
13 So we have a firm basis for believing there's no  
14 motivation for the combination.

15 And I think, again, I'm commented on the lack  
16 of details. I believe the Board will consider that,  
17 and I hope that they will agree with me. I don't know  
18 how the Board may ultimately find, but I think there's  
19 compelling evidence that there's not enough details in  
20 this combination, especially based on Dr. Collins'  
21 testimony, to move forward with it.

22 Q Are you aware that Dr. Collins testified that

1 Norrie was redundant of Young because it is his opinion  
2 that Young teaches the determination of the thickness  
3 of the fat cover?

4 MR. HART: Object to form.

5 A Perhaps you could point me to explicitly what  
6 you're reading so I could comment on, not what you're  
7 saying but on what Dr. Collins says.

8 Q (By Mr. Sheeler) Have you reviewed the  
9 transcript of Dr. Collins' deposition?

10 A I have.

11 Q And is that what you rely on when you state  
12 it's his opinion that Norrie is redundant of Young?

13 A Yes, and I cite exactly what he says in  
14 response to the question. He says -- he's asked, Is  
15 there any technical reason to add Norrie's camera 54 to  
16 Young's system? Answer: I don't see why. I think  
17 they could use the existing cameras of Young. What's  
18 the motivation to add a camera that's already there?

19 Again, he's asked about the functionality  
20 from Norrie. And he says, Norrie frankly is redundant  
21 of what's already disclosed in Young. It's pretty  
22 clear.

1           Q     Dr. Collins is testifying that it is  
2     redundant because Young's camera already determines the  
3     fat thickness, correct?

4           A     Well, again, if you'll point me to testimony  
5     that you'd like me to consider.

6           Q     Have you reviewed Dr. Collins' testimony in  
7     general?

8                     MR. HART: Object to form.

9           A     I have reviewed it, yes.

10          Q     (By Mr. Sheeler) In full.

11          A     Yes.

12          Q     Is it your opinion Dr. Collins testified that  
13     Young does not disclose determination of the thickness  
14     of the fat cover?

15          A     Yes, he did testify exactly to that.

16          Q     That Young does not disclose the thickness,  
17     determination of the thickness of fat cover.

18          A     Yes, he testified to that in deposition.

19          Q     Do you agree with that opinion?

20          A     Young clearly does not disclose determination  
21     of the thickness of the fat cover. There's no reason  
22     in Young to make that determination.

1           Q     You testified earlier today that Norrie does  
2     disclose determination of the thickness of the fat  
3     cover. Right? That's Exhibit 1005, Norrie not  
4     Young?

5           A     Right. So it sounds like what you're leading  
6     up to is this hindsight analysis to say, well, we're  
7     looking for a reference that mentions determination of  
8     fat thickness and let's pull that in and add it. But  
9     clearly, Norrie is redundant of everything that's in  
10    Young. You wouldn't make that combination.

11          Q     Norrie teaches something, the determination  
12    of the thickness of the fat cover, that Young does not,  
13    correct?

14          A     Young does not need -- there's no reason for  
15    Young to determine the thickness of the fat cover.  
16    Young bases the cutting on an offset from a fat/lean  
17    dividing line, not the thickness of the fat cover. So  
18    there's no reason Young would even want that  
19    measurement.

20          Q     Right. There's no reason a POSA would want  
21    that measurement or make that combination. But Norrie  
22    teaches functionality. Young does not. In your

1 opinion. Correct?

2 A Young teaches the determination of the  
3 thickness. I'll agree with that. But it's  
4 functionality that has no use in the invention of  
5 Young.

6 Q So there would be no reason a person of  
7 ordinary skill in the art would want to make the  
8 proposed combination of Young and Norrie.

9 A Well --

10 MR. HART: Object --

11 A Hindsight bias would be the reason, the only  
12 reason I could think of, to look to Norrie for a  
13 measurement of something that Young doesn't or wouldn't  
14 or couldn't use.

15 Q (By Mr. Sheeler) Other than hindsight bias,  
16 there's no reason or motivation that a POSA would want  
17 to make the proposed combination of Young and Norrie.  
18 Do you agree with that?

19 A I have not seen any justification of the  
20 reason for making that combination, and I think  
21 Dr. Collins has explicitly admitted that there is no  
22 reason to make the combination.

1 Q Okay. Thank you.

2 You testified earlier that throughput would  
3 be an important consideration to a POSA. Is that  
4 right?

5 A One important consideration could be  
6 throughput, depending on the application.

7 Q In the context of this field that we're  
8 discussing, what does yield mean?

9 A I haven't provided an opinion on the term  
10 "yield." Yield, in this field -- well, I would say in  
11 general, yield usually has to do with either how much  
12 of the product is useful after the processing or could  
13 also relate to throughput; how much yield you get; how  
14 many parts per hour could be a measure of yield.

15 But, again, I haven't given a specific  
16 opinion on that.

17 Q Have you provided an opinion that Young  
18 teaches away from combination with Norrie?

19 A Yes.

20 Q What is your understanding of what "teaching  
21 away" means?

22 A In paragraph 56, I explicitly state my

1 understanding and provided by counsel, I understand  
2 that when a POSA, upon reading the reference, would be  
3 discouraged from following the path set out in the  
4 reference, the prior art reference is said to teach  
5 away. So that's the meaning of teach away. You'd be  
6 discouraged from following the path.

7 Q What in Young's disclosure discourages a POSA  
8 from combining it with Norrie?

9 A Young, again, in paragraph 56, Young  
10 expressly identifies Norrie as a known prior art system  
11 and criticizes Norrie, and systems like Norrie, for  
12 their lack of control resulting in unacceptable waste  
13 product and lower yields.

14 Q Young's criticizing Norrie's blade control in  
15 the portion you're discussing; is that right?

16 It may useful to look at Young, column 2,  
17 line 30.

18 A I'm looking at that portion of Young right  
19 now.

20 So it's more -- it's more -- I think it maybe  
21 would be good to repeat the question, but let me  
22 attempt to answer it and you can maybe ask me another

1 question.

2           You asked about blade control, and I think  
3 that's part of it, that clearly, Norrie is a very  
4 simple system, Young is a very sophisticated system  
5 that has multiple degrees of freedom. Norrie controls  
6 only the up and down movement of the blade, one degree  
7 of freedom, but it's more than that.

8           At the end of that paragraph, so around line  
9 39, in column 2, it says, Thus conventional automated  
10 systems -- so like Norrie -- often are not capable of  
11 separating loins from bellies at the optimal points of  
12 separation, often yielding -- often resulting in  
13 unacceptable waste product and lower yields.

14           So it's talking about automated systems. It  
15 doesn't just limit that to blades or blade control.

16           Q     Doctor, isn't it correct that the sentence  
17 immediately preceding that says, Furthermore, it is  
18 difficult to reproduce the different subtle motions  
19 experienced human operators use to optimize end  
20 products with limited control over the loin knife and  
21 scribe saw?

22           A     It does say that. That, of course, brings in

1 the scribe saw, which is not taught at all in Norrie.

2 And so, yes, the sentence says what you read. But the  
3 sentence following it talks about broadly all the  
4 conventional automated systems, not being capable of  
5 separating loins from bellies.

6 Q It talks about separating loins from bellies  
7 at optimum points where the blade would enter, right?

8 A It doesn't say that.

9 Q Does it say that conventional automated  
10 systems have inferior imaging?

11 A No, it doesn't say that, either.

12 Q Does it disparage conventional automated  
13 systems imaging capabilities?

14 A Well, it broadly disparages conventional  
15 systems such as Norrie as not being capable of  
16 separating loins from bellies at the optimum points of  
17 separation and thus producing waste and yield. It  
18 doesn't distinguish whether that is focused on the  
19 knife or the knife movement or the imaging system or --  
20 it's really talking broadly about conventional  
21 automated systems.

22 Q Does Young discuss the imaging and sensing

1 capabilities of conventional automated systems except  
2 for that they may be implemented to increase the  
3 imaging functionality?

4 MR. HART: Object to form.

5 A You lost me on that.

6 Q (By Mr. Sheeler) Does Young discuss the  
7 imaging and sensing capabilities specifically, solely,  
8 of conventional automated systems?

9 MR. HART: Object to form.

10 A (Examines a document.) I think you're -- I  
11 think you're asking me -- well, maybe I should stop.  
12 What are you asking me? I don't know.

13 Q (By Mr. Sheeler) I'm asking if Young  
14 discusses imaging and sensing capabilities of known  
15 prior art machines.

16 A I have not re-reviewed Young in full. But  
17 the material that we're talking about in column 2,  
18 while it doesn't specifically say, imaging systems, it  
19 generally says, conventional automated systems. And  
20 it's critical of those, and it talks about the degree  
21 of control, which requires feedback sensing.

22 So I think it's broadly criticizing this

1 prior art, and that would include potentially vision  
2 systems. It doesn't say in this passage or in the  
3 passages we're looking at, I don't see where it talks  
4 specifically about a deficiency in prior art imaging  
5 systems. But it's just a general statement that these  
6 earlier systems can't do what Young is able to do.

7 Q Other than that passage, which broadly  
8 criticizes prior art machines, are you aware of  
9 anything in Young that criticizes, disparages, known  
10 imaging systems?

11 MR. HART: Object to form.

12 A So I think we now agree that Young disparages  
13 Norrie and other conventional systems in a broad way.  
14 Based on your question, I sense that you agree with  
15 that. I don't see any particular mention of vision  
16 systems or failures or vision systems. But I'm not  
17 sure that level of detail would even be appropriate.

18 Q (By Mr. Sheeler) We discussed this morning  
19 that Young mentions incorporating other known imaging  
20 systems into its apparatus, right?

21 MR. HART: Object to form.

22 A You'll have to remind me where that is.

1           Q     (By Mr. Sheeler) Look at column 20, line 17,  
2 of Exhibit 1004, the Young patent.

3           A     (Examines an exhibit.) Okay.

4           Q     That reads, Various modifications and changes  
5 may be made to control system 170 consistent with the  
6 invention. For example, additional imaging and motion  
7 functionality may be included to provide more  
8 sophisticated profiles using the preferred scribe saw  
9 and loin knife assemblies. Do you see that?

10          A     I do.

11          Q     So Young contemplates including additional  
12 imaging and motion functionality. Is that right?

13          A     It does. It doesn't mention here Norrie nor  
14 the prior art. It could be other improvements that are  
15 yet to be disclosed in the art. For example. So  
16 there's nothing that would tell us that -- that  
17 Norrie -- anything in Norrie at all would be adopted,  
18 and Dr. Collins has already told us that what's in  
19 Norrie is redundant. The cameras and the functionality  
20 are redundant of what's already in Young.

21          Q     But you can point to nothing in Young  
22 disparaging known imaging functionality.

1 MR. HART: Object to form.

2 A What do you mean by imaging functionality?

3 Q (By Mr. Sheeler) Do you have an  
4 understanding of what imaging functionality means in  
5 this context?

6 A Well, it's a pretty broad term. It could  
7 mean a camera with improved resolution. It could be  
8 improved image processing capabilities. It could be  
9 the way the information is fed back. Could be part --  
10 so what information is discerned from the imaging  
11 system. Like in Young, this fat/lean separation line  
12 and doing an offset from that, that that could be part  
13 of what's being described here.

14 You're asking me a question that's going to  
15 require me to re-review the whole patent to answer. I  
16 don't see anything in here that would remotely suggest  
17 that you could adopt something from Norrie that would  
18 be useful to this, the disclosure of Young. And  
19 Dr. Collins has been very clear that there isn't  
20 anything.

21 Q (By Mr. Sheeler) But do you recall, sitting  
22 here today, any disparagement of imaging functionality,

1 as broad as you want to make that term, in Young?

2 A Yes.

3 Q What is that? Would you please point me to  
4 it.

5 A Well, we've already read that passage. These  
6 systems, these past systems, don't have the capability.  
7 They create waste, low yields.

8 Q Can you point me to anything else other than  
9 the passage we've already discussed, that you believe  
10 disparages imaging functionality?

11 MR. HART: Object to form.

12 A (Examines an exhibit.) If you'll look to the  
13 next paragraph in column 2, I'll start here. So  
14 starting at line 43 or 44. Thus, a need has existed in  
15 the art for an automated system which offers greater  
16 control over loin knife and scribe saw operations,  
17 which obviously includes the feedback imaging system,  
18 to optimize yield and reduce amount of waste product.

19 In particular, there is a need for a loin  
20 separation apparatus -- that's the whole machine --  
21 which may provide a customized processing of individual  
22 sides of meat to optimize the various operations for

1 each side and thereby result in higher quality and more  
2 consistent end products.

3           Clearly, the system includes the imaging.  
4 Its imaging is not specifically called out as a  
5 deficiency. But neither is there any reference to  
6 prior art there that could be used to improve an  
7 imaging system.

8           Q     Do you believe that that passage you just  
9 read on column 2, lines 43 through 51, disparages  
10 imaging systems such as Norrie?

11           MR. HART: Object to form.

12           A     It disparages systems such as Norrie.  
13 There's no specific mentions of shortcoming of the  
14 imaging system, but the whole system of Norrie is being  
15 disparaged in column 2.

16           Q     (By Mr. Sheeler) Okay. Other than the  
17 passages you've discussed, column 2, line 35 through  
18 51, which we've just discussed in sequence, can you  
19 point to anything else in Young that disparages imaging  
20 functionality?

21           MR. HART: Object to form.

22           A     So if you'll turn to column 4, talking about

1 the invention of the '032 patent, the invention of  
2 Norrie. There, it talks about the invention of this  
3 system. And so I'm starting on the second line.

4 It says, An imaging camera positioned to  
5 generate a top plan image of the side of meat and a  
6 controller coupled to the loin knife assembly, the  
7 conveying means, imaging camera. The controller  
8 includes image processing means for determining  
9 backbone and fat/lean separation lines from the top  
10 plan image. Profile calculating means for generating  
11 profiles for the vertical.

12 Moving means -- in the first and second  
13 lateral, moving means to control the first side of the  
14 U-shaped knife blade to follow a preset distance from  
15 the backbone and the second side of the U-shaped knife  
16 blade to follow a preset distance from the fat/lean  
17 separation line.

18 An activation means we're activating the  
19 vertical. Moving means -- the first and second  
20 lateral, moving means. And the conveying means to  
21 follow the profiles generated by the profile  
22 calculating means. Clearly, Norrie would be incapable

1 of providing the kind of image data that is -- and  
2 information that's described as part of this invention.

3 So it doesn't say, Norrie doesn't have this.  
4 But a person of skill in the art would recognize that  
5 this clearly is saying what's in Norrie isn't  
6 sufficient. That you need these other views to make  
7 the most optimal decisions about how to cut.

8 Q (By Mr. Sheeler) Just to make sure I  
9 understood you, because that was detailed. It's your  
10 opinion that a POSA would understand the passage you  
11 just read on column 4, lines 2 through 16, disparages  
12 Norrie's imaging functionality because it would be  
13 unable to provide the kind of image data disclosed  
14 here.

15 A The text of this passage doesn't disparage  
16 Norrie. It doesn't mention Norrie. But a person of  
17 skill in the art would understand that Norrie is  
18 incapable of providing the capability that this passage  
19 is describing. And so you're asking me for detailed  
20 answers.

21 You're saying, is there anywhere in this  
22 patent that a person would understand that Norrie's --

1   you're asking very narrow question about imaging  
2   functionality or some term you used like that. There  
3   is plenty of text and description in Young who would  
4   tell a person of skill in the art that Norrie is not  
5   capable of performing these operations.

6               And I consider that broadly disparaging of  
7   the prior art. The prior art just doesn't have this  
8   capability, including Norrie.

9               Q     Okay. Thank you. So that passage is your  
10   opinion is broadly disparaging of the prior art.

11              A     I would say the whole patent of Young. There  
12   are a lot of sections. I've skipped over some, but  
13   Young is a sophisticated system with multiple cameras  
14   and multiple views that can position the side of meat,  
15   know where it starts and ends, for example. Can view  
16   it from a number of different angles. These are  
17   capabilities that Norrie clearly does not have.

18              So I think there's a clear disparagement in  
19   the earlier passage we read that these prior art  
20   systems just don't have the needed capability. But  
21   then there's details within the specification that  
22   explain the things that are just not found in the prior

1 art with Norrie.

2 Q Okay. Thank you. Let's change gears.

3 Do you remember this morning briefly

4 discussing the North American Meat Institute?

5 A You mentioned that. I can't say that was the

6 exact organization, but I think you cited to them. So,

7 yes, I do remember you asked me a question about it.

8 Q Okay. I am going to hand you a printout of a

9 webpage from the North American Meat Institute website

10 and mark it Reinholtz Deposition Exhibit 1.

11 (Exhibit 1 marked.)

12 Q (By Mr. Sheeler) Take a moment to just

13 familiarize yourself with this, Doctor.

14 A The copy you gave me may be in everybody's

15 copy but there's some text that's overprinted that

16 makes it hard to read the full content of this

17 document.

18 MR. HART: Yes, mine has the same issue.

19 MR. SHEELER: It appears to be a universal

20 issue. There's only one or two paragraphs I want to

21 ask you, about, Doctor, which aren't covered. We'll

22 struggle along.

1           Q     (By Mr. Sheeler) We see that, on the first  
2 page of Reinholtz Deposition Exhibit 1, it states that  
3 the North American Meat Institute was founded in  
4 Chicago in 1906.

5           A     I do.

6           Q     Turn to the third page of Reinholtz  
7 Deposition Exhibit 1. And the first two paragraphs  
8 there, would you please read those.

9           A     1999 -- so I'm starting in mid-sentence. Is  
10 that where you'd like me to start?

11          Q     After the comma, please.

12          A     The AMI -- let me get the whole -- I can't  
13 read the whole -- no, I can't. So I'm starting at the  
14 last word on page 2. It says, In 1999, the AMI  
15 foundation launched a multi-million dollar multiyear  
16 Food Safety Initiative with the goal of reducing and  
17 ultimately eliminated listeria monocytogenes and  
18 e. coli 0157:H7 from meat and poultry products.

19                     In 2006, AMI celebrated its hundred-year  
20 anniversary as a leading trade association for the meat  
21 and poultry industry.

22          Q     Do you have any reason, sitting here today,

1 to believe that AMI is not a reputable industry  
2 association?

3 MR. HART: Object to form. Lacks foundation.  
4 Lacks relevance.

5 A Yeah, this is the first time I've seen this  
6 document. The document AMI sounds familiar, but I  
7 really don't have any opinion on the credibility of the  
8 organization. They may be credible. I just don't  
9 know.

10 Q (By Mr. Sheeler) Are you -- you have no  
11 opinion on whether they are well-known in the industry.

12 MR. HART: Object to form.

13 A I haven't attempted to do a survey of how --  
14 how well people know them. So, yeah, I don't have an  
15 opinion on that.

16 Q (By Mr. Sheeler) Are you aware if either  
17 Weber or Provisur are members of AMI?

18 MR. HART: Object to form. Lacks foundation.  
19 Lacks relevance.

20 A I probably have seen information to that  
21 effect, but I just don't recall sitting here. It  
22 hasn't been an issue in the case. I haven't considered

1 it.

2 Q (By Mr. Sheeler) Haven't considered it. You  
3 can put that to the side.

4 Did you consider any AMI machine design  
5 principles in forging your opinions?

6 MR. HART: Object to form. Lacks relevance.

7 A I would have to see specific AMI principles  
8 to see if I considered those. I don't have that in  
9 front of me. To my recollection, petitioners and  
10 Dr. Collins did not cite to that material.

11 Q (By Mr. Sheeler) Okay. You talked earlier  
12 about teaching away. I believe you referenced  
13 paragraph 22 of your report. So if you could turn to  
14 paragraph 22 of Exhibit 2007.

15 A Okay. I'm on the beginning of paragraph 22.

16 Q On the fourth line, I believe, you state  
17 that, A reference may teach away if a POSA would be  
18 discouraged; is that right?

19 A Would be discouraged from following the path  
20 set out in the reference or would be led in a direction  
21 divergent from the path that was taken by the patent  
22 applicant. And I go on from there.

1 Q Okay. What did you mean by discouraged?

2 Does discouraged mean it would be difficult to do?

3 A I don't think discouraged implies difficulty.

4 It implies a belief that the path would not lead to an  
5 improved outcome.

6 Q Okay. Is it still your opinion that Young  
7 has a more sophisticated blade and blade control system  
8 than Norrie?

9 MR. HART: Object to form.

10 A Are you citing to my opinion someplace?  
11 Perhaps you could point me to that so I could review  
12 what I said.

13 Q (By Mr. Sheeler) Sure. Turn to paragraph 55  
14 of your declaration. And 56.

15 A (Examines an exhibit.) Okay. Generally  
16 familiar with this material.

17 Q Is it still your opinion that Young has a  
18 more sophisticated blade control system than Norrie?

19 A Well, certainly, Young's blade, with its  
20 degrees of freedom and actuators and controller can  
21 provide a more sophisticated profile, a shape, than  
22 Norrie's system can.

1 Q What's a more sophisticated profile?

2 A One that generally can adapt to more -- can  
3 adapt to changes in the profiles within the meat. For  
4 example, if the -- if the fat line flares out, Young's  
5 system is capable of following that -- that flare,  
6 whereas Norrie wouldn't have that capability. So  
7 that's an example of a more sophisticated profile being  
8 cut.

9 Q Thank you. What is a profile in general?

10 A A profile is really the shape. So what  
11 shape? It's a curve that defines the cut, shape, at  
12 any point in time. And in Norrie, the shape of the  
13 blade doesn't change. It's only able to raise and  
14 lower. So it has one degree of freedom. In Young, it  
15 has multiple degrees of freedom and can change a number  
16 of parameters. And Young does a good job of describing  
17 that. I'd be happy to go through that with you if  
18 you'd like.

19 Q Maybe. One moment.

20 Do you think a POSA, when designing a  
21 defatter or derinder, would consider a design that does  
22 not contribute to the harborage and growth of bacteria?

1 MR. HART: Object to form.

2 A Seems reasonable. I don't know what you're  
3 reading from. It's not something that I've cited, but  
4 seems like a pretty general reasonable statement.

5 Q (By Mr. Sheeler) Would a POSA care about a  
6 design's tendency to cause the harborage or growth of  
7 bacteria?

8 A Yes, I think so.

9 Q How would a POSA care? In what way?

10 A You don't like people to die from the  
11 products you produce or become severely ill.

12 Q Seems reasonable.

13 Does the '321 Patent have any teachings  
14 regarding using insertion sensors, as we discussed  
15 earlier today, to measure fat cover thickness?

16 A The '321 Patent talks pretty extensively, I  
17 think, about the prior art and the probing systems like  
18 we see in Johnson, for example, and the disadvantages  
19 of those.

20 Q Okay. That's a good point. Let's talk about  
21 Johnson. Would you look at Exhibit 2006, which is US  
22 Patent number 6,929,540 to Johnson?

1 A Okay. I have the patent in front of me.

2 Q And you're familiar with this patent?

3 A Yes.

4 Q You've reviewed it in full?

5 A Yes.

6 Q Did you review it yesterday?

7 A I may have reviewed pieces of it on my own.

8 I don't recall whether I reviewed it with counsel at

9 all.

10 Q At a high level, what is Johnson's invention?

11 MR. HART: Object to form.

12 A Again, the abstract probably provides a  
13 reasonably good summary what the inventor thought the  
14 invention was. And it says, Apparatus and method for a  
15 meat cut classification and fat trimming for sensing  
16 the thickness of a layer of fat of a cut of meat and  
17 the various contours thereof, as it travels along a  
18 conveyance and providing the fat thickness or  
19 classification information to a downstream system for  
20 performing a fat-trimming operation.

21 Q (By Mr. Sheeler) What is a contour?

22 A Contour implies a topography. In other

1 words, a surface shape. And so the probes in Johnson  
2 give a three-dimensional map. And so like a contour  
3 plot of the earth, you see mountains and valleys and so  
4 forth. That's -- that's the general meaning of a  
5 contour.

6 Q Thank you. Does Johnson teach an apparatus  
7 for separation of a fat cover?

8 A (Examines an exhibit.) A fat trimming  
9 operation? I think it's correct to say Johnson can  
10 trim -- trim fat.

11 Q Does Johnson teach a measurement device for  
12 automatic determination of the thickness of the fat  
13 cover?

14 A (Examines an exhibit.)

15 MR. HART: Object to form.

16 A I haven't opined on this, but I don't have  
17 any disagreement that Johnson teaches that measuring  
18 the thickness using these probes and at a number of  
19 points within the body of the meat.

20 Q (By Mr. Sheeler) Does Johnson teach a  
21 control unit or control of the position of the cutting  
22 blade in dependence of fat cover thickness?

1           A     Again, I haven't analyzed that. I have not  
2     disagreed with Dr. Collins' analysis but I haven't  
3     analyze it myself.

4           Q     Do you dispute that it contains that  
5     limitation?

6           A     I just haven't analyzed it, so I don't know  
7     if it does or doesn't from my own analysis. I just  
8     haven't disputed it.

9           Q     (By Mr. Sheeler) Okay. At this time, you  
10    don't dispute it not having done an analysis.

11          A     I haven't done an analysis, so I haven't  
12    disputed it. That's right.

13          Q     Okay. Would you agree that Johnson discloses  
14    a product support and product feed?

15          A     Again, I haven't analyzed every limitation,  
16    formed an opinion, on every limitation. In particular,  
17    that limitation, I have not disputed that Johnson  
18    teaches a product support.

19          Q     You have analyzed Johnson for missing  
20    limitations from the '321 Patent; is that right?

21          A     I have, yes.

22          Q     What limitations of the '321 Patent does

1 Johnson fail to disclose?

2 MR. HART: Object to form.

3 A (Examines an exhibit.) Again, I haven't  
4 analyzed every limitation with respect to Johnson, but  
5 clearly, there's the big one that's missing. And I  
6 will refer to the '321 Patent.

7 So for example, in claim 1. A measurement  
8 device for automatic determination of the thickness of  
9 the fat cover, wherein the determination of the  
10 thickness of the fat cover takes place in a contactless  
11 manner. Johnson is -- complete contact, poking holes  
12 in the meat along the way, across the width of the  
13 meat.

14 Q (By Mr. Sheeler) Johnson does not disclose  
15 determination of the thickness of the fat cover in a  
16 contactless manner. Is that fair?

17 A Well, it doesn't disclose that whole  
18 limitation like that.

19 Q Of the limitations that you conducted an  
20 analysis on, are there any other that you feel Johnson  
21 does not disclose?

22 A Right. Well, like in most of them, right,

1 because it says, cutting. So the next limitation says,  
2 Cutting device coupled to the measurement device.

3 Well, the measurement device is the one that I just  
4 discussed that has to measure in a contactless manner.

5 So it doesn't disclose the limitations starting with  
6 cutting device coupled to the measurement device.

7 It doesn't disclose a control unit for  
8 control of the position of the cutting blade in  
9 dependence on the thickness determined by the  
10 measurement device. So it doesn't disclose that  
11 complete limitation.

12 So there's not much that it does -- well, if  
13 you go limitation by limitation. Yeah. There's a lot  
14 that's not disclosed in Johnson.

15 Q So for the limitation, the cutting device  
16 coupled to the measurement device for automatic  
17 separation of the fat cover from the flesh component,  
18 dependence on the thickness determined by the  
19 measurement device wherein the cutting device  
20 comprises.

21 For that limitation, you believe Johnson does  
22 not disclose it because it does not teach a measurement

1 device as defined in the previous limitation.

2 A Right. It doesn't teach that limitation, and  
3 clearly, it doesn't teach the measurement device that  
4 is required of this claim. So it doesn't practice  
5 that -- any of that limitation or doesn't practice --  
6 the limitation is taken as a whole and it just doesn't  
7 practice that limitation.

8 Q So is it your understanding of obviousness  
9 that when a limitation is missing from a piece of prior  
10 art and a second limitation references the missing  
11 limitation, the second limitation is also not taught by  
12 the prior art?

13 MR. HART: Object to form.

14 A That may be a legal question. But I look to  
15 see -- I look at each claim, limitation by limitation,  
16 to see if everything that is disclosed in that  
17 limitation is present. And for example, the cutting  
18 device limitation is not found in Johnson.

19 And so that limitation, if taken together --  
20 I don't take limitations a few words at a time to see  
21 if there's a -- a cutting device. I think you have to  
22 consider the whole limitation. That's the way I review

1 patents and analyze patents for obviousness or  
2 anticipation.

3 Q (By Mr. Sheeler) So it's your opinion the  
4 cutting device limitation is not taught by Johnson  
5 because Johnson lacks the measurement device. Is that  
6 fair?

7 MR. HART: Object to form.

8 A Well, it also doesn't -- it doesn't meet the  
9 last part of that limitation where it says, wherein the  
10 cutting device comprises, and then it requires a  
11 control unit that also has this measurement device  
12 requirement in it.

13 Q (By Mr. Sheeler) Johnson -- strike that.

14 In your opinion, Johnson doesn't disclose the  
15 limitation beginning with, a control unit, because it  
16 lacks a measurement device. Is that fair?

17 A It at least lacks the required claimed  
18 measurement device. That must be a contactless device.

19 Q Did you provide an opinion that Johnson lacks  
20 a travel profile?

21 A I don't think I provided an opinion on that.

22 Q Johnson has profiles, right? Are those

1 different from travel profiles?

2 MR. HART: Object to form.

3 A I just haven't provided an opinion on that.

4 Q (By Mr. Sheeler) Well, you defined profiles  
5 earlier, right? You just haven't defined travel  
6 profile; is that correct?

7 MR. HART: Object to form.

8 A Well, I -- I haven't analyzed the term  
9 "travel profile" to see if Johnson practices that or  
10 not. I haven't disputed petitioner or Dr. Collins'  
11 position on that. I've focus on the things that are  
12 clearly absent from Johnson and the clear  
13 incompatibility of the proposed combination.

14 I didn't comment on every limitation or every  
15 subset of every limitation.

16 Q (By Mr. Sheeler) All right. Would you look  
17 at Exhibit 1007, which is US Patent number 6,198,834 to  
18 Belk?

19 A Okay.

20 Q You're familiar with this patent as well?

21 A I am.

22 Q You've reviewed it in full?

1           A     I have.

2           Q     Did you review it yesterday?

3           A     I looked at portions of it on my own in the  
4     last few days.  Whether it was yesterday, I don't quite  
5     recall.  But I have looked at it recently.

6           Q     Is it your opinion that Belk teaches  
7     contactless measurements?

8                     MR. HART:  Object to form.

9           A     (Examines an exhibit.)

10                  MR. SHEELER:  Excuse me.  I'll withdraw that  
11     question.  I misspoke.

12           Q     (By Mr. Sheeler)  Is it your opinion that  
13     Belk teaches contactless measurements of height,  
14     length, or width?

15           A     (Examines an exhibit.)  That's not the focus  
16     of Belk.  Perhaps you can point me to someplace in the  
17     specification where it talks about those measurements,  
18     if it's there.  But I don't recall it off the top of my  
19     head.

20           Q     One moment.

21                     Look at Belk's claim 10.  Column 14.

22     Beginning 1 through 5.  It says in part, A length of

1 the area of interest, a width of the area of interest,  
2 density of lean tissue, density of the fat tissue.

3 A (Examines an exhibit.) I do see -- I do see  
4 in claim 10 the words, a length of the area of  
5 interest, a width of the area of interest. The area of  
6 interest is defined or the -- the understanding of area  
7 of interest is defined in claim 1. And that is an  
8 image processing term. Sometimes you'll hear people  
9 say, region of interest.

10 And so this is a collection of pixels within  
11 an image that may be 300 pixels wide and 220 pixels  
12 tall that is a focus of a particular analysis. So I  
13 think -- I think claim 10 is talking about the region  
14 of interest within a particular image. It doesn't all  
15 appear to be talking about measuring, for example, the  
16 thickness of a fat layer.

17 Q We'll get there. But first, does it disclose  
18 or teach measuring a length, width, or height, in  
19 general?

20 MR. HART: Object to form.

21 A It does discuss measuring. . .  
22 characteristic. I don't see the word "measuring" in

1 here.

2 Belk is about, of course, the quality of the  
3 palatability or quality, perceived quality, of a  
4 particular cut of meat. I don't see the term  
5 "measurement" in here, and I think you used that.  
6 Maybe it's here and I'm just overlooking it. It just  
7 talks about the region or area of interest and the  
8 length and the width of that.

9 Q (By Mr. Sheeler) Okay. How about, does Belk  
10 teach determining a length, width, or height?

11 MR. HART: Object to form.

12 Q (By Mr. Sheeler) And I would direct to you  
13 claim 1, which reads in part, Analyzing said at least  
14 one area of interest to determine at least one  
15 characteristic.

16 MR. HART: Same objection.

17 A To determine at least one characteristic of  
18 at said specimen of meat and determining the  
19 palatability. Okay. So one characteristic  
20 comprises -- so I agree that the length of this region  
21 or area of interest and the width are characteristics  
22 that are contemplated as one of the characteristics

1     that could be determined. Again, I don't think this  
2     relates to a macro measurement of something like the  
3     overall dimensions of the product or the thickness of  
4     the fat layer. I think this is really about image  
5     analysis and what's happening in the imaging analysis  
6     routine.

7           Q     (By Mr. Sheeler) Thank you. You mentioned  
8     earlier when discussing your understanding of Belk,  
9     a -- if it's 300 by 200 pixel area, and that's what  
10    region of interest means? Was that an example you were  
11    providing or do you believe that is where Belk defines  
12    an area of interest?

13          A     No, that is simply an example. So an image  
14    is captured in an image processing system, it may be  
15    low resolution, 640 by 480 pixels is sort of the  
16    original standard for the size of an image. And then  
17    in image analysis, which is a -- the complete focus of  
18    Belk, is on image analysis. When you look within that  
19    image, you focus on regions of interest that may have  
20    certain characteristics.

21                 So I was just citing -- I think I said 300 by  
22    220, but anyway, I was just giving an example -- it may

1 be much smaller than that. It could be much larger  
2 than that, depending on the size and number of pixels  
3 in the image. But it allows for analysis to occur in a  
4 reasonable amount of time, because you're not trying to  
5 analyze everything in the image. You're analyzing a  
6 sub-part or a region of interest, also called an area  
7 of interest, within the image.

8 Q Okay. Thank you.

9 Belk contemplates imaging and analyzing an  
10 entire meat carcass, correct?

11 MR. HART: Object to form.

12 A Perhaps. You'll have to point me to that. I  
13 just don't recall off the top of my head.

14 Q (By Mr. Sheeler) If Belk contemplated image  
15 and analyzing an entire meat carcass, then its  
16 determinations of lengths would not be limited to an  
17 extremely small measurement, would they?

18 MR. HART: Object to form.

19 A Yeah, I -- I disagree with what you said.  
20 You're still looking at a small subpart of an image.

21 Q (By Mr. Sheeler) Okay.

22 A I don't know -- I don't know the predicate

1 for that question is true. If you could point me to  
2 that, it might be helpful to look at what we're -- if  
3 Belk, in fact, does talk about analyzing an entire  
4 carcass, what Belk has to say about that. I just don't  
5 recall.

6 Q Okay. Could you look at column 1, line 55  
7 through 56, of Belk.

8 A (Examines an exhibit.) Yeah. Okay. So I  
9 read that, and there, I don't see any indication that  
10 the imaging system is looking at the entire carcass or  
11 cut. It just says, A device for scoring factors  
12 predictive of palatability of a meat carcass or cut.  
13 So that could entail a whole bunch of images or just  
14 scoring based on a portion of the carcass or cut.

15 Q Okay. Are you familiar with petitioners  
16 proposed combination of Johnson and Belk?

17 A To the extent that it's -- not in detail, but  
18 I am familiar with the general proposal to make the  
19 combination.

20 Q In your opinion, what elements of  
21 the '321 Patent are missing from that proposed  
22 combination of Johnson and Belk?

1           A     Well, Belk's missing most, if not all -- I'd  
2     say, Belk's missing most of the limitations. I already  
3     talked about Johnson not teaching most of the  
4     limitations of claim 1, which we analyze. Belk doesn't  
5     talk about, to my recollection, the -- you know, the  
6     fat separation. I don't believe there is a -- I don't  
7     believe there is a -- there's not a thickness  
8     determination in Belk.

9                     (Examines an exhibit.) There's not a cutting  
10    blade, to my recollection, in Belk. Cutting device is  
11    not in Belk. I'm picking words out of the limitations,  
12    and I shouldn't be doing that. I should be looking at  
13    the whole limitations. But I don't think limitation --  
14    there's a preamble in claim 1. I don't think Belk  
15    teaches an automatic -- or measurement device for  
16    automatic determination of thickness of the fat cover,  
17    wherein the determination of the thickness of the fat  
18    cover takes place in a contactless manner.

19                    I don't think Belk teaches the next  
20    limitation that requires a cutting device. I don't  
21    think it teaches the sub parts of that limitation,  
22    which talk about a cutting blade. Control unit, I

1 don't think, is taught. Product support. I just don't  
2 recall a lot of that being taught by Belk.

3 Q Dr. Reinholtz, I'm asking about the  
4 combination of Johnson and Belk. And it appears that  
5 you were analyzing the references separately for the  
6 missing limitations. Do you believe the proposed  
7 combination misses any limitations?

8 A Yes, of course. There's no contactless  
9 way -- the obvious one, no contactless way to determine  
10 thickness of the -- the fat cover in Belk. But the  
11 references are fundamentally incompatible. You just  
12 wouldn't even consider taking Belk's quality imaging  
13 system and trying somehow to supplant the probe system  
14 in Johnson with that.

15 Q Does the Johnson probe assembly move?

16 A Yes.

17 Q Can you point me to where in your declaration  
18 you state that Belk is incapable of measuring the  
19 thickness of the fat cover?

20 A (Examines an exhibit.) I don't think I said  
21 it's incapable. I just don't recall in the disclosure  
22 of Belk a discussion of determining fat layer

1 thickness. It has imaging capabilities, but I don't  
2 recall the fat -- the thickness of the fat layer being  
3 something that is contemplated by Belk.

4 Q In your report, did you say Belk failed to  
5 teach the determination of the fat cover thickness?

6 MR. HART: Object to form.

7 Q (By Mr. Sheeler) If I can direct you to  
8 page 55, which I think is the relevant section.

9 A (Examines an exhibit.) If you'll look in  
10 paragraph 64. Critically, as Belk explains and as  
11 petitioner admits -- expert admits, Belk's cameras  
12 cannot ascertain fat thickness from the angle of  
13 Johnson's probes.

14 Q Thank you. Does that sentence say that Belk  
15 can't determine the fat thickness or that it can't  
16 determine the fat thickness from that angle?

17 A Well, that particular paragraph says it  
18 can't. But that's to the extent that there is  
19 information in the proposed combination. It's  
20 extremely limited. That's what appears to be proposed  
21 by petitioners, and clearly, it can't do it from the  
22 position of Johnson's probes. There's no discussion by

1 petitioners or Dr. Collins of how you might position  
2 Belk's camera to determine the thickness of the fat  
3 layer, even if it is capable of that.

4           So I just think there's no description that  
5 would lead a person of skill in the art to believe that  
6 Belk's camera could be used as petitioners propose,  
7 with Johnson to determine the thickness of the layer of  
8 fat.

9           Q     Can you point me to where in this report you  
10 state that Belk is unable to determine the thickness of  
11 the fat cover in general, rather than in combination  
12 with Johnson?

13           MR. HART: Object to form.

14           A     I did not analyze the -- it's a combination  
15 reference. It's an obviousness reference. So my  
16 analysis was based on what the proposed combination,  
17 although the details were limited, I analyzed the  
18 proposed combination and based on Dr. Collins'  
19 description and petitioner's description, there's no  
20 way that Belk could be used to measure the -- the fat  
21 thickness.

22           Whether there's something in Belk that says,

1 in some situation, it might be able to, I don't think  
2 is relevant. It's the question, does the combination  
3 allow it? I don't recall in Belk a detail that says,  
4 This is how you measure the thickness of the fat layer.  
5 It may be there. I just don't remember it.

6 Q (By Mr. Sheeler) Do you dispute that Belk is  
7 capable of measuring the thickness of the fat cover in  
8 isolation, not in combination with Johnson?

9 MR. HART: Object to form.

10 A Yeah, I did not do my analysis in isolation.  
11 I considered what petitioners and Dr. Collins proposed.

12 MR. SHEELER: I think we've gone an hour and  
13 half. Take a ten-minute break?

14 THE WITNESS: Yes.

15 THE REPORTER: We're off the record.

16 (Recess from 2:21 p.m. to 2:32 p.m.)

17 THE REPORTER: We're on the record.

18 Q (By Mr. Sheeler) Back, Doctor.

19 We were discussing Belk's functionality --

20 A Yes.

21 Q -- before the break. It's your opinion that  
22 the proposed combination of Johnson and Belk is

1 incapable of measuring the thickness of the fat cover;  
2 is that correct?

3 A It is, and then I've had a chance during  
4 break in the last few minutes to look at Belk a little  
5 more and to look at Dr. Collins' deposition -- I'm  
6 sorry, his declaration. And I'm fairly convinced that  
7 Belk does not disclose measuring the thickness of the  
8 fat cover.

9 I think maybe Dr. Collins has confused  
10 looking at an area of interest, which is a sub-region  
11 within an image, with measuring more of a macroscopic  
12 property. So while it may be possible in Belk or it is  
13 possible and disclosed to measure areas of interest  
14 within an image, I don't see any disclosure of  
15 measuring the thickness of fat.

16 If there's some -- if you disagree with that,  
17 you can point me to it. But my opinion is, from what I  
18 recall and what I see, I don't remember any disclosure  
19 of that.

20 Q Could you point me to where in your report  
21 you provide the opinion that Belk does not determine  
22 the thickness of the fat cover.

1           A     Well, I'm stating it for the record here.

2     You have an opportunity to ask me questions and point  
3     me to something in Belk if you think this is incorrect.

4           I do say in my report, again, that the  
5     combination just can't work as it's been proposed  
6     because Belk's camera wouldn't be in a position for  
7     everyone to make a such a determination. I think  
8     that's sufficient to prove the combination doesn't  
9     work. Beyond that, I think Belk just doesn't disclose  
10    determining the thickness of the fat layer at all.

11          Q     Understood. And we'll definitely ask some  
12    questions about that opinion. But, did you provide  
13    that opinion in your declaration, to your knowledge,  
14    sitting here today?

15          A     Again, I said, as proposed, the combination  
16    could not provide the thickness of the fat layer.

17          Q     But I think you're now testifying that it's  
18    your opinion Belk, even in isolation, couldn't measure  
19    the thickness of fat cover; is that right?

20          A     Belk doesn't disclose that, and Dr. Collins  
21    doesn't appear to present evidence that Belk discloses  
22    that.

1           Q     Okay. So in your opinion, Belk doesn't  
2 disclose the determination of the thickness of the fat  
3 cover.

4           A     Correct.

5           Q     Okay. And did you provide that opinion in  
6 your report, to your knowledge?

7           A     Well, again, I provided it with respect to  
8 the combination. So the combination can't work. Not  
9 sure that it's critical to say that the reference in  
10 isolation wouldn't work, because that's not the  
11 proposed combination of obviousness.

12                     But I'm telling you here today that I don't  
13 think Belk discloses that. It may not be explicitly  
14 stated in my report, except in reference to the  
15 combination. I just don't think that Belk ever talks  
16 about determining the thickness of the fat layer.

17           Q     I understand. I just want a clear record of  
18 your opinions and where they were disclosed. I  
19 understand it's your opinion in answer to the question  
20 now. But sitting here today, you're not sure if you  
21 directly addressed Belk on its own is incapable of  
22 determining the thickness of the fat cover.

1           A     I think I've been pretty clear about that.

2           Q     So the answer's yes?

3           A     The answer is that I don't think Belk  
4     discloses determining the thickness of a fat cover.  
5     And the combination certainly doesn't even -- even if  
6     Belk had the capability, the combination, as proposed  
7     by petitioners and Dr. Collins, wouldn't allow the  
8     determination of the thickness of the fat cover. So it  
9     fails on at least two counts, in my view.

10          Q     Thank you. I think that makes your opinion  
11     in the limitations clear. But I need to be clear about  
12     your knowledge of your report and what's in your  
13     report.

14                 Do you believe in your report you discussed  
15     your current opinion that Belk, on its own, does not  
16     disclose determining the thickness of the fat cover?

17          A     Again, I think I've answered that. What's in  
18     my report. I've cited what's in my report. You're  
19     welcome to interpret it how you wish. But I don't  
20     think Belk discloses determining the thickness of the  
21     fat cover and the combination clearly can't work.

22                 I focused on the combination, which is what

1 petitioners focused on. But looking at Belk today and  
2 looking at Dr. Collins' declaration, I don't see that  
3 there is any evidence in Belk of determining the  
4 thickness of the fat cover.

5 Q Understood. So other than discussing the  
6 combination in your report, is there any discussion of  
7 Belk, on its own, in your opinion, that it does not  
8 disclose the determination of the thickness of the fat  
9 cover?

10 A Well, there's no description in my  
11 declaration or Dr. Collins's declaration that that  
12 limitation is disclosed.

13 Q Thank you. That's helpful.

14 Is Belk limited to a conventional camera?

15 MR. HART: Object to form.

16 A No. Petitioners' combination is limited to a  
17 visual white reflectance-based camera, but Belk does  
18 discuss other possible sensing technologies.

19 Q (By Mr. Sheeler) You testified that  
20 Dr. Collins' declaration has no description that the  
21 limitation of determining the thickness of the fat  
22 cover is disclosed by Belk. Is that right?

1           A     I see references that he cites, but looking  
2     at those, I don't really see where Belk -- maybe I'm  
3     missing it. You're welcome to point me.

4           Q     Well, would you look at paragraph 209 of  
5     Dr. Collins' declaration, which I believe is  
6     Exhibit 1003.

7           A     Okay. I'm looking at 2,009.

8           Q     I'm sorry. 209?

9           A     I'm sorry, 209, yes.

10          Q     The paragraph there reads that, on the last  
11     sentence, Belk uses this process to measure the length,  
12     width, and surface area of fat within a meat product.  
13     Do you see that?

14          A     I do.

15          Q     And the heading for the section of paragraph  
16     209 is titled Dependent claim 2, wherein the  
17     determination of the thickness of the fat cover takes  
18     place optically.

19          A     Correct.

20          Q     Do you see that?

21          A     I do.

22          Q     I understand you may disagree with his

1 citations. But is -- doesn't this show that  
2 Dr. Collins is saying he believes that Belk determines  
3 the thickness of the fat cover?

4 A (Examines an exhibit.)

5 MR. HART: Object to form.

6 A Again, he -- I probably need to go back and  
7 look at all the citations. Dr. Collins does not  
8 clearly say that the thickness of a fat layer is  
9 determined. He points to -- so paragraph 209, in  
10 particular, that you directed me to, talks about  
11 analyzing an area of interest on a meat product.

12 So this, again, is within an image, a small  
13 region that is the focus of the analysis for things,  
14 like, looking at fat/lean ratio content and things like  
15 that.

16 I don't see a specific disclosure of the  
17 measurement of fat thickness. Maybe I've forgotten or  
18 overlooked it today in my review of Belk, but I just  
19 don't see that.

20 And I don't see Dr. Collins explicitly saying  
21 that or pointing to something that makes me think it's  
22 in Belk explicitly.

1           Q     Would you look at paragraph 188 in  
2     Dr. Collins' report. Look at the last sentence.

3           A     (Examines an exhibit.) I see that.

4           Q     So I understand that you may disagree, but  
5     according to that last sentence, which reads, Belk  
6     discloses that imaging device 12 contactlessly takes  
7     image data of a meat product, and said data is then  
8     analyzed to determine the thickness of the fat cover.  
9     It's pretty clear in Dr. Collins' opinion that Belk  
10    does this, right?

11               MR. HART: Object to form.

12          A     Look at the first word that you didn't read,  
13    "therefore," right? So there's a predicate to this  
14    statement, and it says -- look above that. Data --  
15    okay. So I'm starting in paragraph 188, one, two,  
16    three, four, five, six, seven lines in, it says, Data  
17    processing unit 16 may measure the length, width, and  
18    surface area or an area of interest. By determining  
19    location of fat in an area of interest, the location of  
20    fat in an area of interest.

21               That's a subpart of the entire image. So  
22    again, I'm not convinced that that sentence really says

1 that Belk can measure the thickness of a fat layer. It  
2 can measure fat dimensions within an area of interest.  
3 That is not necessarily the fat layer. So I don't see  
4 a clear disclosure in Dr. Collins' declaration that it  
5 can measure a fat layer.

6 Q (By Mr. Sheeler) Understood. I'm not asking  
7 you about a clear disclosure or your opinion on his  
8 citations. You understand, it is Dr. Collins' opinion  
9 that Belk discloses the determination of the thickness  
10 of the fat cover, right?

11 MR. HART: Object to form.

12 A In an area of interest. So that's not the  
13 fat cover of the meat product that we're talking about.  
14 The area of interest is a subpart of an image.

15 Q (By Mr. Sheeler) He describes it as the  
16 thickness of the fat cover in the last sentence of that  
17 paragraph.

18 A Within an area of interest.

19 Q That is not in that sentence.

20 A The therefore, though, creates a predicate,  
21 right? So there's an assumption that you're looking at  
22 an area of interest. And what Belk appears to disclose

1 is that within that area of interest, you can look at  
2 it and see the extensiveness of the fat in that area of  
3 interest. That doesn't mean that you're looking at the  
4 whole fat cover.

5 Q How do you know that is Dr. Collins'  
6 understanding of the term "area of interest"?

7 A Well, it doesn't appear from my quick  
8 re-review of his declaration that he discusses area of  
9 interest. Perhaps with intent, because I know he's  
10 knowledgeable about image processing and would  
11 understand what an area of interest within an image  
12 that's being processed would be. It's a subpart of the  
13 image and not the whole image.

14 Q And you're assuming that's his understanding.

15 A Well, he says, it's within an area of  
16 interest.

17 Q I understand that. He's saying -- you are  
18 assuming his understanding of the term "area of  
19 interest" aligns with yours.

20 MR. HART: Object to form.

21 A Well, he doesn't tell us what he thinks the  
22 area of interest is. I think Belk describes the area

1 of interest as a subpart of the image, but I don't  
2 think there's really any dispute about that. If you'll  
3 go to claim 1 of Belk.

4 So claim 1 talks about obtaining an image,  
5 and then identifying -- identify at least one area of  
6 interest of said specimen of meat. Clearly, it's a  
7 subpart of the image. It's a -- it's a common term in  
8 image processing. You'll also hear it called, region  
9 of interest.

10 Q (By Mr. Sheeler) Can you point me to where  
11 in Belk, Belk defines the area of interest as being too  
12 small to determine the thickness of the fat cover.

13 MR. HART: Object to form.

14 A If I reread Belk, I don't know that I would  
15 find that. But I can say that there's no evidence that  
16 I see that says Belk tells us that this is a tool that  
17 can be used or this invention can be used to determine  
18 the thickness of a fat cover.

19 I think it's an extrapolation by petitioners  
20 and Dr. Collins to think that this may be part of  
21 what's disclosed in Belk. But I don't see it  
22 explicitly in Belk.

1 Q (By Mr. Sheeler) Understood.

2 A And again, combination fails for the reasons  
3 I have clearly stated in my report. But as I look at  
4 this more closely and have a chance to think about it  
5 more, I just don't think Belk discloses the limitation  
6 of determining the thickness of the fat cover at all.

7 Q Okay. Are you familiar with a product called  
8 the Cognex In-Sight?

9 A I've heard of Cognex.

10 Q What is the Cognex?

11 A I believe, if my recollection is correct,  
12 that Cognex is a company that makes image analysis  
13 tools. But I'm not a hundred percent sure of that.

14 Q Were there imaging analysis tools available  
15 at the time of the '321 Patent?

16 MR. HART: Object to form.

17 A Yes. They were more limited, but there were  
18 tools.

19 Q (By Mr. Sheeler) Were they known in the  
20 field of food processing at the time of the  
21 '321 Patent?

22 A Some of the tools and analysis techniques

1    were known. The extent of what was known at the time,  
2    I can't put a boundary on it. But there were some  
3    tools that were known, different color representations,  
4    for example, as described by Belk, were clearly known.

5           Q     Was the Cognex -- was the Cognex imaging  
6    analysis tool known in the food processing industry at  
7    the time of the '321 Patent for any application?

8           MR. HART: Object to form.

9           A     (Examines a document.) I don't -- I don't  
10   recall a citation to it in the prior art. I think it  
11   was around about the time of the '321 Patent, but I  
12   just don't have days firmly in mind. It's one of a  
13   number of different image processing tool companies  
14   available toolboxes.

15          Q     (By Mr. Sheeler) Could the Cognex at the  
16   time of the '321 Patent distinguish between fat and  
17   meat?

18          MR. HART: Object to form. Foundation.

19          A     I don't -- you'll have to give me more  
20   information on what Cognex systems were available. I  
21   probably can't analyze that on the fly. And certainly  
22   not without the proper input, the proper images.

1 It's -- these toolboxes don't operate out of the box.  
2 They require manipulation and setting of parameters.  
3 And so it's certainly possible that they could do this  
4 at some level. What the capability was at the time of  
5 the '321 Patent, I do not know.

6 Q (By Mr. Sheeler) Okay. Let's mark Reinholtz  
7 Deposition Exhibit 2.

8 (Exhibit 2 marked.)

9 Q (By Mr. Sheeler) This is a press release  
10 entitled, Cognex Surpasses 5 million in Bookings for  
11 new In-Sight Vision Sensor. It is also stamped with a  
12 Bates stamp from the parallel litigation. The number  
13 Weber-0005116.

14 Have you seen this document before, Doctor?

15 A I do not recall seeing it before.

16 Q Okay. Do you see a date on this document? I  
17 direct you to the first paragraph, if it's helpful.

18 A I do. So August 3rd, 2000.

19 Q Okay. Could you read that first paragraph?

20 A August 3rd, 2000 -- August 3rd, 2000. Cognex  
21 Corporation, NASDAQ: CGNX, the world's leading  
22 supplier of machine vision systems, today announced

1     that it has surpassed 5 million in bookings for its new  
2     In-Sight 2000 vision, sensor after only six months of  
3     active selling.

4           Q     So at the at least, we're discussing these  
5     various imaging tools, but at least the Cognex In-Sight  
6     2000 was available and known in the art by at least  
7     August of 2000.

8           MR. HART:   Object to form.

9           A     I agree.  I don't know that that tells us  
10    anything about what might be possible with respect to  
11    food products or meat.  But it was available.

12          Q     (By Mr. Sheeler)  Okay.  You can put that to  
13    the side.

14          MR. SHEELER:  Let's mark Reinholtz Deposition  
15    Exhibit Number 3.

16                 (Exhibit 3 marked.)

17          Q     (By Mr. Sheeler)  Do you recognize this  
18    document, Doctor?

19          A     No, I can't recall seeing this specific  
20    document.

21          Q     What is this document?

22          A     It's a document that's printed from the

1 Wayback Machine, so it's a web article from Cognex.  
2 And it looks like it's, in the upper left-hand corner  
3 within the black shade region, it says, In-Sight. So  
4 based on the previous article, this must be talking  
5 about their vision system, which was referred to in the  
6 previous article you gave me as their In-Sight 2000  
7 system. And it's titled Food and Beverage  
8 Applications.

9 Q Just for clarity of the record, Doctor, is  
10 this also stamped with a Bates stamp from the parallel  
11 litigation between the parties?

12 A It is.

13 Q Okay. Could you read the Bates stamp,  
14 please, for the record?

15 A Weber-0966593.

16 Q Thank you. Based on this document, is it  
17 your opinion that the Cognex In-Sight was available for  
18 use in the food and beverage industry?

19 MR. HART: Object to form. Foundation.  
20 Relevance.

21 A (Examines an exhibit.) I see three examples  
22 here of use in the -- it doesn't -- in particular say

1     that they're in use, but I think it's probably a  
2     reasonable assumption to say that these were at least  
3     being pilot-tested by various food and beverage  
4     companies. And the three applications are measuring  
5     the label position on a soda bottle, verifying the  
6     assembly of snack-packs, and locating chocolates for  
7     robot picking.

8           Q     (By Mr. Sheeler) Do you agree that those are  
9     food industry applications?

10          A     Yes.

11          Q     So Cognex was used in at least -- or being  
12     tested, at least, in three food industry applications.

13               MR. HART: Object to form. Foundation.  
14     Relevance.

15          A     (Examines an exhibit.) Yes, I think I -- I  
16     would agree that these three examples demonstrate  
17     Cognex In-Sight system being used in a manufacturing  
18     process, planning the position of a label, probably  
19     isn't specific as to food processing. That's the first  
20     example.

21               The second one has to do with making sure  
22     there are enough products in a snack-pack. And if the

1 seal has been broken.

2 And the third example is being able to  
3 provide feedback to a -- a robot to locate chocolates.  
4 So none of these are meat processing or fat/lean  
5 determinations, but there are examples that relate to  
6 the food industry.

7 Q (By Mr. Sheeler) Thank you. You can put  
8 that to the side.

9 You have no opinions whether the Cognex  
10 In-Sight is capable of determining the difference  
11 between fat and lean?

12 A My experience with Cognex and similar systems  
13 is that without direction, programming, that these  
14 systems can't immediately make determinations of that  
15 type. So that's been my broad experience. I haven't  
16 looked -- I certainly haven't looked at the time of the  
17 invention at what Cognex was capable of doing, whether  
18 there was a Cognex toolbox that allowed fat/lean  
19 determination.

20 It may be in one of these references. It may  
21 be described in Belk. I just don't recall that, so  
22 maybe -- maybe it was available, but I don't see any

1 solid evidence that it could -- it could do -- the  
2 Cognex system could determine fat versus lean without  
3 additional effort to develop it.

4 Q Okay. Would that effort have been beyond the  
5 skill of a POSA as defined in this IPR?

6 A It probably would require some support from  
7 engineers or technicians at Cognex to be able to  
8 complete. So I think a POSA would support, could  
9 probably do up -- but the image processing tools get  
10 pretty complicated. You know, the color -- the color  
11 representation that's being used, things like edge  
12 detection or region of interest analysis.

13 These are complicated things that may not be  
14 familiar to a POSA. But what, I think, the concepts of  
15 what they could do would be within the understanding of  
16 a POSA, so with some support, I think they might be  
17 able to implement it if that -- if the tools really  
18 were available.

19 Q And you adopted Dr. Collins's definition of a  
20 POSA.

21 A I did, yes. For somebody with a couple of  
22 years, for example, of experience in the food

1 processing after getting a mechanical engineering  
2 degree, in this time frame, probably didn't have a  
3 wealth of image processing or knowledge, maybe worked  
4 with vendors that did that. But the POSA themselves  
5 may not have had that kind of experience.

6 Q Would you just quickly look at Exhibit 1003,  
7 Dr. Collins' report, paragraph 43, the last sentence?

8 A Paragraph 43?

9 Q Paragraph 43, the last sentence.

10 A (Examines an exhibit.) Yes. I agree with  
11 that sentence.

12 Q You agree with that sentence?

13 A I do.

14 Q Okay. Could you read the sentence for the  
15 record just to be clear?

16 A Sure. It says a POSA may have consulted with  
17 subject matter experts, such as in the field of  
18 hygiene, meat separation, or software programming.

19 He doesn't specifically mention the image  
20 processing but that is a field unto itself. So I think  
21 that comports with what I was just saying, that a POSA  
22 alone may not have the ability to -- I think it would

1 take somebody with a higher level of skill to do some  
2 of the image processing or a more narrow focused skill  
3 set.

4 Q Thank you. You can put his report to the  
5 side.

6 We'll have fun now. I'm going to mark  
7 Reinholtz Deposition Exhibit 4, which is a document  
8 bearing the Bates stamp in the parallel litigation  
9 Weber-0005121.

10 (Exhibit 4 marked.)

11 Q (By Mr. Sheeler) Have you seen this document  
12 before, Dr. Reinholtz?

13 A I don't recall seeing it.

14 Q What does this document appear to be?

15 A It's another reference, Cognex reference. It  
16 appears to be one of perhaps multiple user manuals, how  
17 to get started using the Cognex system. And, it shows  
18 a camera and a -- a box that probably is part of the  
19 processing system on the cover.

20 Q Thank you. Would you turn to the page with  
21 the Bates stamp Weber-0005197. So a ways back. It's  
22 Chapter 10.

1           A     Okay. I'm here.

2           Q     Do you see about halfway down the page where  
3     it says, the In-Sight's measurement capabilities are  
4     grouped into three categories; counting pixels,  
5     counting features, measuring distance?

6           A     I do see that.

7           Q     Based on this disclosure, do you believe that  
8     the Cognex In-Sight is capable of measuring distance  
9     between points?

10               MR. HART: Object to form. Lacks foundation.  
11     Lacks relevance.

12           A     In a general sense, I agree with that.  
13     That's what the document says. Although it's a very  
14     large document, and I have not had the opportunity to  
15     consider it. So based on just what I see in this page,  
16     it says it has the capability -- group of capabilities,  
17     and one of those groups of capabilities is measuring  
18     distance.

19           Q     (By Mr. Sheeler) Okay. Thank you. You can  
20     put that to the side.

21               MR. SHEELER: Could we go off the record?

22               THE REPORTER: We're off the record.

1 (Recess from 3:05 p.m. to 3:21 p.m.)

2 THE REPORTER: Back on the record.

3 Q (By Mr. Sheeler) All right, Doctor. On the  
4 previous breaks, did you discuss the substance of your  
5 testimony with counsel?

6 A No.

7 Q I just have a few more questions, and then I  
8 think I'm done.

9 A Okay.

10 Q So we talked much earlier today about the  
11 claim 1 of the '321 Patent and the separation of the  
12 fat cover from the meat product.

13 A Yes.

14 Q And you gave the example of cutting a meat  
15 product in half and that that would probably not be  
16 separation under the claims of the '321 Patent; is that  
17 right?

18 MR. HART: Object to form.

19 A I think if you cut it in a way that separated  
20 mostly fat from mostly lean, it might. But in general,  
21 I would say that's not -- probably doesn't meet the  
22 limitations of the claim.

1           Q     (By Mr. Sheeler) Okay. Would a portioning  
2 machine like the one discussed by Dr. Collins in  
3 paragraph 47 of his report, is that separating a fat  
4 cover on a meat product? That's halfway down, US  
5 Patent publication to Sigurdsson, in paragraph 47 of  
6 Exhibit 1003.

7           A     (Examines an exhibit.) I don't generally  
8 think a portioning system or portioning conveyor, a  
9 slicer that portions, in -- there hasn't been any  
10 dispute about the separation of fat and lean. But I  
11 don't think that would meet the -- certainly not the  
12 spirit of what the '321 Patent is talking about.  
13 That's really talking about slicing machines that  
14 creates portion sizes and stack up the meat in a  
15 certain way.

16          Q     There's no dispute, so you agree that Young,  
17 Norrie, and Johnson specifically separate the fat  
18 cover?

19          A     Young is a little more -- I haven't disputed  
20 it, but Young is little more complicated because it's  
21 cutting around bone. So part of the system is  
22 separating a fat cover, so that's been a part of the

1 discussion.

2 Q But you haven't disputed it at this time.

3 A I haven't disputed it, no, and I don't  
4 dispute it at this time.

5 You said if you were to cut a meat product in  
6 half but did it in such a way that you were separating  
7 mostly fat from mostly lean, that might be separation  
8 of fat cover? Is that right?

9 A Probably have to see a more specific example  
10 of that. And consider it in a light of the '321  
11 Patent. It could be, though. Certainly could be.

12 Q How would a person know when a machine has  
13 separated the fat cover? If a machine is successfully  
14 a fat cover separation apparatus?

15 MR. HART: Object to form.

16 A I think there are some clear examples where  
17 there is back fat on a pork side, for example, that is  
18 a fairly distinct, uniform, fat layer. And I think  
19 examples like that, it's pretty clear when you separate  
20 most of that away from the meat portion, that clearly  
21 falls under the scope. Are there systems that may  
22 be -- I haven't disputed it.

1           So for example, Young has separation of parts  
2   that don't appear to be fat or based on just the line  
3   between the bone and the meat. So I haven't made it an  
4   issue with the prior art. I haven't provided a precise  
5   definition of when a product is separating fat from  
6   meat. But I think there's some examples that are  
7   pretty clear. Is there a gray area? Probably. But I  
8   don't think we've really gotten into that.

9           Q     (By Mr. Sheeler) Could you give an example  
10   that is clearly not separating the fat cover?

11           MR. HART: Object to form. Lack of  
12   relevance. Lack of foundation.

13           A     I think a typical -- I haven't considered  
14   this. It's not part of my stated opinion. But I think  
15   if you're portioning a food product that's already been  
16   preprocessed to remove the fat layer and has some fat  
17   content, but you're slicing it, for example, that  
18   probably wouldn't fall within the scope of  
19   the '321 Patent.

20           Q     (By Mr. Sheeler) Why not? How would a  
21   person know that?

22           A     I guess I will say, I haven't taken issue

1     that petitioners and Dr. Collins have represented that  
2     the art that's been presented, the three -- the three  
3     primary references that refer to removing fat are very  
4     specific about that, that you're removing a fat layer  
5     from a lean layer. At least, in part, Young is not  
6     removing just a fat layer. What the boundaries of that  
7     are, I haven't considered it, so I wouldn't represent  
8     an opinion today.

9                 MR. SHEELER: No further questions from  
10    petitioner.

11                MR. HART: Nothing from me.

12                THE REPORTER: Reading and signing?

13                MR. HART: Yes, we'll read and sign.

14                (Off the record.)

15                MR. HART: We don't need a rough draft.  
16    We'll take a standard turnaround, final draft.

17                (Deposition adjourned at 3:28 p.m.)

18                                 \*                         \*                         \*

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