

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

QUASAR SCIENCE LLC

Petitioner,

vs.

COLT INTERNATIONAL CLOTHING, INC, d/b/a COLT LED

Patent Owner.

Case: IPR2023-00613

U.S. Patent No. 10,411,582

Case: IPR2023-00614

U.S. Patent No. 10,566,895

DEPOSITION OF KEN SCOTT FISHER

16000 Ventura Boulevard, Suite 1200

Encino, California 91436

April 12, 2024

9:13 a.m.

SUSAN A. O'LEARY, CSR #3522, RPR, CRR

A P P E A R A N C E S:

On behalf of the Petitioner

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ALSO PRESENT:

FRED FELLMETH

FRED HOLMES - VIDENDUM - (Via Zoom)

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Previously marked exhibits:

- Exhibit 1001
- Exhibit 1005
- Exhibit 2045
- Exhibit 2047
- Exhibit 2050
- Exhibit 2100

1 Previously marked exhibits (continued)

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3 IPR 2023-00613:

4 Exhibit 1002

5 Exhibit 1022

6 Exhibit 1023

7 Exhibit 1024

8 Exhibit 1047

9 Exhibit 2125

10 Exhibit 2126

11 Exhibit 2127

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13 IPR 2023-00614:

14 Exhibit 2125

15 Exhibit 2126

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DEPOSITION OF KEN SCOTT FISHER

April 12, 2024

KEN SCOTT FISHER,

called as a witness, having been duly sworn by
the court reporter, was examined and testified
as follows:

EXAMINATION

BY MR. WARD:

Q Good morning, Mr. Fisher.

A Yes.

Q Can you state your name and address for
the record for us.

A Sure. Ken Scott Fisher. I'm currently
based in Medellin, Columbia, and I can send her the
address.

Q Excellent.

Can I call you Ken?

A Sure.

Q My name is Trenton Ward, I'm a partner at
the firm of GreenbergTraurig, and I'm representing
Petitioner Quasar in this case.

Do you understand that you are here in

1 connection with two IPRs?

2 A I do, yes.

3 Q And just so we have it in the record I'm

4 going to read out the numbers for those IPRs. It

5 is IPR 2023-613 and IPR 2023-614. Does that sound

6 accurate to you, Ken?

7 A Yes.

8 Q Okay. Do you understand that you are

9 under oath today?

10 A I do.

11 Q And this means that you have sworn to tell

12 the truth as if you were in front of a judge and

13 jury.

14 A Yes.

15 Q Is there any reason why you cannot testify

16 truthfully today, Ken?

17 A No.

18 Q Ken, before we begin I just wanted to ask

19 you if you are represented by an attorney in this

20 matter.

21 A I am not, no.

22 Q Okay. I see Mr. Hoffman is here today.

23 You did not hire Mr. Hoffman to represent you?

24 A That is correct.

25 Q Okay. Did you sign an agreement with Mr.

1 Hoffman?

2 A For this matter I'm not sure. I don't
3 think so.

4 Q So you don't believe you have an
5 engagement agreement in place?

6 A No.

7 Q And you understand Mr. Hoffman is
8 representing Colt International Clothing, correct?

9 A Yes.

10 Q So Mr. Hoffman is not your lawyer,
11 correct?

12 A Correct.

13 Q Ken, have you been deposed before?

14 A I have.

15 Q Okay. How many times?

16 A I think a couple times, maybe twice.

17 Q Okay. Talk to me about those. What was
18 the first time?

19 A I believe one was a -- we had a dispute
20 with an ex-salesperson and there was a declaration
21 involving that.

22 Q What company was that, the dispute
23 involved with?

24 A That was involved with Litepens.

25 Q Okay. What year was that dispute, do you

1 remember?

2 A 2009, I believe.

3 Q Okay. And why were you deposed in 2009?

4 A All of the -- all of the company officers
5 were deposed as part of a -- it was a breach of
6 contract matter by an ex-salesperson.

7 Q And had you been involved in
8 communications with that salesperson?

9 A To a limited degree, yes, correct.

10 Q So you were deposed in your capacity as a
11 Litepanels employee?

12 A Correct.

13 Q And what was your position at that time?

14 A Probably like Director of Business
15 Development.

16 Q Okay. You said there was another
17 deposition as well. What was that?

18 A I'm trying to think if there was another
19 patent matter involving a deposition. There may
20 have been just the one deposition. I need to think
21 about it a bit more.

22 Q But there was another patent litigation
23 matter that you were involved in?

24 A No, I'm trying to think if there was.
25 There may have just been the one deposition only.

1 Q Okay. Well, it sounds like you are at
2 least roughly familiar and I know you understand
3 listening to some of our depositions this week so
4 you have heard me kind of go over the ground rules.

5 A Right.

6 Q I will give you the highlights of that
7 which is I'm going to ask you about some documents
8 from the IPR today. I will share those with you
9 when we are taking a look at those. As you have
10 heard me say a couple times this week we will try
11 to have to manage not talking over each other --

12 A Right.

13 Q -- for Susan's benefit here and I'm bad
14 about doing it so I will try not to.

15 A Okay.

16 Q I would appreciate the same from you and
17 we will try to manage that as best we can. Also I
18 will ask for you to wait until I'm done asking the
19 question before you answer the question and I will
20 do the same, wait for you before I ask the next
21 question. When I ask a question I will ask that if
22 you don't understand it, Ken, you can ask me for
23 clarification.

24 A Certainly.

25 Q Okay. So if you answer my question can I

1 assume that you do understand the question?

2 A Yes.

3 Q Okay. And Mr. Hoffman may object from
4 time to time today but you understand that unless
5 Mr. Hoffman instructs you not to answer you are to
6 answer my question, correct?

7 A Yes, I understand.

8 Q And we will take breaks today as you need
9 them, Ken, just let me know. I think you have
10 probably seen my cadence earlier in the week about
11 every hour but if I miss it let me know and we can
12 take a break and see how the day plays out here.

13 I think you've heard me earlier in the
14 week but I just want to remind you that when we do
15 go on break you are not to discuss your testimony
16 here today with anyone else including Mr. Hoffman,
17 okay?

18 A Correct.

19 Q What did you do to prepare for the
20 deposition today, Ken?

21 A Let's see here. I read my depositions, I
22 read the depositions of Kevin Baxter, Fred Holmes.
23 Reread I should say.

24 Q And so you have read those, both the Kevin
25 Baxter declaration and the Fred Holmes declaration

1 before?

2 A Correct.

3 Q Did you look at any other documents in
4 preparation for today?

5 A Let me see here. I believe I scanned
6 the -- the Hasnain and Ducharme patents as well.

7 Q And, Fred, you've got it looks like a
8 couple items on the table over here with you.
9 Maybe you could just go through and --

10 A Sure. These are my two declarations.

11 Q Fred, I will ask if you can --

12 A Ken.

13 Q I'm sorry.

14 A That's okay.

15 Q If you can read the exhibit numbers on
16 those for me.

17 A Sure. This is my two declarations which
18 they're both Exhibits 2100. This is the Kevin
19 Baxter Exhibit 2047. This is the Fred Holmes
20 Exhibit 1003.

21 Q And the Fred Holmes Exhibit 1003 --

22 A Is thick.

23 Q Okay. You've got two, one -- just one
24 declaration that you've got broken up into two.

25 A It is a two-part deal.

1 Q Okay. Did you discuss the deposition
2 today with anybody else in preparation, Ken?

3 A I had a phone call in the afternoon
4 yesterday with David Hoffman.

5 Q Okay. And what did you guys discuss?

6 A Mostly a lot of the protocol here, you
7 know, just going through the -- going through the
8 procedure, making sure, as you said earlier, make
9 sure to wait and make sure I understand the
10 questions and a lot of the protocol type stuff with
11 that.

12 Q Okay. Any other topics discussed?

13 A No.

14 Q And did you discuss the deposition with
15 anybody else other than Mr. Hoffman?

16 A No.

17 Q Okay. Well, Ken, I would like to start by
18 introducing your declaration which I'm going to
19 give you a clean copy of here and I would like to
20 work off of this copy if we can for our purposes
21 today.

22 And I do have -- I'm handing the witness a
23 copy of Exhibit 2100 from IPR 2023-00613.

24 So I'm going to hand you that one and I
25 will ask, Ken, if you could just refer to that one

1 during the deposition today.

2 A Okay.

3 MR. WARD: And I do have extra copies.

4 MR. HOFFMAN: Sure. Why not.

5 Q BY MR. WARD: Ken, do you recognize this
6 document, Exhibit 2100?

7 A Yes.

8 Q And what is it?

9 A This is my declaration for IPR ending in
10 613 for the '582 patent.

11 Q And, Ken, I've taken a look at your other
12 declaration in these IPRs, it is Exhibit 2100 and
13 IPR No. 2013-614. I reviewed your declaration from
14 the 613 case and compared it to the 614 case with
15 the software tool and it showed only minor
16 differences between the two. Would you agree that
17 the two declarations are substantively the same?

18 MR. HOFFMAN: Objection; form.

19 THE WITNESS: I think that's likely a fair
20 statement, yes.

21 Q BY MR. WARD: So when we discuss your
22 declaration today we will be discussing the
23 declaration from the 613 case but you are not aware
24 of any differences that would appear in the
25 declaration on the 614 case?

1 MR. HOFFMAN: Objection; foundation and
2 form.

3 THE WITNESS: I'd have to see the
4 comparison but from memory I believe that's a fair
5 assessment.

6 Q BY MR. WARD: Ken, looking at the front
7 page of Exhibit 2100 you see there are two parties
8 identified here, correct?

9 A Correct.

10 Q And the first is Petitioner Quasar
11 science, correct?

12 A Correct.

13 Q And the second is Colt International
14 Clothing d/b/a Colt LED, the patent owner, correct?

15 A Correct.

16 Q And, Ken, is it okay that today if I use
17 the term Colt I'll be referring to both of those
18 entities, Colt International Clothing and the d/b/a
19 Colt LED?

20 A That's fine.

21 Q I understand you are familiar with both of
22 those parties, correct?

23 A Correct.

24 Q How do you know Colt?

25 A I worked on some prior matters for Colt

1 propagating back to 2016 or 2017.

2 Q So when was your first interaction with
3 Colt?

4 A You are speaking in general or are you
5 speaking in regards to work?

6 Q When was your first interaction with an
7 employee from Colt?

8 A I don't believe I've interacted with an
9 employee of Colt. David Hoffman, the attorney, is
10 the rep for it so I've interacted with David
11 Hoffman. And that would be approximately 2017.

12 Q And so you have not interacted with any
13 other individuals affiliated with Colt, correct?

14 MR. HOFFMAN: Objection; form.

15 THE WITNESS: Recently just in the matter
16 of an invoice in just sending an amended invoice
17 directly but everything typically goes through
18 David Hoffman so I've not interacted with the
19 personnel at Colt LED.

20 Q BY MR. WARD: So in 2017 what was the
21 nature of the matter on which you were approached
22 with respect to Colt?

23 A I believe I list that in my -- in my
24 report here. I'm referring to Paragraph 20. No,
25 I'm sorry, I misspoke there. I'm referring to 23,

1 Paragraph 23, which is on Page 12, it talks about
2 reexams, so this lists the multiple reexams that I
3 have worked on from the family of patents.

4 Q Thanks, Ken. So let me just read that
5 Paragraph 23 of Exhibit 2100.

6 It states, "In reference to the instant
7 action, I have also provided expert testimony on
8 the original reexamination of earlier patents in
9 the '582 Patent's family, i.e. U.S. Patent Nos.
10 9,719,642 and 9,845,924," reexamination numbers
11 provided in Paragraph 23."

12 A Correct.

13 Q So, Ken, the question I have for you is in
14 your first interactions with David Hoffman
15 concerning Colt it was with respect to these
16 reexamination proceedings?

17 A That is correct.

18 Q And what was the nature of that initial
19 request to you? What were you requested to do?

20 A To opine on the patentability of the two
21 patents listed here. I'm not sure which one, the
22 '642 or the '924. It may have been the '924 to
23 start with. I'd have to check.

24 Q Had you worked with Mr. Hoffman
25 previously?

1 A No.

2 Q How is it that Mr. Hoffman came to know
3 about you?

4 A I was contacted by him, I think he was
5 looking for a patent expert, and he came across my
6 name and then called me and engaged.

7 Q Do you -- are you in the business of
8 providing patent expert analysis?

9 A I have experience, you know, both from a
10 venture standpoint and assisting in enforcement in
11 patents, yes.

12 Q And what was the nature of your work with
13 respect to these reexamination proceedings? What
14 work did you provide?

15 A They all involve providing an expert
16 report that was used as part of the reexamination.

17 Q Were you deposed as part of those
18 reexamination proceedings?

19 A I -- no, I was not.

20 Q And how long did those reexamination
21 proceedings last?

22 A Several months.

23 Q And how long were you involved?

24 A My engagement was several months as part
25 of the process so it was -- from there I was not

1 involved. So there was a response due so I
2 produced the expert report for that so my
3 engagement was a few months probably on each
4 project.

5 Q And how many total expert reports did you
6 produce for that project?

7 A Well, based on this it looks to be four
8 separate reexams.

9 Q You produced an expert report for each of
10 the re-examinations listed in Paragraph 23?

11 A I believe so, yes. I'd have to check but
12 I believe it was four. It was four separate
13 actions.

14 Q Ken, have you purchased equipment from
15 Colt?

16 A I have not.

17 Q Have you ever used Colt equipment?

18 A For -- no, I have not used Colt equipment.

19 Q Have you seen Colt equipment in use?

20 A I have seen Colt equipment in use, yes.

21 Q And what was that context?

22 A What comes to mind in roughly 2015,
23 potentially 2014, but I believe it was 2015 I was
24 invited to one of the demonstrations at Paramount
25 Studios. The light had created a fair amount of

1 buzz and I was invited to one of the showings for
2 gaffers and cinematographers.

3 Q And why were you specifically invited to
4 that event, Ken?

5 A I was a person in the industry. With that
6 I get invited to a lot of events. I usually do not
7 attend but this one had several people I knew were
8 interested so I decided to go to this event. I had
9 no association with Colt but I was invited to
10 Paramount for the demonstration.

11 Q Had you gone to Paramount for other
12 demonstrations prior to that?

13 A I had been at Paramount but for a frontal
14 demonstration, no, this was my first dimension.

15 Q When did you first become aware of the
16 '582 patent and the '895 patent at issue in these
17 cases?

18 A 2017 when I was contacted by David
19 Hoffman.

20 Q And how did you become aware of these
21 patents? Were they part of the reexamination
22 proceedings?

23 A I'm sorry, let's back up.

24 What specific patent? We are talking
25 about the patents at issue today?

1 Q Yes. '582 patent and the '895 patent
2 involved in these IPR proceedings, when did you
3 first become aware of them?

4 A Likely for this current action so as far
5 as the '895, or the '582, I don't believe I've
6 dealt with the '582 at all. These were -- I dealt
7 with patents that were earlier in the family.

8 Q You dealt with the parent patents to --

9 A The parent patents, yes.

10 Q To the '582 patent?

11 A Correct.

12 Q And when were you first contacted with
13 respect to the '582 patent or the '895 patent?

14 A It would have been last year. I'd have to
15 check. But quarter three of last year maybe,
16 somewhere in that timeframe.

17 Q So Q3 of 2023 you were contacted about the
18 '582 and the '895 patents?

19 A In that range, yes. It was certainly last
20 year and I believe likely the third quarter. It
21 could have been a little bit later. I don't
22 remember the exact dates.

23 Q What was the nature of the initial
24 discussion, Ken?

25 A Assisting on the expert reports.

1 Q And the request was what?

2 A Just from, you know, this -- I have a
3 history of working with David Hoffman. He
4 contacted me that he would need my assistance again
5 so I worked on -- I think that's when I was first
6 introduced to these two patents.

7 Q And what did he ask you to do, what was
8 the initial ask?

9 A The initial ask was to look at the patent
10 that your client filed and analyze that from, you
11 know, a patentability, you know, from a -- just to
12 analyze the -- analyze the position of Quasar.

13 Q What were you to do with your analysis?

14 A The result would be an expert report that
15 you have today.

16 Q Did the scope of your work expand at all?
17 Were you asked to do other things?

18 A No.

19 Q The only request to you was to generate
20 what we now see as Exhibit 2100, your declaration?

21 A Correct.

22 Q Otherwise you have not been involved in
23 these two IPRs?

24 A Correct.

25 Q How do you know Quasar Science, Ken?

1 A I have seen them at trade shows with that.

2 Q Which trade shows, Ken?

3 A From memory, Cine Gear is a Los Angeles
4 trade show. Likely too I saw them at NAB which is
5 more a national show here in the U.S.

6 Q And when would you have first seen Quasar
7 Science?

8 A 2015-2016.

9 Q And what do you remember seeing with
10 respect to Quasar Science at that time?

11 A They had a range of LED products including
12 LED tubes.

13 Q When you first saw their products in 2015
14 did they include an LED tube?

15 A It is hard pinpoint exactly but I -- it is
16 likely. You know, I've gone to a lot of trade
17 shows so it is hard pinpoint exact years with that
18 but somewhere in the 2015-2016 timeframe.

19 Q Okay. So it sounds like you go to Cine
20 Gear and NAB on a regular basis.

21 A I have historically, yes, for many years.
22 Recently not as much.

23 Q What time periods were you a regular
24 attendee at those?

25 A 2002-2003 through 2013-2014 approximately.

1 Q And why did your attendance become less
2 frequent after 2013?

3 A Let me back up. It would be at least
4 through 2015. So I was assisting several companies
5 with that so at least through 2015. I was doing
6 less, less work directly for clients in the film
7 and T.V. industry.

8 Q So in the 2002 to 2015 period you were
9 doing more work for the film industry, am I
10 accurate?

11 A Correct.

12 Q And as part of that work you would
13 regularly attend Cine Gear and NAB trade shows?

14 A Yeah. I mean, going through at least
15 2013-2014x I was attending trade shows all over the
16 world.

17 Q Was that part of your employment, Ken?

18 A It was part of my work, yes, correct.

19 Q What shows other than Cine Gear and NAB
20 did you regularly attend?

21 A Various -- IBC is a European show, CiNEC
22 is a German show, Inter BEE is a Japan show. And
23 there's a China show, Brazil, and a few more
24 scattered here and there.

25 Q So in that 2002 to 2015 time period how

1 many shows would you attend a year on average?

2 A Three to four at least.

3 Q And were many of those same companies at
4 multiple trade shows?

5 A That's a fair statement, yes.

6 Q Do you remember encountering Quasar
7 Science at shows in addition to Cine Gear and NAB?

8 A I couldn't say. I could say NAB and Cine
9 Gear, I have memories of that. I don't know about
10 the other shows or not.

11 Q Do you know any of the employees at Quasar
12 Science?

13 A I do not. I think I had lunch with one
14 person with an association with Quasar maybe two
15 thousand -- it is hard to say. There was a family
16 member that was tied to the stadium lighting that
17 had an interest, had an interest in Quasar. We had
18 lunch.

19 Q And do you remember the name of the
20 acquaintance?

21 A I do not.

22 Q How did you end up being connected to this
23 person?

24 A I believe that -- I don't recall the exact
25 details. It was a lunch that was attended by

1 myself and Kevin Baxter and this person had,
2 there's a Midwest lighting company that does
3 stadium lighting and this person was the family
4 member of that, somehow had a tie into Quasar.
5 Again, I don't know the details. He wasn't a
6 gaffer, he wasn't -- I understand that Quasar is
7 primarily a group of gaffers. This gentleman was
8 not a gaffer.

9 Q Ken, have you ever purchased any Quasar
10 Science products?

11 A No.

12 Q Have you ever used any Quasar Science
13 products?

14 A No.

15 Q Do you know the difference between the old
16 Quasar and the new Quasar?

17 A It is my understanding that Videndum
18 purchased Quasar a couple years ago.

19 Q So if I use the term Quasar Science you
20 understand that assignment is referring to the
21 entity after the acquisition, correct?

22 A Yes.

23 Q And did you -- it sounds as if you
24 encountered Quasar Science. The acquisition
25 occurred in April of 2021. It sounds that you

1 encountered the products prior to April 2021,
2 correct?

3 A Correct.

4 Q Have you seen any products since April
5 2021?

6 A Only in photographic form. I have not
7 seen -- I have not seen the product in hand, no.

8 Q When is the last time that you went to one
9 of the trade shows like what you previously
10 mentioned?

11 A It has been probably four years, five
12 years.

13 Q And what would have been the last show
14 that you attended, Ken?

15 A Likely NAB I believe is the last show.

16 Q And what year would that have been?

17 A Hard to say. 2019-2020 maybe.

18 Q Do you remember seeing Quasar Science
19 products at that show?

20 A I do not, no.

21 Q How about Colt products? Did you see Colt
22 products at that show?

23 A I don't believe so, no.

24 Q Ken, I want to move actually just to the
25 last page, Page 99 of Exhibit 2100, it is there in

1 front of you.

2 There's a signature on the page there. Do
3 you recognize that signature?

4 A Yes.

5 Q Who is it?

6 A It is my signature.

7 Q And what's the date for that signature?

8 A This is the fifth day of February.

9 Q Who wrote this declaration, Ken?

10 A I did.

11 Q Did you work with anyone else?

12 A No.

13 Q You didn't receive input from anyone else?

14 A No. I think I had a couple of -- couple
15 discussions just in general with David Hoffman on,
16 you know, areas to cover, things like that.

17 Q And how did those discussions occur? Were
18 they verbal or by email?

19 A There were verbal.

20 Q Did you have any email communications
21 regarding the declaration?

22 A I believe there's probably like a draft
23 that was sent.

24 Q Who sent the draft, Ken?

25 A I sent the draft.

1 Q And who did you send it to?

2 A To David Hoffman.

3 Q Anyone else?

4 A No.

5 Q Did Mr. Hoffman provide comment?

6 A I think we had some general discussions,
7 you know, on the draft and on, you know, on other
8 areas to cover with that.

9 Q Did you provide any comments on the
10 declaration itself?

11 A No. It was more just -- just in general.
12 I used that kind of a sounding board to make sure
13 things are clear. Yeah, just some general
14 comments.

15 Q Did you provide any markups?

16 A No.

17 Q This is an area that you have expertise
18 in; is that correct?

19 A My brain is full a bit so yes.

20 Q So you didn't require any markups or edits
21 from Mr. Hoffman?

22 A Yeah. I've got a lot of experience with
23 LEDs going back many years with that so it is an
24 area I'm comfortable with.

25 Q And you have a lot of experience in

1 drafting expert reports for patent litigation

2 matters?

3 A Well, patents -- patent, you know, expert
4 reports, patents, claim charts, a range of things.

5 Q Were you involved in drafting any other
6 declarations for these IPR proceedings?

7 A Yeah. I assisted -- I assisted Bruce Finn
8 and I assisted Kevin Baxter.

9 Q So how did you assist Bruce Finn?

10 A I believe Bruce prepared the initial
11 draft. A lot of it with -- I think both Fred and
12 Kevin was, you know, both are very experienced
13 people so I assisted in the formatting and
14 questions so I was more of a taking what they said,
15 helping them arrange it, format it.

16 Q Did you edit the documents in a word
17 processing tool?

18 A Yes.

19 Q Were you editing someone else's draft or a
20 draft that you first created?

21 A This was editing what I believe on both --
22 I was editing what they sent. I think on Kevin I
23 was more almost a second for Kevin where, you know,
24 we would go through the questions, Kevin would
25 answer the questions. I did a lot of secretarial,

1 you know, the formatting, getting it all prepared,
2 sent a draft back. Kevin would then make changes
3 with that.

4 Q Who drafted the initial questions for
5 Kevin to answer?

6 A In general I had -- I had questions for
7 Kevin on -- as part of my report that started off
8 that way and then expanded where Kevin became an
9 expert as well. So initially the questions were
10 fine, then as Kevin understood the project more
11 then, you know, he put forth a lot on the tech
12 deals. Tech details, I should say.

13 Q And how did Kevin Baxter come to be
14 associated with this IPR proceeding?

15 A I reached out to him on some -- on some
16 tech questions and so I started off that way and
17 then expanded to where Kevin became an expert as
18 well.

19 Q Did you recommend to Mr. Hoffman that
20 Kevin Baxter be additionally retained?

21 A I did, yes.

22 Q And how about Bruce Finn? Did you help
23 with Bruce Finn's declaration?

24 A I did as well, yes.

25 Q How did you help?

1 A I took his draft. A lot of it was just
2 Bruce writing paragraphs so I did all the
3 formatting into the -- into the more of the
4 declaration form. Certain things were not clear.
5 I asked Bruce, you know, on specific things that he
6 had done as far as -- it was a narrow area just on
7 the fluorescence. And then I transcribed what he
8 said and so --

9 Q Bruce Finn created the first draft of his
10 declaration?

11 MR. HOFFMAN: Objection; asked and
12 answered.

13 THE WITNESS: Yes.

14 Q BY MR. WARD: And you provided comment to
15 that first draft; is that correct?

16 A I did, yes.

17 Q Did you edit the declaration or did you
18 only provide comment?

19 A I took what he -- I took what he had said
20 and transcribed that. Anything -- he wasn't
21 familiar with the process and, you know, the
22 formatting, the level of detail.

23 Q Did you make substantive edits to Mr.
24 Finn's testimony?

25 MR. HOFFMAN: Objection; form.

1 THE WITNESS: I took what Bruce said and
2 put it into -- you know, I transcribed more of a --
3 I won't call it secretarial but, yeah, it is taking
4 his comments and putting that into, you know, into
5 a concise, a more concise form with that.

6 Q BY MR. WARD: And how did Bruce Finn come
7 to be associated with these IPRs?

8 A Same thing. Bruce had expertise in this
9 one area, a lot of on-set experience with
10 fluorescence, and I recommended to Mr. Hoffman to
11 engage.

12 Q So in addition to Mr. Baxter and Mr. Finn
13 who else did you recommend for Mr. Hoffman to
14 engage?

15 A Just those two.

16 Q Did you assist in the declaration of Mr.
17 Csernecky?

18 A No.

19 Q Did you assist in the declaration of
20 Fernando Silva?

21 A No.

22 Q Did you assist in the declaration of Dr.
23 Allen?

24 A No.

25 Q Did you assist in anyone's declaration

1 other than Mr. Finn or Mr. Baxter?

2 A Just those two.

3 Q Okay. We can put your declaration away
4 for a moment there, Ken.

5 I would like to understand your
6 educational background, Ken, so can you tell me
7 about your education starting after high school.

8 A Yeah. I've got a bachelor degree in
9 photographic science from the Brooks Institute in
10 Santa Barbara. It is a B.A. degree.

11 Q And what year did you receive that degree?

12 A 1982.

13 Q Okay. So what years would you have been
14 in college?

15 A It is a two-and-a-half-year accelerated
16 program, I started early -- early 1980 and finished
17 toward the end of 1982.

18 Q Okay. So you said two-and-a-half-year
19 program but you received a Bachelor of Science in
20 advertising photography; is that correct?

21 A Correct.

22 Q And do you have any other degrees, Ken?

23 A I do not, no.

24 Q What was your first job after receiving
25 your bachelor's degree?

1 A As a photographer for a studio in Seattle,
2 Washington.

3 Q So you moved from Santa Barbara to
4 Seattle?

5 A I'm from Seattle originally, yes.

6 Q So you grew up in Seattle and then you
7 moved to Santa Barbara to go to college, correct?

8 A Correct.

9 Q And so you moved back home once you
10 graduated.

11 A Correct.

12 Q And you worked for what did you say?

13 A The company was Northwest Photography, I
14 believe. Commercial studio. This was less than a
15 year.

16 I then went to work as the submarine base
17 photographer at the Trident Nuclear Submarine Base
18 in Bangor, Washington.

19 Q How did in a come about, Ken? That's not
20 a typical photography position.

21 A It was an opening, it was an interesting
22 project with that, so I spent a couple years as the
23 submarine base photographer. It was kind of a
24 movement away from civil servants and from a cost-
25 savings standpoint they were engaging more

1 civilians. So the job was open, I applied for
2 that, and was -- secured that job.

3 Q In what years were you in that job?

4 A It is really I think '82 to about '84.

5 Q And why did you leave?

6 A Part of the reason is I had a second
7 photographer who got a brain tumor, we were doing
8 things in and around a lot of nuclear, it was --
9 yeah. That was concerning to me.

10 Q Were you actually photographing on a sub?

11 A We had the highest level of security
12 clearance up to nuclear warhead and sub so we were
13 doing anything from in and around nuclear reactors
14 to nuclear warheads. It was all some serious stuff
15 with that, so --

16 Q So health concerns was the reason to leave
17 that position.

18 A Yeah. This guy came in on a Monday, is a
19 very mechanical person, and said he couldn't
20 assemble his kid's bunk bed and within a day or two
21 they diagnosed a softball-size tumor in his brain
22 so that took some hard looking, yeah, and I decided
23 the time was right.

24 Q In college did you envision yourself as
25 being a professional photographer?

1 A This is the -- the school at that time was
2 one of the top four for photography, filmmaking.

3 Q Is that what you were thinking of, your
4 career at that time, you were thinking I want to be
5 a professional photographer?

6 A Correct. Yeah. I had been rep'd by Getty
7 Images for many years and at one point three of us
8 were about 10% of Getty Images so a lot of
9 experience with photography and what's suitable for
10 image capture and a lot of experience on that side.

11 Q When did you move from photography to
12 lighting?

13 A It was concurrent, I did both, so starting
14 in late '84, early '85 I moved to Los Angeles at
15 that point doing both lighting and photography.

16 MR. WARD: Ken, I want to provide you a
17 copy of what's been marked as Exhibit 1024,
18 Petitioner's Exhibit 1024.

19 David, this is a new exhibit.

20 Q Ken, Exhibit 1024 is a printout of your
21 LinkedIn profile. I will give you a moment to look
22 through the profile and then ask you a question.

23 Ken, does this look to be an accurate copy
24 of your LinkedIn profile?

25 A I haven't seen it in a while but this

1 looks -- this looks accurate.

2 Q Okay. Ken, I would like to ask you about
3 the professional experience noted in your LinkedIn
4 profile and I see that the first entry in your --
5 in the "Experience" category on Page 1 of Exhibit
6 1024 is "Founder, President, Fisher Production
7 Services."

8 What is Fisher Production Services?

9 A It is a company that designed, built and
10 also rented, did some sales as well for lighting
11 equipment for the motion picture and T.V.
12 industries.

13 Q And when did you first -- you were the
14 founder, correct?

15 A Correct.

16 Q When did you first create this entity?

17 A This was formed in 1988.

18 Q And you mentioned earlier that you were
19 pursuing photography and lighting concurrently.

20 A Uh-huh.

21 Q Would this have been the timeframe in
22 which these would have overlapped?

23 A It would have been earlier, about '85 as
24 mentioned.

25 Q And what was the first lighting entity

1 then that you worked for in a professional
2 capacity?

3 A It may -- it was just most like a sole
4 proprietor from '85 to '88.

5 Q Okay. So in 1988 you created the entity
6 Fisher Production Services but it was a
7 continuation of what you already were doing?

8 A Correct.

9 Q And describe that to me. You said you
10 designed, built and rented. Talk me through what
11 you were doing.

12 A So we did specialized lighting, everything
13 from the focus was more automotive lighting, doing
14 everything from special effects lighting, to xenon
15 lighting, to automotive lighting.

16 Q And when you say automotive lighting what
17 do you mean? You are talking about automotive
18 advertising for automobiles?

19 A No. We designed and produced a series of
20 large what are called soft lights. The cars are
21 very reflective, sheet metal and glass, so you need
22 a very soft light. We call it liquid light. So
23 that -- these lights were up to a hundred thousand
24 watts of tungsten lighting at that time, computer-
25 controlled output stages for many years, with

1 Toyota, Toyota City in Japan; GM's World Design
2 Center in Germany. Did a lot of T.V. commercials.
3 You know, there's been new models so there's a fair
4 amount of work to be done both in studio and on
5 location.

6 Q Did you create these lighting environments
7 in your own studio or in the automobile
8 manufacturing studio?

9 A Typically it would be in like stages so we
10 would work in L.A., New York, Paris, London, Tokyo.
11 Also on location as well.

12 Q And you mentioned that these were high-
13 powered lights. What types of lights were they?

14 A Primarily tungsten-based lights.

15 Q And were these lights that you
16 manufactured?

17 A Correct.

18 Q Where did you manufacture these lights?

19 A They were manufactured primarily in
20 Oklahoma.

21 Q And what was the entity that manufactured
22 them?

23 A There was several contract manufacturers.
24 We would -- some of the framework was done in
25 Oklahoma, a lot of the lighting part was filmed in

1 Los Angeles. Just like anything you have
2 different -- different suppliers, different
3 component suppliers.

4 Q And was Fisher Production Services the
5 named entity for the manufacturer?

6 A Well, it would be a contract for component
7 manufacturing if that's what you are asking. I'm
8 not quite sure what you are asking.

9 Q So were there light products that were
10 produced with a Fisher label on them?

11 A Yes. Yeah. The term was FisherLight was
12 the -- the sort of the mark of the car lights.

13 Q Were they available for public sale?

14 A We did a rental model with that. So when
15 you -- these are more exclusive so from an income
16 standpoint when you don't have competitors the
17 rental side could be more advantageous.

18 Q So Fisher Production Services never sold
19 any lighting products.

20 A No. We had -- again, we had different --
21 we had different lines of products but speaking
22 about the -- the car light itself, it was a rental
23 light.

24 Q What were the other lines of products?

25 A There was a series of xenon lights.

1 Q And what were those intended to be used --
2 how were they intended to be used?

3 A That's more of a -- it is a high-powered
4 light used to recreate sunshine.

5 Q Did you --

6 A We also represented -- I think there was
7 another light we rep'd from France.

8 Q Did you sell the xenon lights?

9 A We sell or rent the xenon lights, yes.

10 Q Did you sell the lights that you
11 represented from France?

12 A That was a sale, yes.

13 Q Did you also rent those products?

14 A I think a little bit, yes.

15 Q And the lights from France, what types of
16 lights were those?

17 A This would be a tungsten lamp.

18 Q So how is that different than the car
19 lights that you were renting?

20 A Much smaller, much lower powered.

21 Q How many employees did Fisher Production
22 Services have at its peak?

23 A If you combine full time and part time, on
24 demand, project-based, 20, 25.

25 Q And where were those employees located?

1 A Primarily in the Los Angeles area.

2 Q Some in Oklahoma as well?

3 A Yes.

4 Q And what were the -- were the employees in
5 the Oklahoma office concentrated on manufacturing?

6 A Yeah, that was -- we worked with Kevin
7 Baxter, you know, and Fred Holmes who you know.
8 They were both at that time based in Oklahoma.
9 Kevin subsequently moved out to Los Angeles.

10 Q And what were the employees in the L.A.
11 area focused on?

12 A Again, we manufactured depending on the
13 components. Some of it was manufactured in
14 Oklahoma and some was manufactured in Los Angeles.
15 L.A. was also operations. L.A. also knows a lot of
16 the on-set lighting transpired in Los Angeles.

17 Q On Exhibit 1024 in front of you there,
18 Ken, you are listed as Founder and President of
19 Fisher Production Services. What were your duties
20 and responsibilities as Founder and President?

21 A Like any small business you are wearing
22 different hats so there was involvement in almost
23 everything, you know. One day you are mopping
24 floors, another day you are dealing with banks on
25 credit lines with that, so it is --

1 Q Give me an idea, Fred, of the growth of
2 the entity. Say you incorporated it 1988. What
3 was the size at that time?

4 A I'd have to go back and look. This is 40
5 years ago, 30 some years ago. God, I'd have to
6 look.

7 Q Was it less than five?

8 A What, number of people or --

9 Q Number of employees in 1988.

10 MR. HOFFMAN: Objection; form.

11 THE WITNESS: Number of employees. It
12 would be -- again it is much like when you are on
13 set, we've supplied lighting and technicians, so
14 the number of employees would vary on the projects.
15 One day you might have three projects and need six
16 people. You know, it was all dependent on the
17 projects. As far as full time, initially I think
18 just two, two full-time people initially.

19 Q BY MR. WARD: And what years would Fisher
20 have had 25 employees that you described?

21 MR. HOFFMAN: Objection; relevance.

22 THE WITNESS: Hard to say. I'd have to --
23 again you are reaching back 35 years. Just --
24 yeah.

25 Q BY MR. WARD: Was it the biggest in the

1 nineties?

2 MR. HOFFMAN: Objection; relevance.

3 THE WITNESS: Likely the nineties.

4 Q BY MR. WARD: Does Fisher Production
5 Services still exist?

6 A No.

7 Q The next company you list, Ken, on Exhibit
8 1024, your LinkedIn profile, is Freefly. Tell me
9 about Freefly.

10 A Assisted them on -- they had a camera
11 support product. I assisted them on the launch of
12 that.

13 Q And it states the years of your engagement
14 were 2013 to 2015; is that correct?

15 A Correct.

16 Q And this camera support product was a
17 Gimbal product; is that correct?

18 A Correct.

19 Q But you did not found Freefly Systems; is
20 that correct?

21 A No, no.

22 Q Did they make any other products other
23 than a Gimbal?

24 A I think they had some camera drone
25 equipment as well.

1 Q Your title was Strategist and Worldwide
2 Distribution. What did that entail?

3 A This was just basically a contract to help
4 them launch so they -- they were -- they had a very
5 specialized rental, very large drones that carried
6 large cameras. They were more into an item for
7 sale.

8 Q And how were you initially connected to
9 Freely?

10 A They wanted help in the launch of MoVI
11 projects with that so set up trade shows all over
12 the world, coordinated a lot of the advertising.
13 We did a big crowdfunding as part of the project
14 that was large.

15 Q And how did you -- did you have an
16 acquaintance at Freely before you joined there?

17 A I had met the president of Freely and so
18 he engaged me to help them with the launch of the
19 product.

20 Q Is this somebody you had a longstanding
21 relationship with?

22 A No.

23 Q Did you resign from Freely in 2015?

24 A No. It was a launch contract so the
25 project was to launch, I don't know the exact dates

1 here, but it was about a year to a year-and-a-half
2 project to get it up and launched with that, help
3 them set up a dealer network with that, so it was a
4 contract.

5 Q So you signed a limited term contract when
6 you joined?

7 A Correct.

8 Q Does Freefly still exist?

9 A It does, I believe.

10 Q Okay. Moving down on your LinkedIn
11 profile that's Exhibit 1024, moving over to Page 2,
12 I see it says Co-founder of Litepanels. What is
13 Litepanels?

14 A Litepanels is an LED company specializing
15 in LED lighting for the film and T.V. industry.

16 Q You are listed as co-founder. Who were
17 the other founders?

18 A Pat Grosswendt, Rudy Pohlert, Kevin Baxter
19 and Fred Holmes.

20 Q And how did you come to know Pat
21 Grosswendt?

22 A Pat was a gaffer in Hollywood. I worked
23 with Pat before.

24 Q Earlier in your LinkedIn profile we
25 discussed that Fisher Production Services existed

1 until 2016; is that correct?

2 A Correct. Approximately. I don't know the
3 exact date.

4 Q And according to Page 2 of your LinkedIn
5 profile Litepanels was founded in 2002; correct?

6 A Correct.

7 Q Were those two entities in operation at
8 the same time?

9 A Yeah. Initially we reserved a portion and
10 Fisher Productions took over a portion of the
11 warehouse for Litepanels. We ran it as a d/b/a for
12 a couple of years, the [moneys for Litepanels.
13 There was a lot of just research and development
14 that ran through Fisher Productions.

15 Q So what was your initial title at
16 Litepanels?

17 A We didn't have -- we didn't have formal
18 titles back then.

19 Q You were performing as President of Fisher
20 Productions while at the same time serving as
21 co-founder of Litepanels?

22 A Correct.

23 Q Was that during your entire tenure with
24 Litepanels?

25 A You know, as far as the Litepanels, that

1 was pretty much a full-time and still I had a
2 general manager that looked after Fisher
3 Productions.

4 Q So your role during this Litepanels period
5 in 2002 to 2012 was reduced at Fisher Productions?

6 A Correct.

7 Q So you mentioned is that Litepanels was a
8 lighting manufacturer. What industry did
9 Litepanels serve?

10 A The film and television and still
11 photographic industries.

12 Q And what kind of products did Litepanels
13 provide?

14 A It provided lighting diodes, LED-based,
15 film and T.V. lighting.

16 Q The lighting panels was exclusively an LED
17 lighting product?

18 A Correct.

19 Q And did you see that as having market
20 potential when you founded it in 2002?

21 A Yes.

22 Q Why?

23 A Well, in general the -- your LEDs are
24 lower power, they do not project heat. They had a
25 lot of localized heat but they do not project heat.

1 They can be battery powered as well so they're
2 lightweight, portable.

3 Q And did you see that as providing a unique
4 advantage to the lighting industry that wasn't
5 present in 2002?

6 A I did, yes.

7 Q And how did LED lighting change in the
8 2002 to 2012 period in which you were affiliated
9 with Litepanels?

10 A It expanded rapidly.

11 Q How did it expand?

12 A In what -- you are talking about different
13 models? What -- can you be a bit more specific?

14 Q Who was using LED lights in T.V. and film
15 in 2012? I'm sorry, in 2002.

16 A LEDs in 2002 were like more of what we
17 called the effects lighting so if you had a stage
18 and you wanted to have a multicolor, for example,
19 whatever, a concert, you would have effects lights.
20 Typically not a white light, it would be red,
21 green, blue color changing, you know, effects
22 lighting versus a primarily lighting source.

23 Q So when you founded Litepanels was your
24 anticipation that LED lighting would become an
25 important part of T.V. and film lighting?

1 A That was our hope, yes.

2 Q Did you see improvements in the LED
3 lighting products in the 2002 to 2012 time period?

4 A Yes.

5 Q How did they improve?

6 A Better color, fidelity, more consistency.

7 A lot of the -- even in 2012 there was a lot of
8 promises made but not -- not delivered. It was
9 still kind of the wild west in 2012-2011.

10 Q Did Litepanels file any patent
11 applications in the 2012 to -- I'm sorry, 2002 to
12 2012 time period?

13 A We did.

14 Q And were you involved with those patents?

15 A I was.

16 Q Were you listed as an inventor on some of
17 those patents?

18 A I was, yes.

19 Q Were they -- were those Litepanels patents
20 directed to improvements in LED lighting?

21 A They were.

22 Q What were some of those improvements, Ken?

23 MR. HOFFMAN: Objection; asked and
24 answered.

25 THE WITNESS: What were some of the

1 improvements. We did various from modular LEDs to
2 battery-powered LEDs, on-camera embodiments, off-
3 camera embodiments, wide range.

4 Q BY MR. WARD: Was Litepanels seen as
5 providing quality LED products during that time
6 period?

7 A I'd say so, yes.

8 Q And is that in part based upon the
9 improvements that Litepanels made with LED
10 lighting?

11 A I would say that's a fair statement, yes.

12 Q What were some of the most significant
13 improvements that Litepanels made in LED lighting?

14 MR. HOFFMAN: Objection; form.

15 THE WITNESS: We -- you know, it was
16 common knowledge that a lot of the sales sheets,
17 data sheets were propaganda, you know. It was very
18 sales centric. We advanced to a point where we had
19 our own production line in Asia, you know, micro-
20 scales, microdosing to be able to control the
21 quality better. A lot of -- you know, it is a
22 constant with issues with CRI consistency even when
23 you control your own, you know, sub-manufacturing
24 line with that. But we tried our best to make
25 improvements, yes.

1 Q BY MR. WARD: Was Litepanels seen as
2 revolutionizing LED lighting for T.V. and film?

3 MR. HOFFMAN: Objection; form.

4 THE WITNESS: Yeah. When we were -- as
5 mentioned in the report, I mean, we were awarded
6 the pioneering prime time Emmy for our work.

7 Q BY MR. WARD: And what was the basis of
8 that award?

9 A The work we did with Litepanels.

10 Q And why was it seen as pioneering?

11 A Well, effectively we pioneered the use of
12 LED in the film and T.V. industry.

13 Q And did you do so in a way that was
14 recognized as quality lighting?

15 MR. HOFFMAN: Objection; form.

16 THE WITNESS: Yeah. I mean, LED --
17 there's no one size fits all. LED can work very
18 good in some situations and not so good in other
19 situations with that but in general our -- we took
20 approaches and strategies that would -- that would
21 produce a quality light, yes.

22 Q BY MR. WARD: You mentioned Litepanels had
23 numerous patents. Was there any litigation
24 involving those patents?

25 A There was.

1 Q Was it while you were with the company?

2 A Yes.

3 Q What was that litigation?

4 A Oh, starting probably 2005-2006 we had
5 upwards of three cases in federal court at any one
6 time.

7 Q And was Litepanels the plaintiff in those
8 litigation matters?

9 A Yes.

10 Q Who were the defendants?

11 A I believe the first one was Gecko Lighting
12 out of the U.K.

13 Q And what happened in the Gecko Lighting
14 case?

15 A They -- the case was settled. It was a
16 license.

17 Q And who represented Litepanels in that
18 litigation?

19 MR. HOFFMAN: Objection; relevance.

20 THE WITNESS: Let's see. For Gecko we
21 used K.C., Sonny Chairean [phonetic], and at that
22 time Sonny was with Townsend & Townsend, I believe.
23 Yeah, I'd have to go back and just -- there was
24 multiple lawsuits and multiple law firms but I
25 believe -- no, sorry. Let me back up there.

1 The first one I believe we used McKool &
2 Smith.

3 Q BY MR. WARD: Do you recall an ITC
4 investigation involving Litepanels?

5 A I do.

6 Q And who was on the opposite side of the
7 ITC investigation?

8 A It was about approximately 15 Asian
9 companies.

10 Q And do you recall if Pepper Hamilton was
11 relied on as Litepanels's counsel?

12 A I believe they were, yes.

13 Q Do you recall Bill Bellinger being counsel
14 for Litepanels in that matter?

15 A I do.

16 Q Do you know if David Magee was involved as
17 counsel in that matter?

18 A I believe he was.

19 Q What was the outcome of the ITC
20 investigation?

21 A We secured a general exclusion order.

22 Q Against all of the respondents?

23 THE WITNESS: Fred, was it all of the
24 respondents? I believe it was. Didn't one settle
25 out beforehand? I have some memory of one settling

1 out beforehand.

2 Q BY MR. WARD: The general exclusion order
3 was based on enforcement of Litepanels' patents,
4 correct?

5 A Correct.

6 Q Were there other successful litigation
7 matters asserting Litepanels' patents in addition
8 to the ITC and the Gecko Lighting matter?

9 A Particularly -- I mean yes to answer your
10 question. In general the outcome were licenses.

11 Q Do you recall any litigation, patent
12 litigation matters for Litepanels that were not
13 successful?

14 A No.

15 Q When did you leave Litepanels, Ken?

16 A 2012.

17 Q Why did you leave?

18 A We sold the company in 2008 to what then
19 was the Vitec Group which is now Videndum and there
20 was a three-year earn-out contract that ended the
21 beginning of 2012.

22 Q And when you say we sold, who was we? Who
23 were the owners in the 2008 period?

24 A Was the five founders I mentioned earlier.

25 Q And why did you sell?

1 A You know, it was a strategic decision.
2 You know, when you -- as a company grows there's
3 more and more need for cash flow. There's a lot of
4 companies that are successful but can die from a
5 cash flow standpoint. You've got more inventory,
6 more products, it can be -- it can be a challenge.
7 Vitec helped from the distribution standpoint as
8 well.

9 Q So you said there was a three-year, you
10 labeled it as an earn-out period?

11 A Correct.

12 Q And what do you mean by earn-out?

13 A The company was bought at an earlier stage
14 so part of the -- part of the -- there was a
15 multiple on current profit circa 2008 and then an
16 earn-out for new profit so a base level was
17 established and there was an earn-out, multiple
18 agreed to for each year for that amount above the
19 base, so --

20 Q So three years from 2008 would have been
21 2011, correct?

22 A Correct.

23 Q You left in 2012?

24 A Well, it was through I think the purchase
25 was August-ish so it was late third quarter,

1 beginning fourth quarter, and the contract went
2 through the end of 2011 so yeah. So beginning of
3 2012, late 2011.

4 Q Did you resign from Litepanels?

5 A No. The contract was not renewed, there
6 was no -- it was a three-year contract.

7 Q So you performed the contract that was
8 created in 2008?

9 A Correct.

10 MR. WARD: We have been going about it
11 looks like an hour and 20 so do you want to take a
12 break?

13 THE WITNESS: Sure.

14 MR. WARD: Okay. Off the record.

15 (Recess taken from 10:25 a.m. to 10:35
16 a.m.)

17 BY MR. WARD:

18 Q Ken, I meant to ask you about the Vitec
19 group. Is it your understanding the Litepanels was
20 acquired by the Vitec Group?

21 A Yes.

22 Q And you said that happened in 2008?

23 A Yes.

24 Q Do you recall the purchase price for
25 Litepanels?

1 A I believe the initial payment was
2 approximately 15 million.

3 Q And there were subsequent payments as
4 well?

5 A There were, yes.

6 Q You listed on your LinkedIn page that you
7 were the vice president of strategic projects at
8 Vitec, correct?

9 A Yes.

10 Q And was that different from your role at
11 Litepanels?

12 A Yes.

13 Q And your LinkedIn, and I'm looking, it is
14 kind of hard to see because it is the bottom of
15 Page 1 of Exhibit 1024 and the top of Page 2, but
16 you list Co-founder of Litepanels from 2002 to
17 2012, and then Vice President, Strategic Projects
18 for Vitec 2010 to 2012. So those were overlapping
19 positions?

20 A Well, in general. I don't use LinkedIn
21 that much, some of these dates are not correct, I
22 think it was roughly about a year in total so it
23 probably would be -- it should say it is roughly
24 2011.

25 Q And what do you mean it was a year? What

1 do you mean?

2 A The vice president, strategic projects.

3 Q And was that in addition then to your
4 duties as co-founder of Litepanels or concurrently?

5 A No, it was just like the last ten months
6 or I don't remember the exact time but it was
7 roughly 2011 and that would be separate.

8 Q Do you know if you were an employee of
9 Vitec Group PLC as listed here or an employee of
10 Litepanels?

11 A I don't know.

12 Q Perhaps you were an employee of Vitec
13 Production Solutions?

14 A There could have been -- I believe there
15 may have been like a U.S. entity.

16 Q U.S. entity for which one of those, Vitec,
17 Vitec Productions?

18 A For Vitec.

19 Q But you were an employee of the U.S.
20 entity for Vitec.

21 A Yes.

22 Q And is it your understanding that Vitec
23 renamed itself as Videndum?

24 A Yes.

25 Q And Videndum is associated with the

1 petitioner in this action, correct?

2 A As mentioned, you said they acquired that
3 a couple years ago, the company. Most of the
4 actions here are the old company prior to the
5 acquisition.

6 Q Videndum acquired Quasar Science, correct?

7 A Correct.

8 Q So you worked with an affiliate of
9 Petitioner in this matter, correct?

10 MR. HOFFMAN: Objection; form,
11 characterization, foundation.

12 THE WITNESS: Well, as mentioned, I think
13 recently there was an acquisition so there would be
14 a -- I'm assuming whatever, stockholder or
15 shareholder in the company.

16 Q BY MR. WARD: Do you know Mr. Fellmeth
17 that's here with us today?

18 A I do.

19 Q How do you know him?

20 A Through both -- through the association
21 through Litepanels.

22 Q So you worked with him in a professional
23 capacity with Litepanels?

24 A Yes.

25 Q And what was your relationship like, how

1 did you work with Mr. Fellmeth?

2 A Fred was the corporate counsel for
3 Vitec/Videndum.

4 Q And what kind of projects would you report
5 with Mr. Fellmeth?

6 A Well, in addition to the Litepanels we
7 worked on a project regarding the U.K. LED company.

8 Q And what company is that?

9 A Repressed their name. I'm not like that.
10 Give me a second, I'll think of the name.

11 Q Okay. I will keep asking you questions.

12 A Yes.

13 Q So have you kept in contact with Mr.
14 Fellmeth after leaving Litepanels?

15 A Yes.

16 Q And what's the nature of your connection
17 to him or contact with him?

18 A You know, I think both personal and
19 professional.

20 Q Have you pitched Mr. Fellmeth on the idea
21 of asserting some Litepanels patents?

22 MR. HOFFMAN: Objection to form.

23 THE WITNESS: Yes. In the stadium
24 lighting side, yes.

25 Q BY MR. WARD: Okay. Tell me about that.

1 What did you pitch?

2 A So Kevin Baxter and Fred Holmes and myself
3 also went on to found a stadium lighting business.
4 Through that we got closer toward the understanding
5 what is effectively a different industry although
6 because there is some broadcast applications for
7 stadium lighting besides just the general
8 illumination we looked at the idea of asserting the
9 Litepanels patents in that separate side.

10 Q And how many Litepanels patents would have
11 been part of that matter?

12 A I couldn't give you an exact number. I'm
13 going to estimate around three to four.

14 Q And how did you present that to Mr.
15 Fellmeth? How did you indicate that that matter
16 could be pursued?

17 A Likely just through a short write-up.

18 Q And what did you say in the short
19 write-up, Ken?

20 A I think we estimated what some of the
21 royalties could be based on some research in what
22 we thought their sales were.

23 Q Did you provide a claim analysis?

24 A Could have been. It is likely.

25 Q Did you indicate to Mr. Fellmeth that you

1 had spoken to a law firm about representing him on
2 a contingency basis?

3 A Yes.

4 Q What was the response to that
5 recommendation?

6 A Well, I think there was an issue with like
7 a cross-license and so it was not advantageous for
8 Vitec to pursue.

9 Q So Videndum declined to pursue the idea;
10 is that correct?

11 A That's correct.

12 Q Have you consulted with Videndum on any
13 matters?

14 A The U.K. company I mentioned earlier, yes.

15 Q Any matters other than the U.K. Stadium
16 lighting company?

17 A I think that's the primary one.

18 Q Do you recall emailing with Mr. McGee
19 about the possible assertion of patents?

20 A I believe Fred provided Mr. McGee's number
21 and I forwarded that to him.

22 Q When you say you forwarded that, you
23 forwarded your proposal with respect to the U.K.
24 Stadium lighting company?

25 A Yeah, again I need to check, it has been a

1 few years so I need to check that, but that's in
2 the realm of possibilities.

3 Q How about Kyle Gottuso at Armstrong
4 Teasdale? Have you had similar conversations about
5 patent litigation matters with him?

6 A I don't know the name.

7 MR. HOFFMAN: Objection; form.

8 THE WITNESS: I don't know that name.

9 Q BY MR. WARD: How about Fred Holmes? Have
10 you had communication with Fred Holmes about
11 asserting different patents?

12 A Yes.

13 Q I'm interested to know how is it that you
14 determined that the U.K. Stadium lighting company
15 might be infringing on patents.

16 A Well, let's clarify that. The stadium
17 lighting company was U.S.-based and then they had
18 been acquired by I believe it was Phillips and
19 that's what created potential conflict there from
20 the Videndum standpoint.

21 Q How is it that you initially made the
22 determination that there could be possible patent
23 infringement by the U.K. Stadium lighting company?

24 A I mean, while I'm not a patent attorney I
25 understand the processes from a claim chart

1 standpoint with that and you know it is a
2 comparison of the product versus the claim
3 language.

4 Q Have you done any other patent analysis
5 for infringement purposes?

6 MR. HOFFMAN: Objection; form.

7 THE WITNESS: Yes.

8 Q BY MR. WARD: What can you tell me about
9 that?

10 A Probably started 2004, '05, and I think
11 our first patent was issued in 2005. I looked at
12 targets.

13 Q Specifically I'm interested in other
14 interactions similar to your interaction with Mr.
15 Fellmeth about the U.K. Stadium lighting company.
16 Have you made other proposals with respect to
17 potential patent infringements?

18 MR. HOFFMAN: Objection; form.

19 THE WITNESS: Again can you just be a bit
20 more specific?

21 Q BY MR. WARD: Other than the U.K. Stadium
22 lighting company have you identified other
23 companies that might be infringing Litepanels'
24 patents or other patents in which you have been
25 involved?

1 A I mean, I have targeted companies that
2 would be infringing the portfolio since 2006 and,
3 you know, pretty much, as I said, I managed up to
4 sometimes two to three cases in federal court at
5 one point in time prior to the acquisition so we
6 picked companies for infringement and go after
7 them.

8 Q So you are familiar with the task of
9 assessing potential patent infringement, correct?

10 MR. HOFFMAN: Objection; form.

11 THE WITNESS: That's a fair statement,
12 yes.

13 Q BY MR. WARD: And after you left
14 Litepanels in 2012, in addition to this proposal to
15 Mr. Fellmeth about the U.K. Stadium lighting
16 company, have you made other proposals with respect
17 to potential patent infringement?

18 A From memory everything focused in and
19 around the stadium lighting, potential for Videndum
20 to expand into what I would call a different area
21 of focus. When I was there and I think in general
22 specific competitors toward Litepanels, the stadium
23 lighting is a separate so from memory it is just
24 the stadium lighting.

25 Q When you had those conversations with Mr.

1 Fellmeth about possible assertion against the
2 stadium lighting company did you disclose that you
3 were engaged with Colt at that time?

4 A I'd have to see the timing. Videndum has
5 just recently purchased Quasar. I had been working
6 with Colt since 2016 or 2017. It is two separate.
7 I believe the stadium likely would have been prior
8 to Videndum's acquisition. Again I'd have to check
9 that.

10 Q You understand that the conversation you
11 had with Mr. Fellmeth about the stadium lighting
12 company would have been prior to 2016?

13 A No, I'm saying that Videndum performed
14 according to what you said earlier in 2009. Sorry,
15 in 2021, sorry, let me be specific. So Videndum
16 has only been involved with Quasar for just a very
17 recent and short period of time.

18 Q And your understanding would be that your
19 conversation with Mr. Fellmeth would have been
20 prior to April of 2001?

21 A I believe so. I'd have to check. I'd
22 have to check.

23 MR. WARD: Okay. Susan, if I could get
24 your help I'll need to mark an exhibit.

25 ///

1 (Fisher Exhibit 1025, Email with
2 attachment, marked for identification.)

3 MR. WARD: So, David, if it is okay with
4 you I will share this with the witness. It is
5 Exhibit 1025.

6 Q Ken, this is an email from Fred Fellmeth
7 to David McGee and others from June 20th, 2023. Do
8 you see that on the top of the first page?

9 A Yes.

10 Q Okay. I will give you a moment to review
11 the thread of this email and then I just want to
12 ask a few questions.

13 MR. HOFFMAN: I have an objection to the
14 exhibit as it appears to be incomplete. It appears
15 to be only a portion of the thread.

16 Q BY MR. WARD: Just let me know when you're
17 ready, Ken.

18 A Go ahead.

19 Q Ken, you see in the middle of that first
20 page of Exhibit 1025 this is an email forwarding an
21 email and the header is provided in the middle of
22 the page. The email is from Ken Fisher dated June
23 20th, 2023, to Fred Fellmeth, "Subject: Lighting
24 Expert - Bruce Finn, Hollywood Director
25 Photography."

1 And in the body of the email you state,
2 "For the Lighting Effects Expert: Mr. Bruce Finn,
3 DP, Two-time Emmy Award Winning Cinematographer,
4 Professor, Author, Bruce Finn is credited as the
5 Director of Photography on more than one hundred
6 major television network episodes and pilots."
7 And it continues on to provide a number of credits
8 associated with Mr. Finn."

9 And on Page 2 of the exhibit it states,
10 "Ken's note: Bruce is very knowledge, well spoken,
11 and extremely experienced in explaining film and
12 television concepts in understandable terms. Bruce
13 is available for the expert project. Hourly Rate:
14 \$400/hour. Programming expert to follow next."

15 And then at the top of Page 3 it says,
16 "Best, Ken."

17 Do you remember sending this email, Ken?

18 A Yes.

19 Q And what's being described in the email?

20 A So let's clarify. You mentioned -- I
21 mentioned earlier about a London or U.K. project.
22 I couldn't remember the name is of the company.
23 This was a project that I worked with Fred Fellmeth
24 on. It is unrelated to the current project.

25 Q What do you mean by current project?

1 A This case.

2 Q What project is this email, Exhibit 2015,
3 related to?

4 A Do you have the additional? It would be
5 good to see the whole chain with this.

6 Q I do not. This is all that I have.

7 A I'd like to see the prior as well. This
8 is just a snippet.

9 Q Based upon the text of the email it
10 appears that you are recommending Mr. Bruce Finn as
11 an expert, correct?

12 A Yes, correct.

13 Q And in June of 2023 what would you have
14 been recommending Mr. Bruce Finn to serve as an
15 expert on?

16 A I assisted Mr. Fellmeth with a company
17 that's infringing the patent. I believe this was
18 tied to that. But again I'd like to see the full
19 chain of emails.

20 Q What is that company?

21 A That's the name that I cannot remember.

22 Q What's the technology, do you remember,
23 Ken?

24 A Selling LEDs.

25 Q LED lighting?

1 A Yes.

2 Q What's the industry for the lighting?

3 A The film and television.

4 Q And what type of LED lights?

5 A What type of lights?

6 Q Tube lights, panel lights?

7 A Non-tubes. It is separate. It is an
8 unrelated.

9 Q Unrelated to what?

10 A To tube lighting.

11 Q And does it involve a potential assertion
12 of a Litepanels patent?

13 A I believe so.

14 Q And you state in the email, "Programming
15 expert to follow next."

16 What do you mean by that?

17 A I'd like to see the full chain. I'd be
18 happy to answer your question if we could just
19 delay this one, let me see the full chain. I'm
20 just seeing a snippet here. I need to put it more
21 into context.

22 Q Sorry, Ken, I don't have the full chain
23 but when you say programming expert what do you
24 think that would apply to?

25 MR. HOFFMAN: Objection; asked and

1 answered.

2 THE WITNESS: The core part involved a
3 special effects software so when I say it is
4 unrelated it is completely separate. So this is a
5 U.K. company that has -- you say Litepanels patent.
6 Again, it is -- I need this in context.
7 Specifically this as I remember without seeing the
8 prior, this is a -- this is a U.K. company that has
9 patented special effects lighting. I believe they
10 have asserted something against Videndum so this is
11 not tube lighting, this is not LED lighting, this
12 is a special effects. This company is asserting
13 patents involving special effects against multiple
14 companies in the industry. Vitec is one of the
15 defendants in the case.

16 Q BY MR. WARD: So in June of 2023 as
17 exemplified by this email you were having
18 conversations with Mr. Fellmeth about assisting in
19 patent litigation, investigation and perhaps
20 representation?

21 MR. HOFFMAN: Objection;
22 mischaracterization.

23 THE WITNESS: No, I -- I assisted Mr.
24 Fellmeth as to why the U.K. patents that were
25 involving unrelated special effects was invalid.

1 So I prepared claim charts, prior art in regards to
2 a separate special effects patent or patents, I
3 should say.

4 Q BY MR. WARD: And at any time during this
5 work did you relay to Mr. Fellmeth that you were
6 also engaged in Colt IPRs?

7 A I wasn't at that time engaged. This is
8 April of or June of 2023. I was doing some work
9 for Mr. Fellmeth in let's call it Quarter 1. I'd
10 have to double check. The current was like Quarter
11 3. Again, I need to see the whole string here so I
12 can make sure my dates are correct. I want to give
13 you accurate dates.

14 Q Have you had any communications with Mr.
15 Fellmeth after Q3 of 2023?

16 A I don't know. It could be, yes.

17 Q At any time did you relay to him your
18 engagement in the Colt IPRs?

19 A I can't give you a definitive answer. I'd
20 be happy to check it.

21 Q The question, Ken, is have you
22 communicated with Mr. Fellmeth with respect to your
23 engagement in Colt IPRs.

24 A I have not.

25 Q Are you still continuing to work with Mr.

1 Fellmeth on certain matters?

2 A There's no -- there's no pending --
3 there's -- no to answer your question.

4 Q When did that work conclude?

5 A I'd have to check. I prepared some
6 reports regarding the software and why the patents
7 were invalid, provided prior art in and around the
8 first quarter of 2023.

9 Q Okay. I want to move back to your
10 LinkedIn profile, Ken, if you go back to Exhibit
11 1024, please.

12 On Page 2, the next company that you list
13 is SST, Incorporated. What is SST?

14 A This is a company called ShotSpotter. We
15 did a merger with ShotSpotter back in and around
16 2004. It was a -- the old ShotSpotter was an
17 analog gunshot detection system. Mr. Baxter and
18 Mr. Fisher and I developed around 18 patents for a
19 digital gunshot detection system and there was a
20 merger of companies forming a new ShotSpotter
21 Delaware in around 2004.

22 Q How did you first become engaged in
23 gunfire detection?

24 A We -- there was in and around 2002, I
25 remember there was the D.C. Sniper. This was where

1 an older gentleman and a young kid were in a trunk
2 of the car. They were shooting people in
3 Washington, D.C. They were doing -- we were in Los
4 Angeles and watching that on CNN. It was
5 essentially an invention through problem solving.
6 We looked at people crawling out of the car on the
7 greasy gasoline, you know, on hands and knees
8 putting -- putting gas in their cars and we
9 determined what was needed was a fast-deploy
10 gunshot detector locator system and we proceeded to
11 patent that and expand on that and over time
12 developed roughly 18 patents.

13 Q Prior to that you had no experience in
14 gunshot detection?

15 A Zero.

16 Q And how did you go about developing your
17 expertise?

18 A This was with Kevin Baxter and Fred
19 Holmes. We designed highly portable battery-
20 powered system.

21 Q When did you first sell the system?

22 A It is hard to say but currently our
23 systems is in roughly 95 cities in the U.S.

24 Q But you don't remember when you first sold
25 the product?

1 A I don't.

2 Q And your Exhibit 24, your LinkedIn
3 profile, it lists your involvement for ShotSpotter
4 2004 to 2006, correct?

5 A Correct, yeah. We developed the patents
6 starting in about 2002 and then the merger was I
7 believe 2004.

8 Q I'm sorry, the merger? What do you mean
9 by that?

10 A We merged in our technology in exchange
11 for some founders' stock in the new ShotSpotter.

12 Q You are listed as a co-founder of SST so
13 you are a co-founder of what you are referring to
14 as the new ShotSpotter?

15 A Correct. There was a prior California
16 entity that was an analog system, literally a
17 server with some phone, you know, copper phone
18 lines going out to microphones, a very crude old
19 system. So, yeah, co-follower of the new Delaware
20 ShotSpotter with the digital technology that we
21 supplied.

22 Q Does ShotSpotter the company still exist?

23 A It does.

24 Q Why did you leave?

25 A Well, we provided the patents. It was

1 really do we work on Litepanels or do we work on
2 ShotSpotter and they had a team from the old so we
3 pursued Litepanels and then had the founders -- the
4 company went public in, I don't know, a few years
5 ago for a few hundred million dollars.

6 Q Did you resign from ShotSpotter?

7 A It wasn't a -- we were more consultants,
8 more transition consultants bringing in the new
9 technology. I think that at least Kevin worked for
10 a year. It was more transitional.

11 Q So you were never an employee of
12 ShotSpotter, correct?

13 A I don't believe so, no.

14 Q But you were a co-founder of ShotSpotter.

15 A Correct. Of the new ShotSpotter, yes.

16 Q New ShotSpotter being SST, Incorporated,
17 Delaware?

18 A Correct.

19 Q So you co-founded that entity but you were
20 never an employee of that entity?

21 A I believe that's correct, yes.

22 Q Were you ever involved in any litigation
23 against other co-founders of ShotSpotter?

24 A Say the question again?

25 Q Were you ever involved in any litigation

1 against other co-founders of ShotSpotter?

2 A Against other co-founders of ShotSpotter.

3 No.

4 Q Were you involved in any litigation with
5 respect to ShotSpotter or its employees?

6 A Yeah. We had a stock option contract and
7 when they went public they wanted to reduce the
8 amount of shares so there was some litigation which
9 was settled regarding the -- our founders' stock.
10 Oh, I'm sorry, the stock option for some additional
11 technology, I misspoke. So we had founders' stock
12 and we also had -- we had a separate contract for
13 additional intellectual property work and there was
14 a dispute over that contract from the additional
15 technology.

16 Q Ken, did you seek to have Pepper Hamilton
17 represent you in that matter?

18 A That's a possibility.

19 Q Did they represent you?

20 A I'd have to check.

21 Q What was the outcome of the litigation?

22 A It was settled and we received a payment.

23 Q And you say we received. Who is we?

24 A This would be Fred Holmes, Kevin Baxter
25 and myself.

1 Q What is FisherLight, Ken?

2 A FisherLight is a d/b/a of Fisher

3 Productions and was essentially the large car

4 lighting that I mentioned earlier.

5 Q Okay. So did FisherLight predate Fisher

6 Productions?

7 A Did FisherLight -- I think some of the

8 work being done in '85 or '86, '87 prior the

9 incorporation of Fisher Productions may have been

10 under the FisherLight name.

11 Q Are you familiar with the company by the

12 name of BB&S Lighting?

13 A Yes.

14 Q Who were they?

15 A This is a European-based manufacturer.

16 Q Manufacturer of what, Ken?

17 A Of lighting for film and T.V.

18 Q What type of lighting?

19 A Both conventional LEDs as well as remote

20 phosphor.

21 Q And were you involved with BB&S Lighting?

22 A Yes. I put in the -- I put in the

23 declaration handled marketing for the U.S.

24 distribution side of the -- for the company.

25 Q Were you responsible for making corporate

1 filings and paying taxes for BB&S Lighting?

2 A No. There was a separate U.S. company
3 called BBS Lighting so it was a sales distribution
4 company.

5 Q So there was a U.S. incorporated entity
6 BB&S Lighting?

7 A So BB&S is a European manufacturer. BBS
8 Lighting was handling some sales and distribution
9 for the European company.

10 Q Do you know Toby Salli?

11 A I do.

12 Q Am I saying that last name correctly?

13 A I think so.

14 Q Who is Toby?

15 A He worked with me on the BBS Lighting
16 side.

17 Q And what was his role?

18 A He would assist in sales and marketing.

19 Q Your role was marketing, correct?

20 A Also involved in advising on product
21 development too.

22 Q And does BB&S or BBS still exist?

23 A BB&S does, yes.

24 Q And what about the U.S. entity BBS?

25 A I don't know. I believe that's been -- I

1 believe that's been shut down.

2 Q Has your relationship with BB&S ended?

3 A Yeah. There was a contract that called
4 for quotas and also there was a lot of supply
5 issues where there were long delays. For the U.S.
6 side it did not meet its distribution. There was a
7 hard sales contract, it did not meet the minimums,
8 so the contract was cancelled or just expired
9 automatically.

10 Q So were you terminated from BB&S, Ken?

11 A No. The distribution contract --
12 distribution contract with the manufacturing
13 company expired because it didn't hit the sales
14 minimums. It was like a two-year contract. It
15 would renew if the company hit sales numbers. The
16 company also had issues producing products so it
17 was kind of a difficult situation.

18 Q And what do you mean by difficult?

19 A We didn't make the sales minimums. Part
20 of that was -- a lot of that was delays in
21 manufacturing. Things tend to take longer from a
22 manufacturing standpoint than planned.

23 Q Ken, I would like to ask you about a
24 company name Visual Buddha. Who is Visual Buddha?

25 A Visual Buddha was a small company that we

1 did some trials to see about producing some LED
2 lights.

3 Q When would that have been?

4 A Two thousand -- I don't know, similar
5 times. 2013 to maybe '15.

6 Q That would have been after you left
7 Litepanels?

8 A Yes.

9 Q Is Visual Buddha providing products
10 competitive to those of Litepanels'?

11 A As I remember, Litepanels stopped making
12 the conventional one by ones and so we were seeing
13 if there was a market for the conventional one by
14 ones. Litepanels moved to higher output, different
15 designs on the one by one.

16 Q Does Visual Buddha still exist today?

17 A No.

18 Q What happened to it?

19 A We had an Asian manufacturer, we had some
20 quality control issues with that and there wasn't
21 that big of a market for the old-style lights.

22 Q Were you -- how did your relationship with
23 Visual Buddha end?

24 A Well, Visual Buddha was a company that I
25 formed so when the -- with the manufacturing issues

1 we just shut it down.

2 Q Have you ever heard of a company called
3 Soft Panels?

4 A Yes. That was a crowdfunded project that
5 we did.

6 Q And when was that?

7 A I'd have to check. 2016, maybe 2017.

8 Q And what was the nature of the company?

9 A The nature of the company was technology
10 that could sense the ambient color temperatures,
11 you know. In some cases one conference room may be
12 a different color temperature or have -- this like
13 it could auto-sense the ambient and match to that.

14 Q And what type of lights was it?

15 A Those were LED.

16 Q And would that have been a competitive
17 product to Visual Buddha or Litepanels?

18 A I don't -- I don't know if Visual Buddha
19 was still -- still there. I mean, any -- any LED
20 light would be competitive with other. This was a
21 different technology. We're seeing sort of
22 auto-sensing a light that to adapt itself
23 automatically.

24 Q So was Soft Panels incorporated?

25 A No, this was really -- we did this through

1 a crowdfunding source.

2 Q Does it still exist?

3 A No.

4 Q What happened?

5 A We had an Asian contract manufacturer. I

6 think we looked maybe at like the partnership to

7 develop different lights and we had some issues

8 with the manufacturer making their own lights

9 against what the partnership agreement had said so

10 I think we just stopped doing it. And there may

11 have been a little bit of technology. There's a

12 fair amount in trying to have an accurate color

13 sensor with that. I think there's some tech issues

14 too with that.

15 Q How much money was raised for the

16 crowdfunding?

17 A I have to look but like \$400,000.

18 Q And does the entity exist?

19 A No.

20 Q And when was it terminated?

21 A Well, it never officially formed so this

22 was a pilot program with the crowdfunding. We

23 delivered the lights as promised.

24 Q Okay. Can you tell me about Patent Group,

25 LLC.

1 A Uh-huh.

2 Q What is it?

3 A So that is my company and so I -- the work
4 that I do goes through that.

5 Q What do you mean the work that you do?

6 A For example, like expert patent work.

7 Q So when you invoice Mr. Hoffman for your
8 work in the Colt IPRs you invoice it from Patent
9 Group, LLC?

10 A That's correct.

11 Q How many different litigation matters has
12 Patent Group, LLC been involved in?

13 A Well, the four or five we discussed here
14 already in and around the Colt LEDs, the mention
15 with project assistant Mr. Fellmeth mentioned
16 earlier so six or seven. I'd have to go back and
17 have a look. Ten. I'd have to go back and look.

18 Q When did you create Patent Group, LLC?

19 A This was created, this one was created
20 2020. It is an LLC.

21 Q Does it still exist?

22 A It does.

23 Q Does it have employees?

24 A Myself.

25 Q Anyone else?

1 A No.

2 Q Are you responsible for making the
3 corporate filings and paying taxes for that entity?

4 MR. HOFFMAN: Objection; compound.

5 THE WITNESS: Yes.

6 Q BY MR. WARD: Ken, have you heard of a
7 company named Rotolight?

8 A Yes.

9 Q How do you know them?

10 A That was a company that I couldn't think
11 of the name but that's the U.K. company that has
12 the special effects patents mentioned earlier.

13 You talked about the U.K. stadium light
14 company. That company is Rotolight. I think you
15 may have combined both so let's clarify that.

16 So the U.K. company that I was referring
17 to earlier was Rotolight. The stadium lighting
18 company was a U.S. company that was bought directly
19 by Phillips and Phillips had a name change so
20 they're a European so it is two separate. So the
21 Rotolight was the consulting project that I
22 assisted Mr. Fellmeth with involving again special
23 effects software.

24 Separately there was a proposal to -- so
25 the Rotolight has nothing to do with Litepanels or

1 the Litepanels patents as far as the stadium
2 lighting is not the U.K. company, this is I
3 believe, I think they're Dutch, Dutch-based,
4 Phillips.

5 Q Are the same -- is the same technology an
6 issue in both of -- for both of those companies?

7 A So again the Rotolight, the U.K. company,
8 is a company that has special effects software.
9 They have asserted patents against at least a half
10 a dozen companies in the film and T.V. industry,
11 one of which is Videndum. I helped Mr. Fellmeth
12 with that project roughly the first quarter of last
13 year. Separately, likely a few years before that,
14 I proposed that we go after the separate stadium
15 lighting business. It is not a competitor to film
16 and T.V. So both are unrelated so one is a
17 software, Videndum is a defendant. The second one
18 was trying to expand the reach of the Litepanels
19 portfolio.

20 Q Do you know if the Rotolight dispute is
21 still ongoing?

22 A I do not know.

23 Q Do you anticipate having further
24 consulting activity with Mr. Fellmeth in the
25 Rotolight matter?

1 A I think what I gave them can destroy the
2 case, there's no question.

3 Q You anticipate working further on that
4 matter?

5 A I think what I gave them was enough ammo
6 that would -- that there's nothing else needed. It
7 is a clear, you know, disabling prior art.

8 Q Ken, we talked about a lot of different
9 entities this morning. Any one that I haven't
10 mentioned that you have been affiliated with in
11 your professional capacity?

12 A I don't think so.

13 Q Which entities are you currently employed
14 by or affiliated at the moment?

15 A I do some separate tax strategies which is
16 completely separate from this, so excluding that I
17 am only engaged in this Colt matter with that.

18 Q So other than Patent Group, LLC, you are
19 not currently engaged with any entity.

20 A Correct.

21 Q Or serving in a consulting capacity for
22 any other entity?

23 A No.

24 Q Any independent contractor status with
25 another entity?

1 A No.

2 As I said, I do some separate business
3 strategy, tax strategy work, and that is also run
4 through the same IP group, so that's, you know,
5 polar opposite. I have been doing some of that
6 work as well.

7 Q Have you previously done works with Fox
8 Corp., Ken?

9 A No.

10 Q How about Sony Pictures?

11 A No.

12 Q Warner Bros.?

13 A No.

14 Q I want to turn back, Ken, to your
15 declaration, Exhibit 2100, if you could turn to
16 that for me. I want to take a look at Paragraph
17 156 which is on Page 77.

18 Paragraph 156 states, "Petitioner proposes
19 that a POSITA would have had: at least a Bachelor
20 of Science degree in electrical engineering, or a
21 closely related field" --

22 A Yes.

23 Q -- language "... with at least two years
24 of experience in the design of entertaining
25 lighting systems, and the design and use of LED

1 lights."

2 In view of that proposed definition of a
3 person of ordinary skill in the art, Ken, can you
4 consider yourself a person of ordinary skill in the
5 art for this matter?

6 A What I believe is I wrote I think in great
7 detail, I believe that the petitioner's proposed
8 definition of relevant artist is far too narrow.
9 This is a very engineering focus. The reality in
10 the industry is the polar opposite of that. For
11 example, your -- your client on the website says
12 they have a hundred years of set lighting
13 experience. I give some examples in -- on Page 81,
14 Paragraph 165. So in your patent you mention in
15 Example No. 1 gaffers Rudy Pohlert and Pat
16 Grosswandt who developed LED lighting. Petition 2
17 you went forward about Kino Flo performed by two
18 gaffers. So here is three examples where one is
19 skilled in the art, engineers, they are gaffers. I
20 think your definition is far too narrow.

21 Q Ken, the question is in accordance with
22 Petitioner's proposed definition of a person
23 skilled in the art do you consider yourself to be a
24 person of ordinary skill in the art.

25 A This says Bachelor of Science degree so I

1 do not have a Bachelor of Science degree.

2 Q So you are not a POSITA in accordance with
3 Petitioner's definition?

4 A With the overly narrow definition I am
5 not.

6 Q Ken, have you ever designed an LED light?

7 A I have been part of many teams that have
8 developed lights, yes. It is very different, you
9 know. Again I refer you back to -- there's great
10 detail spent here explaining. You have -- so here
11 again on -- on Page 45 you have two gaffers
12 developing LED lighting. These are not engineers.
13 Quasar itself has a hundred years of on-set
14 lighting as designers. So if you talk about did I
15 specify what capacity to use for the LED, no. Was
16 I a designer of the light, yes. You know, the
17 whole focus here is far too much on the engineering
18 side and not in the real world.

19 Q Ken, I would like to go to Page 8 of your
20 declaration.

21 Page 8, Paragraph 12, you provide a Table
22 A. Paragraph 12 states, "Table A below contains a
23 list of film, television, video-related lighting
24 patents for IM named inventor," and then you
25 provide us a list there of US patent numbers that I

1 didn't get a chance to count the number but do you
2 know how many you listed there, Ken?

3 A I don't know.

4 Q What's your -- what's your guess?

5 MR. HOFFMAN: Objection; form.

6 THE WITNESS: One, two. Roughly -- well,
7 total there's 22 on that list.

8 Q BY MR. WARD: And is this a comprehensive
9 list of LED patents in which you have been named as
10 an inventor?

11 A I don't think every one is LED, we have to
12 subtract a few, but --

13 Q It is safe to say you have been involved
14 in a number of LED patents, correct?

15 A That's correct.

16 Q And you are an inventor on those LED
17 patents.

18 A Correct.

19 Q And I'm just curious, Ken, about the types
20 of LED lights that are involved. So if you can,
21 describe to me the types of LED lights that you
22 have been involved in designing, whether they were
23 panel lights or other types of LED lights.

24 A Well, there would be film, television,
25 video. It could be on-camera lights, off-camera

1 lights, lights with adjustable lenses.

2 Q Have you designed flat panel LED lights,
3 Ken?

4 A Well, again how do you -- how do you
5 define -- if you are talking about did I specify
6 what capacitor to use, no. Was I intimately
7 involved in the -- in the features, sets, the
8 design of the lights, yes.

9 Q And, in fact, sufficiently involved that
10 you were named as an inventor on many of those
11 patents, correct?

12 MR. HOFFMAN: Objection; asked and
13 answered.

14 THE WITNESS: Correct.

15 Q BY MR. WARD: Who would you say are some
16 of the leading experts in LED lighting for T.V. and
17 film industry?

18 MR. HOFFMAN: Objection; foundation.

19 THE WITNESS: I mean, that's a very broad
20 question. If you talk about specifying individual
21 components that's a whole different -- it is a
22 whole different deal, you know.

23 Q BY MR. WARD: Ken, I'm just asking about
24 in your mind who do you envision as this person who
25 is an expert on LED lighting for T.V. and film.

1 A Well, there's no one size fits all. You
2 have to be more -- you have to be more specific.
3 We talked about -- I mean, there's an engineering
4 side to that. This huge report here is all on the
5 engineering side, it is not on the invention, it is
6 not on the -- but it typically takes a team with
7 that part and, you know, there's ideas going back
8 and forth on feature, feature sets, what about
9 this, do we make the lenses moveable. You know, it
10 is -- it is -- the stuff is very complex and you
11 are asking basic questions and there's no simple
12 answer. If you want to ask me specifically on
13 the -- is there a person expert on the engineering
14 side, that's one thing. Is there a -- is there --
15 we use as far as the feature set came up with very
16 innovative products with that. Very, very great
17 design team.

18 Q Would you agree that there are certain
19 individuals recognized in the film and T.V.
20 lighting industry as having deep experience in LED
21 lighting?

22 MR. HOFFMAN: Objection; form.

23 THE WITNESS: Yes.

24 Q BY MR. WARD: Would Kevin Baxter be one of
25 those individuals?

1 A I think Kevin Baxter would be, absolutely.

2 Q Would Bruce Finn be one of those
3 individuals?

4 A Bruce has far less experience but Bruce
5 opined on a very specific, you know, very narrow --
6 again this is -- so Bruce in the area that he
7 opined on was -- you know, had been on hundreds of
8 locations, spec stuff; do I change out fluorescent
9 lights, do I not change out florescent lights, he
10 addressed a specific area so it is very fact
11 dependent on a case-by-case basis.

12 Q Would you consider Fred Holmes an expert
13 in the film and T.V. LED lighting area?

14 A On the engineering side, yes. On the
15 on-set side, no.

16 Q And why is that?

17 A He has little experience on set. I have a
18 lot of respect for Mr. Holmes, he a very good --
19 his area of expertise is software, he is brilliant,
20 but again it is a team with that part. The -- you
21 have to be -- one skilled in the art tends to be
22 more of a gaffer that is doing design than it is
23 engineering. It is a very different thing. So
24 Litepanels was strong in that we had Fred Holmes on
25 the software side, we had Kevin Baxter on the

1 hardware side and we had three lighting people. So
2 we had Rudy, Pat and myself with years of lighting
3 experience with that part.

4 The inventions come from the on set. The
5 one skilled in the art from a designers standpoint
6 tends to be heavier on the on-set lighting design.
7 If you have a positively recited suitable-for-
8 commercial-image capture you need somebody who has
9 been on set to judge that. It is very hard. It is
10 not -- you know, Mr. Holmes is brilliant but he
11 doesn't have experience on set. It is a team with
12 that part.

13 Q So, Ken, you've got more than 20 patents
14 and by my count more than two decades of experience
15 in LED lighting. Would you consider yourself an
16 individual who is an expert in T.V. and film LED
17 lighting?

18 A Yes. But again there's no one size fits
19 all, even on -- you know, even on this. There's --
20 Mr. Baxter brings in both lighting and engineering,
21 I bring in more lighting. You know, as I quote in
22 here, you know, Quasar promotes itself, your
23 client, with a hundred years of on-set lighting
24 experience. Kino Flo. And when I read the -- when
25 I read your petition it misrepresents fluorescent

1 in a very broad way.

2 Kino Flo is a monster company, Academy
3 Award-winning, revolutionized. What happens is the
4 view that's put to the board is very misleading.
5 Oh, fluorescent is -- is bad, it flickers. Kino
6 Flo is double, triple the output, very stable, 95
7 CRI. It is a -- it is the an Academy Award-winning
8 technology company I have seen all over the world
9 with that part. You -- your petition tells the
10 board, oh, one skilled in the art would instantly
11 change from LED; it is more reliable. Well, that's
12 if you don't -- if you disregard the claimed
13 invention, in some cases yes, it is reliable, in
14 other cases stuck into a little tube that's
15 encapsulated, there are -- it is risky, it is --
16 you have to -- you cannot apply a one-size-fits-
17 all and it is misleading.

18 Q Ken, are you a member of the patent bar?

19 A I'm not a patent attorney.

20 Q Have you ever sat for the patent bar?

21 A I have not.

22 Q Are you an attorney?

23 A I am not.

24 Q Have you ever drafted a patent
25 application, Ken?

1 A Yes.

2 Q How many?

3 A I have worked closely with patent
4 attorneys and I have drafted patent applications.

5 Q Have you drafted patent applications
6 relating to LED lighting?

7 A I have been deeply involved in both
8 drafting, writing the claims. A lot of the claims
9 that Litepanels have I personally wrote.

10 Q Have you ever drafted a patent application
11 for Colt?

12 A No.

13 Q Have you ever prosecuted a patent
14 application generally, not just for Colt but
15 prosecuted any patent application?

16 A I've done that, yes.

17 Q And by that I should explain. I mean
18 responding to office actions and otherwise
19 attempting to gain an allowance. You participated
20 in that?

21 A Yes.

22 Q How many roughly?

23 A I've got roughly 50 patents. I
24 probably -- I don't know, I'd have to look, but
25 eight to ten that I personally handled.

1 Q So you would consider yourself familiar
2 with the patenting process?

3 A Yes. I'm not a patent attorney but I'm
4 familiar with the process, yes.

5 Q And are you familiar with the different
6 components of a patent?

7 A Yes.

8 Q You were involved in the reexamination
9 proceedings for certain Colt patents, correct?

10 A I provided the expert reports for at least
11 three, four. Three to four.

12 Q But you were not involved in either
13 drafting or prosecuting the patents at issue in
14 these IPRs?

15 A No. No, I didn't even know about them
16 until one of the reexams.

17 Q Ken, I just want to point out a particular
18 patent that's listed on Page 8 of your declaration.
19 It is the ninth one down. The number is 7,972,022
20 and the title you provide is "[LED] Stand-mounted
21 light panel for natural illumination in film,
22 television or video."

23 A Uh-huh.

24 Q Do you recall that patent?

25 A It is one of the group, yes.

1 Q And do you recall what that patent relates
2 to?

3 A To a stand-mounted light panel for natural
4 illumination in film, T.V. and video.

5 Q Okay. I'm going to share with you now a
6 copy of that patent, Fred. I'm sorry, Fred. Ken.

7 I will give you one too, Fred.

8 MR. FELLMETH: Thanks.

9 MR. WARD: That should be Exhibit 1022.

10 Q And so now we're looking at Exhibit 1022.
11 Do you see that label in the bottom right-hand
12 corner, Ken?

13 A Yes.

14 Q Do you see up in the top right-hand
15 corner, Ken, it lists the Patent No. 7,972,022,
16 correct?

17 A Yes.

18 Q Is it okay if I just refer to this as the
19 '022 patent?

20 A Yes.

21 Q You see the date of patent listed at July
22 5th, 2011?

23 A Yes.

24 Q On the left-hand side of that first page
25 it lists the inventors. Can you tell me who the

1 inventors are?

2 A Rudy Pohlert, Pat Grosswendt, Kevin
3 Baxter, Ken Fisher.

4 Q And tell me who those folks are.

5 A These are co-founders of Litepanels.

6 Q So these four individuals, do they
7 represent all of the founders of Litepanels?

8 A No. Fred Holmes would be an additional.

9 Q But these four would have been founders as
10 of the creation of Litepanels in 2002?

11 A Yes.

12 Q Do you see it is designated as Line 22 in
13 the middle of the page there, the filing date is
14 March 30th of 2009, correct?

15 A Most of these are continuations that date
16 back earlier than that. So, yes, this was filed in
17 2009 but it would track back to an earlier
18 provisional.

19 Q And given its issuance date of July 5th,
20 2011, do you understand this patent to be prior art
21 to the '582 patent and the '895 patent?

22 A Yes.

23 Q I want to move to Column 15 of the '022
24 patent and it is going to be Line 22.

25 A 15/22?

1 Q Yes. In the middle of the page there.

2 A Uh-huh.

3 Q You are an inventor on this patent,

4 correct, Ken?

5 A Yes.

6 Q And you would have reviewed this patent

7 prior to its filing, correct?

8 A In general, yes.

9 Q Here column 15, Line 22, you stated this.

10 "FIG. 7 is a more detailed diagram of a
11 light segment 792 (e.g., an array) as may be used,
12 for example, in connection with the lighting frame
13 302 shown in FIG. 4. The light segment 792 may
14 correspond to each of the individual light segments
15 306 shown in FIG. 4, and the various light elements
16 (i.e., LEDs) 790 in FIG. 7 may correspond to the
17 individual low power lamps 305 shown in FIG. 3.
18 FIG. 7 illustrates a straight row of LEDs 790 as
19 may comprise the lighting segment 790."

20 And if you would do me a fair, Ken, and
21 flip back up to FIG. 7, I want to take a look at
22 the corresponding figure here.

23 And you see in Figure 7, and I will just
24 re-read the description, it says, "FIG. 7
25 illustrates a straight row of LEDs 790 as may

1 comprise the lighting segment 790."

2 Do you understand Figure 7 and the
3 associated disclosure to identify LED light with
4 LEDs displaced on a lighting frame?

5 MR. HOFFMAN: Objection; foundation and
6 form.

7 THE WITNESS: They are LEDs, yes.

8 Q BY MR. WARD: So what we're seeing in
9 Figure 7 is a LED light where the LEDs are
10 displaced on a lighting frame, correct?

11 A Correct.

12 Q And the 792 is referred to light segment
13 792, just looking at Figure 7 what do you
14 understand you disclosed there?

15 A On 792?

16 Q Yes. What does Reference No. 792 refer to
17 in Figure 7?

18 A A circuit board.

19 Q Okay. I want to move back down in the
20 text and take a look at Column 16. Column 16, Line
21 34. Just let me know when you're there.

22 A Column 16, 34?

23 Q Yes.

24 A Okay.

25 Q It says this. "In a preferred embodiment,

1 the bi-colored lighting apparatus utilizes light
2 elements of two different colors which, (unlike
3 red, green, and blue) are separated by a relatively
4 small difference in their shift or color balance.
5 When reference is made herein to the light
6 reference of, the light elements may, for example,
7 include first group which provide light output at a
8 first color and a second group which provide light
9 output at a second color, or else the light
10 elements may all output light of a single color but
11 selected ones of the light elements may be provided
12 with colored LED lenses or filtering to generate
13 the second color."

14 Do you understand this disclosure to
15 disclose a bi-color LED light with two different
16 sets of LEDs?

17 A I will just read it, please.

18 I do, yes.

19 Q And the statement is that the light
20 elements include a first group which provide light
21 output in a first color and a second group which
22 provide light output in a second color. Is it your
23 understanding that that discloses a bi-color LED
24 with one set of lights for one color and one set
25 of -- I'm sorry, one set of LEDs for one color and

1 one set of LEDs for another color?

2 A Yes. I believe in my report I put that I
3 wrote the bi-color claims in 2002 personally. It
4 issued in 2003, the bi-color, as a published
5 application with no changes. It issued as a patent
6 in 2005 so bi-color was publicly known for at least
7 ten years as part of the inventive nature of what
8 Colt just did. Litepanels assembled new
9 combinations of old elements is what Litepanels
10 did. Same thing that Colt has done. Assembled --
11 you have to view it. You cannot ignore the
12 structure of the -- of what's been claimed. It
13 is -- it was there for a decade. No one made a
14 bi-color tube. This is the whole -- it just --
15 without the on-set lighting experience there are
16 inherent problems with LEDs. There are inherent
17 problems when you have a very narrow encapsulated
18 tube cover. There are inherent problems with
19 bi-color.

20 And what trumps everything else there
21 are -- there are highly challenging conditions that
22 the things are used in. No one -- no one did what
23 Colt did.

24 Q You would agree as of 2009 a bi-color LED
25 light was known, Ken?

1 A I'm saying that I wrote the claims
2 personally in 2002 saying it published in 2003, ten
3 years before the Colt, well known, yes. It
4 published as a patent as is. What I wrote in 2002
5 issued in 2003 so publicly available in 2003 a
6 decade before Colt made the bi-color tubes, well
7 known, but no one went there. You have to -- the
8 petition completely ignores insofar as the
9 structure as claimed. You've got to choke
10 everything through there, it was well known, but no
11 one went there.

12 Q When you say you've got to choke
13 everything through this, what do you mean by that?

14 A I gave an example earlier saying that
15 Quasar in its petition says that the relevant
16 artist would readily change from fluorescent to
17 LEDs. It is a one size fits all. You've got to
18 look at the -- at the -- you cannot ignore the
19 structure as claimed. It is highly risky to put it
20 into a very narrow.

21 I will say it again. There were inherent
22 problems with LEDs even under a best case scenario.
23 There are major problems, major inherent heat
24 issues that will take a high CRI light and within a
25 short period of time have it be a low CRI,

1 unsuitable. You have huge issues with bi-color
2 because you are doubling the wattage, doubling the
3 localized heat. You have huge issues in film and
4 T.V. lighting that they wrap black wrap on tubes.

5 Every statement that I have read so far
6 fails to, ignores the structure as claimed. You
7 can't just say I've got a thousand lumens input.
8 The claim language was a thousand lumens output.
9 Completely different. And there's all kinds of
10 things that will de-rate it down. You can't just
11 say a sales focus, oh, it does seven, 70 watts per
12 lumen. Well, A, it is in the Set Lighting handbook
13 that we don't get anywhere near the output
14 promised. It just -- you know --

15 Q As of 2002 you would agree then that a
16 bi-color LED light of tungsten LEDs and daylight
17 LEDs in a housing was known, correct?

18 A I would say you have to look at the
19 published patent application. So the bi-colored
20 published in 2003, there was no changes from what I
21 wrote to what was published in the -- in the patent
22 application and there was no changes in the final
23 issued 2005 patents. So it was known, at least
24 available as of 2003. Then we launched a bi-color
25 product and I put that in my report as well in

1 2008. There was a long felt, unmet need and no one
2 did it until Colt did. I was there at Paramount.
3 There were top director, top gaffers. I'm rarely
4 surprised. It was a great invention, very much
5 what we did. A new combination of old elements.

6 Q Ken, I want to show you now Exhibit 2050.
7 Exhibit 2050 is a patent owner's exhibit. You
8 referenced this exhibit in Paragraph 8 of your
9 declaration.

10 A Yes.

11 Q And I want to point out the second
12 paragraph of the exhibit where it says, "What
13 prompted this column, you ask? Recent product
14 announcements confirm a trend toward the concept.
15 Lunera Lighting has announced LED lamps designed to
16 work with compact fluorescent and metal-halide
17 ballasts (p. 16). Cree recently announced LED
18 tubes that work with existing ballasts, following
19 similar announcements from other including Phillips
20 lighting and Luxul Technology."

21 Would you agree that as of the writing of
22 this article it was known to have an LED retrofit
23 tube for a fluorescent form factor?

24 A Yes, I believe I put in my report on
25 the -- on the Mac Tech light was roughly 2011.

1 Yes.

2 Q So in 2011 there were LED tubes that could
3 be retrofitted into a fluorescent form factor
4 lighting device?

5 A Yeah. Mac Tech put out a mono-color,
6 nine- to ten-watt mono-color in 2010. Yes, it was
7 not bi-color. It also was a large -- you know,
8 these are again looking at you cannot ignore the
9 structure of the Colt claim and this is just very,
10 very important. So we look at -- you look at Mac
11 Tech. It is mono-color, it is large banks. The
12 Colt invention is a single-fixture integrated bi-
13 color. Again, it is a -- it is -- it is really
14 simple, guys. It is a -- it is a new combination
15 of old elements. You know, the whole focus is on
16 an individual element, that's not the point. The
17 point is is no one else went there. I'm going to
18 give you just a specific example.

19 In 2013 we were doing tube lights. You
20 bring the Colt claims to me in 2013 as claimed and
21 say do it, I would laugh at you. I would not do
22 that. I have gone to great lengths here to explain
23 that. It is a bad idea. No one went there.
24 There's a lot of hindsight bias. You just -- did
25 some of the components exists. Yes, absolutely,

1 for many years. The problems were known.

2 Q Do you agree with the statement in the
3 article that says there is a trend toward the
4 concept? Was this trending at that time?

5 A Well, again, this is a consumer. This is
6 not suitable for film and T.V. This is a single
7 color that goes into a tube like this in a
8 horizontal in a very preferred format so in what
9 context do you mean that?

10 MR. HOFFMAN: Objection; form.

11 THE WITNESS: You cannot ignore the
12 structure as claimed. You've got to choke it
13 through suitable for film and T.V. This is not
14 suitable for film and T.V. A little flicker in the
15 consumer world changing color is not a problem. It
16 is a huge problem in a highly expensive film and
17 T.V. environment with that.

18 MR. HOFFMAN: Foundation too.

19 THE WITNESS: It is just an overly
20 simplistic outlook here.

21 Q BY MR. WARD: Were you familiar with
22 Lunera Lighting pre-Phillips and others providing
23 these LEDs tubes at this time?

24 A No.

25 Q I want to show you now, Ken, Exhibit 2045.

1 Exhibit 2045 is a printout of Mac Tech LED's web
2 page. Do you recognize this document, Ken?

3 A I recognize the logo.

4 Q You didn't review this document for
5 purposes of this case?

6 A I mean this is about a year after the
7 invention or --

8 Q The top of the first page of Exhibit 2045
9 provides a URL to the Wayback Machine.

10 A This is a year past invention.

11 Q It appears to indicate a 2014 date.

12 A Okay.

13 Q So you were aware of Mac Tech providing
14 LED tubes at this time?

15 A Yeah. So Mac Tech provided large banks,
16 they didn't do single tubes. They had, you know,
17 two-by-four-foot, four-by-eight-foot banks of
18 single color. You could do tungsten or you could
19 do daylight.

20 Q Did you use these tubes during that time
21 period, Ken?

22 A Didn't use them but I saw that. I think I
23 toured Mac Tech probably in 2012 maybe.

24 Q So the exhibit says, "Mac Tech LED
25 Lighting is the next stage in the evolution of LED

1 lighting allowing you to save on equipment, power,
2 air conditioning."

3 Would you have agreed with that statement
4 of those benefits at that time?

5 A I don't see how Mac Tech is. I mean, LED
6 used properly has benefits. I don't see this as
7 being tied to Mac Tech, but --

8 Q You would agree at that time LED was
9 beneficial because it allows to you save on
10 equipment, power and air conditioning?

11 A Well, again, there's no -- you've got to
12 be really careful here. There's no one-size-fits-
13 all answer. It depends on the context. If you are
14 using it -- you know, I put in the report, for
15 example, when you use LEDs and in the set lighting.
16 All LED lights had large heat sinks so when used
17 properly you can gain benefits but it is a double-
18 edged sword. There are -- LEDs in certain
19 instances, in certain embodiments are the worst
20 choice or at least perceived as the worst choice.

21 Q So these Mac Tech LED tubes at this time,
22 would they have exhibited the thermal issues that
23 you have identified?

24 A Mac Tech at that time were nine to ten
25 watts, large -- by design are in large banks. The

1 Colt, again when you look at it through the -- not
2 ignoring the structure of the Colt, the Colt is a
3 single integrated tube. That single integrated
4 tube bi-color could be used vertically, it could be
5 put up into the ceiling of a car, jammed into a
6 set, very challenging thermal environments that Mac
7 Tech wouldn't have experienced that at nine to ten
8 watts in a large bank, so again it is case by case.
9 You just can't oversimplify this stuff. It is
10 really important to analyze it in the context of
11 the matter which is the claims. So yes, at nine
12 watts; yes in a bank that cannot be jammed into a
13 corner or put up vertically, that would do that.
14 That could be a workable scenario. What they had
15 was workable within the context of a single color
16 large bank with separate controllers and, you know,
17 it was all very controlled.

18 Q You would agree that the Mac Tech LED tube
19 was operable in view of the thermal issues that you
20 have identified?

21 A Okay. Again, I think I was very specific
22 there. So the Mac Tech worked in the horizontal
23 orientation, the Mac Tech ran at nine to ten watts,
24 so it is all very, very case specific. In the case
25 of a nine- to ten-watt running only horizontal with

1 no ability to jam it into a corner, that -- under
2 those specific circumstances which are the polar
3 opposite of the claim in that specific case, yes,
4 it -- it appeared to be workable.

5 Q Ken, I want to show to you now what is
6 Exhibit 1023.

7 A Uh-huh.

8 MR. WARD: There you go, David.

9 MR. HOFFMAN: Thank you.

10 Q BY MR. WARD: Exhibit 1023 is a press
11 release entitled "B&M Lighting & Universal Studios
12 Partner on Mac Tech LED Lighting." The date
13 indicated on the article is June 3rd, 2011. And on
14 the first page of the exhibit it states, "B&M
15 Lighting and Universal Studios announce an
16 evolutionary new lighting product, Mac Tech LED.
17 Using specially developed LED lighting tube
18 technology, B&M Lighting has created four product
19 lines that use 30% to 70% less power than
20 conventional lighting, offer consistent color
21 temperatures at both daylight and tungsten and are
22 lightweight for easy load-in and strike. Universal
23 Studios Set Lighting is the exclusive rental
24 agent."

25 And then on Page 2 it provides a

1 photograph and on Page 2 a quote from the president
2 of B&M Lighting that says, "'Working closely with
3 experienced film and telephone professionals, we've
4 spent almost two years developing high output LED
5 chips,' said Ray Wolffe, President, B&M Lighting."
6 "'Using Mac Tech LED, a production can only use
7 Edison plugs and stingers, utilize 50K hour bulbs
8 and save on air conditioning because the LED tugs
9 run cool."

10 Would you agree with those statements with
11 respect to the Mac Tech LED tubes identified here?

12 MR. HOFFMAN: Objection; foundation, form.

13 THE WITNESS: Okay. Again you've got to
14 put it in context. So Mac Tech was monochromatic
15 so their tube was either daylight or tungsten, they
16 did not do bi-color. In fact, I think they teach
17 away from that. They were in the nine- to ten-watt
18 range so, I mean, this is a fluffy thing that's got
19 a lot of sales; oh, two years, I don't believe
20 that, I don't believe 50,000 hours, you know. So
21 viewed through -- I mean, like I said, it is a nine
22 watt. The fixtures as you see in here are all
23 designed to be horizontal. You can't jam that into
24 the ceiling, you can't jam an eight-foot light into
25 the roof of a car, so within very much more

1 controlled, so relatively there are substantial
2 material differences between this and the Colt
3 invention.

4 Q BY MR. WARD: Would you agree that what's
5 shown in Photo 2 of Exhibit 1023 is lighting for
6 use on a T.V. or film production set?

7 A Yes. That individual element exists.

8 Q On Page 4 of Exhibit 1023 it recognizes
9 some features of the product. In the second bullet
10 point it states, "Consistent color temperatures at
11 both daylight and tungsten and almost zero percent
12 green at 93 CRI."

13 A Sales propaganda. I can tell you in 2011
14 we made sure we didn't even put a CRI on our sales
15 because we couldn't get to it. Maybe in the
16 tungsten a little bit. Just because it is printed
17 doesn't mean it is true on this stuff. I can tell
18 you and I think Litepanels continued that for a
19 couple more years. We didn't even put CRI because
20 we couldn't put hand to heart to it and back it up
21 and we were the experts.

22 Q Are you familiar with the B&M Lighting
23 Company?

24 A I said I toured that I think in 2012.

25 Q And what do you mean you toured it?

1 A I mean I was offered a tour and I met and
2 toured, I met with B&M Lighting, I looked at all
3 the features, I'm familiar with B&M Lighting
4 Company in and around the invention, yes.

5 Q You don't believe these statements they
6 made about their product at this time are accurate?

7 A I'm saying to you specifically that we
8 control, we had micro scales, we had -- we have
9 what I think are the most advanced ways of
10 achieving high CRI. At that timeframe, especially
11 because, you know, the daylight LEDs lack red and
12 red is the most heat-sensitive, it falls off
13 quickly, I don't -- we did not -- if you look at
14 Litepanels circa 2000 we did not publish our CRI,
15 it was done for a reason, because it was
16 detrimental, it caused more problems or we would
17 have to lie. So do I believe this? No, I do not.

18 All of the sales stuff, you have to
19 really, the -- a one skilled in the art who had
20 experience with on-set lighting, I had coloring, I
21 was metering this stuff, it was not high CRI. Did
22 the sales propaganda say it was high CRI?
23 Absolutely. Did people promote it? Yes. I'm
24 telling you we could not put hand to heart and even
25 publish -- looking -- you look at a Litepanels

1 brochure. You will not see CRI with that part. So
2 it just -- you know, you don't believe everything
3 that you see written.

4 Q Ken, what percent of energy applied to an
5 LED is converted into light?

6 A It -- it depends. I don't know. I mean,
7 it used to be about 50%, there's a lot of localized
8 heat, so while it doesn't project heat you have a
9 lot of junction temperature issues, it -- there's a
10 lot of inefficiencies even in LED lighting with
11 that.

12 Q So what percent of energy applied to an
13 LED is converted to light?

14 A It depends on the manufacturer. I think,
15 you know, going back a few years you would be at
16 approximately 50%. Now I can't give you an exact
17 number. I'm not the one as part of the design team
18 that is spec'ing which -- you know, what capacitor
19 is being used with that part.

20 Q So with an LED can it is roughly 50% of
21 the energy applied is going to --

22 MR. HOFFMAN: Objection; asked and
23 answered, harassing.

24 THE WITNESS: I'm saying this is at a
25 highly detailed engineering but in the past it has

1 been about 50%. I'm giving you a generalized
2 answer. It varies on the manufacturer.

3 Q BY MR. WARD: And the rest of the energy
4 would then go to heat, is that your understanding?

5 A Correct, correct.

6 So there's a lot of heat, there's a lot of
7 heat in -- there's a lot of heat in LEDs at the
8 junction level and people confuse heat that's
9 radiated versus localized heat. It is a major
10 problem. It is the reason why no one put LED bi-
11 colors into a tube. It was a bad idea.

12 Q What percent of energy applied to a
13 fluorescent light is converted to light?

14 A It is a great question for an engineer but
15 it is somewhat similar, I can't give you an exact
16 percentage, but not every -- in some cases a few
17 years ago you could actually get more efficiency
18 out of fluorescent and whatever you see on
19 fluorescent isn't what Kino Flo did. So again
20 everything is fact-based, specific-based, there's
21 no one-size-fits-all answer. Kino had the best
22 electronic ballast, they had ultra-high night five
23 plus CRI dyes running two, two and a half times
24 brighter than any reference that you see here.

25 Q Would you agree that typically fluorescent

1 and incandescent lights convert less of the energy
2 that's applied to light than an LED light?

3 A Certainly, certainly from a tungsten
4 standpoint, and again you can't -- I'm giving you
5 specifics on Kino Flo that is -- that is suitable
6 for film and T.V. lighting. Anything else is -- is
7 a detail. You show me a pedestrian patent here
8 that, you know, on a Hasnain that talks about an
9 open air experiment without a diffusion cover,
10 that's of little to no value to me. But the entire
11 Hasnain reference, it doesn't apply to us. It is
12 used in a horizontal, every optimized, so all of
13 the heat is very, very even, so on the convection
14 cooling it is spaced away from the wall.

15 The Colt deal spun upside down horrible,
16 put against the wall so you blocked the heat sink.
17 So film and T.V. suitable for lighting you've got
18 to have factors of safety. Whatever you see here
19 on an idealized consumer has little to no bearing
20 in film and T.V. lighting. It is hindsight biased,
21 it just lacks the vantage point. The beauty of
22 Litepanels is that we had different vantage points.

23 MR. WARD: Thank you, Ken. I think we can
24 go ahead and take a break now, go off the record.

25 THE WITNESS: Okay.

1 (Lunch recess taken at 12:08 p.m.

2 Deposition resumed at 1:08 p.m.)

3 BY MR. WARD:

4 Q Ken, I'm going to share with you now what
5 is marked as Exhibit 1005.

6 A Okay.

7 Q Ken, Exhibit 1005 is a copy of U.S. Patent
8 No. 7,350,936. Do you see that in the top right-
9 hand portion of the first page?

10 A I do, yes.

11 Q You also see on the top portion it
12 identifies that this is the Ducharme reference.
13 One of the named inventors is Ducharme. Do you see
14 that?

15 A Yes.

16 Q Is it okay if I refer to this as the
17 Ducharme patent?

18 A Sure.

19 Q Ken, do you see in the upper right-hand
20 corner the date of the patent is listed at April 1,
21 2008? Do you see that?

22 A I do see that, yes.

23 Q Is it your understanding that this patent
24 would have issued prior to the filing of the '585
25 patent in the -- I'm sorry, the '582 patent and the

1 '895 patent?

2 A I do, yes.

3 Q I would like for us to turn to Column 5 of
4 the patent. Column 5, Line 18. It looks like this
5 printout is a little smaller than the normal
6 printing.

7 A Okay.

8 Q So looking at Column 5, Line 18, it
9 states, "Another embodiment comprises a lighting
10 fixture to be used in a lamp designed to take
11 fluorescent tubes, the lighting fixture having at
12 least two" -- I'm sorry -- "the lighting fixture
13 having at least one component illumination source
14 (often two or more) such as LEDs, mounted on a
15 mounting, and having a connector on the mounting
16 that can couple to a fluorescent lamp and receive
17 power from the lamp. It also contains a control or
18 electrical circuit to enable the ballast voltage of
19 the lamp to be used to power or control the LEDs."

20 Ken, in view of this disclosure and the
21 Ducharme patent do you understand what's being
22 disclosed here is a LED lighting device in a
23 fluorescent tube form factor?

24 A Yes, I do.

25 Q And do you understand that the disclosure

1 that it says it contains a control or electrical
2 circuit to enable the ballast volt of the lamp to
3 be used to power or control the LEDs, do you
4 understand that disclosure to be disclosing a
5 circuit to drive the LEDs?

6 A Yes. I believe that both the fluorescent
7 tube element and the circuit to drive it existed in
8 the prior art, yes.

9 Q Okay. Skip down to Column 28.

10 A I do think it is important to note in
11 Ducharme if you look at what they call the high
12 CRI, just to clarify the LEDs, in Figure 14 they
13 basically propose using nine to 300 very narrow
14 band LEDs and in Figure 16 they -- they propose a
15 non-existent RGB. When I read this I'm discouraged
16 from high CRI. Again, you know, stuff is all very
17 context based with that so when I -- what I derive
18 is being one skilled in the art from Ducharme is it
19 teaches -- it does teach the LED, it does teach the
20 tubular format, but what it proposes is non-
21 workable, you know, for a high CRI with that.

22 Q Ken, look at Column 28, Line 53.

23 A Sure. 28, you said?

24 Q Uh-huh.

25 A Okay.

1 Q 28 down at the bottom, Line 53.

2 A Okay.

3 Q It says, "A high-quality LED based light
4 may be configured to replace a fluorescent tube.
5 In one embodiment, a replacement high-quality LED
6 light source useful for replacing fluorescent tubes
7 would function in an existing device designed to
8 use fluorescent tubes."

9 Do you understand that to disclose a high-
10 quality LED light to replace a fluorescent tube?

11 A Well, again, you've got to define what
12 does high quality mean, and high quality as I
13 remember from the Ducharme, he says it is in the
14 high 95s he proposes to get there so again you --
15 everything is context based; what does high quality
16 mean. And what Ducharme qualifies as high quality,
17 he's got an embodiment with Figure 14 that is nine
18 to 300 narrow band LEDs. You can't put that into a
19 fluorescent tube. Or Figure 16 is a non-existent
20 RGB and so what does high quality mean so we have
21 to define these.

22 If I look at this and saying you asked me
23 about high quality, it is not obtainable here with
24 that, so we just -- stuff is very complex, it is
25 just not a simple -- designing LEDs is not simple.

1 There's a thousand variables; context-based, what's
2 the form factor, what's the heat. You asked
3 earlier about output of lumens. Well, it depends
4 on the heat. You will have one efficiency when it
5 is spaced apart and you will have a different
6 efficiency when you have high heat. So there's --
7 again, there's just no one size fits all here. It
8 is far more complex than people think. I've got
9 years of experience with this.

10 Q If you would, Ken, turn to Figure 9 of the
11 Ducharme patent.

12 A Okay.

13 Q I'm going to read to you the associated
14 disclosure for Figure 29. It appears at Column 29,
15 Line 16.

16 It says, "FIG. 29 shows one embodiment of
17 a lighting fixture according to this disclosure
18 which could be used as a replace fluorescent tube
19 in a housing such as the one in FIG. 28. The
20 lighting fixture may comprise, in one embodiment, a
21 variation on the lighting fixture (5000) in FIGS.
22 5a and 5b. The lighting fixture can comprise a
23 bottom portion (1101) with a generally rounded
24 underside (1103) and a generally flat connection
25 surface (1105). The lighting fixture also

1 comprises a top portion (1111) with a generally
2 rounded upper portion (113) and generally flat
3 connection surface (115). Top portion (111) will
4 generally be comprised a translucent, transparent
5 or similar material allowing light transmission and
6 may comprise a filter similar to filter (391). The
7 flat connection surfaces (1105) and (1115) can be
8 placed together to form a generally cylindrical
9 lighting fixture and can be attached by any method
10 known in the art. Between top portion (111) and
11 bottom (1101) is a lighting fixture (1150) which
12 comprises a generally rectangular mounting (1153)
13 and a strip of at least one component illumination
14 source such as LED (1155)."

15 In view of this disclosure in Ducharme do
16 you understand that it is disclosing a lighting
17 fixture 1150 with rectangular rounding 1153 having
18 LEDs 1155?

19 A So that last part again, please, so I can
20 check the numbers?

21 Q Sure.

22 Do you agree that Ducharme discloses a
23 lighting fixture 1150 which comprises a generally
24 rectangular mounting 1153 and a strip of at least
25 one component illumination source such as LED 1155?

1 A I agree that it does disclose those
2 individual elements. To contextualize it, most of
3 the elements did exist. No one assembled it in the
4 way that the Colt invention did so I think it is
5 important to keep it in context as well. That
6 again goes back to the, you know, inventions are a
7 new combination of -- of already known elements.

8 Q Okay. Ducharme states that the "Top
9 portion (111) will generally be comprised a
10 translucent, transparent or similar material
11 allowing light transmission and may comprise a
12 filter similar to filter (391)."

13 Do you understand that disclosure in
14 Ducharme to be disclosing a transparent or
15 translucent top cover which would contain a filter?

16 A Yes, I believe that the individual element
17 is disclosed here so in the prior art, yes. Again,
18 to contextualize it no one has assembled it in the
19 way that Colt did.

20 Q Take a look now at Figure 5.

21 A Okay. 5a?

22 Q Yeah, 5a and 5b.

23 At Column 12, Line 49 it states "FIGS. 5a
24 and 5b shows an alternative lighting fixture (5000)
25 including a housing that could be used in another

1 embodiment of the invention. The depicted
2 embodiment comprises a lower body section (5001),
3 an upper body section (5003) and a lighting
4 platform (5005). Again, the lighting fixture can
5 contain a lighting fixture (300), a different
6 lighting fixture known to the art, or a lighting
7 fixture described anywhere else in this document.
8 The Lighting platform (5005) shown here is designed
9 to have a linear track of component illumination
10 devices (in this case LEDs (5007))."

11 Do you understand this disclosure to be
12 disclosure of a LED light tube in which the LEDs
13 are arranged on a -- on a circuit board and
14 surrounded by a cylindrical housing?

15 A I believe that it does have the housing
16 that's cylindrical. I agree that it shows LEDs. I
17 disagree where it says any of the -- any of the
18 embodiments described herein as one skilled in the
19 art. It qualifies, it defines high quality.
20 Apparently in Figure 14 and Figure 16, Figure 14
21 proposes from nine to 300 very narrow band. I
22 don't see -- you are not going to fit 300 and mix
23 that. The RGB that's also -- you know, it is the
24 high CRI embodiments. Again, not workable, they
25 don't exist, so again it is important to

1 contextualize. So the elements LED, the elements
2 cylindrical, yes. The high CRI, no.

3 Q I want to ask you now to turn to Figure 4
4 of Ducharme.

5 A Okay.

6 Q At Line 11 -- I'm sorry, Column 11, Line
7 67.

8 A Column 11?

9 Q No, no, I'm sorry. Take a look at Figure
10 4 and I'm going to read to you the associated
11 disclosure in the patent which appears at Column
12 11, Line 57.

13 It says body Section (362), conductive
14 sleeves (368) and (374) and enclosure plate (378)
15 are preferably made from a material that conducts
16 heat such as aluminum.

17 Do you understand this disclosure to
18 disclose that an LED tube can use aluminum
19 materials for heat dissipation?

20 A I believe that it could use aluminum, yes.
21 I believe that in the context of the claimed
22 invention where it says suitable I believe this is
23 undersized, there's physically not enough space.
24 The -- as shown in my declaration the standard
25 industry was to have overly large heat sinks. It

1 is simply a real estate problem. You do not have
2 sufficient cooling to make a light suitable for
3 film and T.V.

4 The conditions, and I give examples on
5 black wrap, gels, this fundamentally changes the
6 thermal when you start to block heat sinks, when
7 you encase heat sinks. So from a pedestrian --
8 when I use pedestrian I'm referring to consumer --
9 very controlled conditions in horizontal, this from
10 one skilled in the art in the film and T.V. world
11 has little to no value to me because the -- as soon
12 as you wrap that -- A, it is under-sized already.
13 B, when you put it in film and T.V. and, for
14 example, it is common to have it wrapped in black
15 wrap for control, you have an overheating, you lose
16 CRI.

17 The one skilled in the art in film and
18 T.V. would disregard this. It is of little value
19 to me. You know, it was a classic, it was the Mike
20 Tyson, everyone has a plan until you are punched in
21 the face.

22 Putting black wrap and blocking a heat
23 sink in film and T.V. for an already under-sized
24 would have been viewed by one who is skilled in the
25 art at the time of the invention as unsuitable, and

1 by unsuitable I'm talking about it would fail.

2 That was the general perception.

3 You are showing me consumer products used

4 in very involved conditions. That's not what film

5 and T.V. lighting is. This is suitable for image

6 capture. So did -- did some of the individual

7 elements exist in a consumer world? Yes, it did

8 for Litepanels as well. We had new combinations of

9 existing components. It must be viewed in the

10 context of the invention in a whole and this to me

11 has little value to this because it will fail and

12 that was what one ordinary in the skill in the art

13 would have viewed it around the time of the

14 invention. This is a consumer product, little to

15 no value.

16 Q Ken, can you identify disclosure in

17 Ducharme that says the disclosure is limited to

18 consumer products only?

19 A No, you missed the point. It is the form

20 factor. So LEDs have inherent issues as far as

21 film and T.V. goes. So, for example, the red

22 phosphors are extremely high sensitive with that

23 part. There is not enough heat sinking in a -- in

24 the form factor. So the LEDs have an inherent

25 problem. It is magnified when you take a narrow

1 tubular format and encase it with diffusion.

2 On top of that you add the bi-color that
3 further complicates it. On top of that you wrap it
4 in black wrap. That's not enough surface area here
5 to cool. That was the impression.

6 Q Can you agree that the Ducharme reference
7 does not expressly state that it is limited to
8 consumer embodiments? Correct?

9 A That is correct. But I'm talking about
10 Ducharme reflecting in general on what are the
11 tradeoff factors. You have to factor in the
12 tradeoff factors and it is an inadequate heat sink.
13 The physical space on a T8 or T12 as perceived by
14 one skilled in the art at the time of the invention
15 is inadequate because of the conditions. When you
16 block a heat sink it all goes away. You've got to
17 have the -- if you look in the -- this is common
18 knowledge and this is the difference here. The
19 absolutely common knowledge.

20 You go to the Set Lighting handbook and it
21 says very clearly LED lights. Almost everybody had
22 large heat sinks. There's not the physical space
23 to do that here. This is never [inaudible] to one
24 skilled in the art in film and T.V. It doesn't
25 matter if it is Ducharme or any other reference.

1 The perception at the time of the invention is that
2 this is inadequate and your high CRI will go away
3 with that part.

4 Q Ken, if you would please turn to Column 33
5 for me.

6 A Sure.

7 Q I want to direct your attention to line I
8 believe it is 62 and it is where Claim 6 of the
9 Ducharme reference is set forth. I will read it to
10 you.

11 It says, "An LED-based light bulb
12 comprising: at least one first white LED to
13 generate first radiation having a first spectrum;
14 at least one second LED to generate a second
15 radiation having a second spectrum different from
16 the first spectrum; at least one power connection
17 having a form to engage mechanically and
18 electrically with one of a conventional Edison-
19 mount screw-type light bulb socket, a conventional
20 fluorescent tube coupler arrangement, and a
21 conventional halogen MR-16 socket arrangement."

22 Do you understand this disclosure to
23 disclose a LED tube and a fluorescent form factor
24 with two LEDs, one to generate a first spectrum of
25 light and the second to generate the second

1 spectrum of light?

2 A I do, yes.

3 Q Okay. I want to move on now to Exhibit
4 2047. Exhibit 2047 is the declaration of Kevin
5 Baxter. And if you would for me, Ken, I'm going to
6 ask you to turn to Page 5 --

7 A Okay.

8 Q -- of 2047. And I'm going to start at
9 Paragraph 20 at the bottom of the page.
10 There's a heading before Paragraph 20
11 titled "LED-Tubular Light Feasibility Analysis -
12 Circa 2009/2010." Paragraph 20 states, "During the
13 2009 to 2014 timeframe, I was the Chief Technical
14 Officer at Litepanels." This is Kevin Baxter."

15 "In and around 2009-2010 I evaluated the
16 viability of creating four-foot LED tube lighting
17 systems specifically intended for the film and
18 television lighting industry (the 'Evaluation')."
19 "The Evaluation specifically covered designing LED
20 'tubular' lighting fixtures, including the unique
21 design challenges therein."

22 Were you part of this evaluation, Ken?

23 A No, I was not.

24 Q Were you at Litepanels during this time,
25 the time period identified in 2009 to 2010?

1 A I was.

2 Q Were you aware that this evaluation was
3 being conducted?

4 A I think at some point afterwards Kevin
5 mentioned that I think it was Pat had brought by
6 somebody with a tube light and they had looked at
7 it but I was not -- I was not there.

8 Q So Kevin mentioned that someone not with
9 Litepanels visited a Litepanels facility to demo an
10 LED tube?

11 A Well, Pat was always -- you know, Pat from
12 a gaffer's standpoint it was, you know, the tube
13 lighting was a desirable feature but it is just
14 highly risky, but it is something from a lighting
15 standpoint there was certainly a demand for and
16 that was something Pat had always pushed for, so I
17 think Pat had brought something by with that but
18 that was a goal of Pat was to have LED lights in
19 tubes and it just was a bad idea.

20 Q Do you recall if that product that was
21 demo'd was referred to as the only light?

22 A I don't know. This is more just in
23 general, this was -- I mean, Pat was a working
24 Hollywood gaffer, feature films, commercials. This
25 was a product that Pat wanted but we -- we just

1 viewed it as a bad idea, just something that the
2 combination of elements is -- in short order would
3 just be inoperable so why even go there with that
4 part. But it was certainly a big goal of Pat's.

5 Q Do you remember Kevin telling you that he
6 was conducting this evaluation as referenced in his
7 declaration?

8 MR. HOFFMAN: Objection; foundation.

9 THE WITNESS: I don't remember really the
10 details with that. What I can convey is I believe
11 I heard that Pat had brought a tube by or someone
12 by. As I said, I had talks with Pat on -- Pat
13 wanted LED tube lights.

14 Q BY MR. WARD: But you didn't participate
15 with Kevin in making the evaluation of these
16 products.

17 A No, no.

18 Q Did Kevin relay to you any of the results
19 of his evaluation?

20 A It wasn't -- I think, as I said, what I
21 remember was that I think he had said that Pat had
22 brought somebody by. I mean, I was already aware
23 of it. It was just -- it was an area that we would
24 not go to, it just wasn't -- we didn't discuss the
25 details; we already new the answer. It was

1 viewed -- again, I lived this. I mean we're not
2 talking theory here, I lived this. Pat very much
3 wanted a tube light. It was a bad idea. I did
4 tube lights and I advised on the manufacturing of
5 tube lights with BBS maybe 2011, 2012. You would
6 never do what the Colt LED did. We viewed it as,
7 right or wrong, as the bad yesterday. When you are
8 on set you see the abuses it goes through and it is
9 just -- no one did it. I mean, every trade show,
10 no one did this. It was viewed as a bad idea.

11 Q But you never saw a report from Kevin
12 Baxter providing his conclusion?

13 A I don't believe so, no. I don't think so.

14 Q Did you see any analysis or readouts from
15 his testing?

16 A No.

17 Q At Paragraph 25 of Mr. Baxter's
18 declaration he states, "Litepanels, as an Emmy
19 Award developer of LED-based lighting systems for
20 the film and television industry, had the technical
21 capability to develop and manufacture a full range
22 of 4ft. LED tube lights starting at least as early
23 as 2009. More specifically, at the time of the
24 Evaluation, Litepanels had the technical capability
25 to build (1) single-color LED tube versions, e.g.

1 single tubes with either 5600K cool white, or
2 3200K warm white LEDSS (collectively 'Single-Color'
3 or 'Mono-Color.')

4 Do you agree with Mr. Baxter's statements
5 that at this time as early as 2009 Litepanels could
6 have made what he refers to as the single-color
7 tube?

8 A We had as mentioned earlier so we had bi-
9 color we launched in 2008 so there's two things.
10 Do we have the physical capabilities to do it, yes.
11 Do we have the motivation to do that, no.

12 Q Did you have the physical capabilities to
13 develop a single-color LED tube at that time?

14 A Same, yeah. I mean, we do bi-color, you
15 can do -- again, it is -- but it would not be
16 suitable for film and T.V. But could we have done
17 it, yes. Did -- did one of the founding partners
18 want it, yes. Would we do it? Absolutely no
19 motivation to shoot ourselves in foot.

20 Q But you had the components, you could have
21 gone into your lab and created a bi-color LED tube
22 in 2009?

23 A Well, we were making bi-color lights in
24 2008, yes. We could have done that. There was
25 simply no motivation because it would be -- it

1 would be inadequate for its intended purpose, it
2 would not work, it would fail.

3 Q Ken, let's move back to your declaration.
4 I want you to turn to Paragraph 56 of your
5 declaration.

6 A Okay.

7 Q So we're back in Exhibit 2100.

8 A Okay.

9 Q And I want to direct your attention, Ken,
10 to Paragraph 56 which says, "I describe below what
11 I believe are the ten important Design Constraints
12 and Tradeoffs in this case that reflect the state
13 of art that a POSITA would have had knowledge of
14 and understood prior to and at the time of the
15 invention of the '582 patent."

16 How did you go about determining these ten
17 most important design constraints and tradeoffs?

18 A These were common sense, common knowledge
19 at the time of the invention.

20 Q Common sense, common knowledge to who,
21 Ken?

22 A To one skilled in the art in the film and
23 T.V. industry.

24 Q Are there --

25 A Development artists.

1 Q Sorry, Ken.

2 A Okay.

3 Q Are there other design constraints and
4 tradeoffs?

5 A There could be. This is what I believe
6 are the ten most important. But this is -- this
7 certainly I believe to be the key ones. Could it
8 be additional ones? I'd have to think about it,
9 but this certainly I think covers the majority.

10 Q And are these design constraints and
11 tradeoffs specific to LED lights?

12 A I'd have go through it but -- so LEDs are
13 unique in that they're -- the Achilles heel of LEDs
14 are heat. You can wrap, and I've seen wrapped a
15 hundred times florescent lights. They may go a
16 little bit off color, slightly off color, but they
17 don't die, you don't lose the 95 CRI. So LEDs are
18 uniquely problematic to heat and it is just one of
19 the major constraints. It is why no one did the
20 Colt invention. It just sort of a bad idea.

21 Q You mentioned earlier specifically
22 regarding heat constraints for LED lights that the
23 LED doesn't necessarily radiate heat. What did you
24 mean by that?

25 A So --

1 MR. HOFFMAN: Objection; characterization,
2 form.

3 THE WITNESS: So it is a misnomer. People
4 say, well, LEDs don't produce heat, and I'd say
5 that's a common misconception. So depending on do
6 you have a -- do you have a low-powered LED, do you
7 have a high-powered LED. You know, there's a wide
8 variance in efficiencies. But in general a
9 substantial portion of the energy in is produced in
10 localized heat. I would give you a -- if look at
11 31, the top of Page 31, I give you an example of
12 that and I discuss the localized excess heat and
13 really, you know, I point you to Design Constraint
14 No. 2 that starts in Page 30. Excessive heat
15 renders LEDs unsuitable for commercial image
16 capture. By that I mean specifically and it is
17 really only in film and T.V. You know, a little
18 flicker, a little color change in a consumer light
19 is a minor inconvenience; it is a major problem in
20 film and T.V., it is materially different with
21 that, so you lose your CRI. When you lose your CRI
22 it is unsuitable. When you have color shifts in
23 green, when you have variable brightness, variable
24 color temperature, there's a parade of horrors
25 that happen when you have -- you know, you must be

1 extremely good at heat management in the film and
2 T.V. side.

3 Q BY MR. WARD: Let's look specifically, you
4 just mentioned Paragraph 67, Ken --

5 A Okay.

6 Q Paragraph 67, you say, "The localized
7 excess heat can related in a LED lighting fixture
8 becoming inoperable for its intended purpose of
9 film and T.V. lighting."

10 Can you show me what's shown in the figure
11 above 57?

12 A So there's a large heat sink but the light
13 is localized so this is in and around the junction
14 of the LED so you have a blue emitter, if you go
15 back one page you have the mechanical, so you have
16 the LED slug itself on the bottom, you have LED, it
17 is a blue die, but then right on top of the blue
18 die is a highly heat-sensitive phosphor so both the
19 blue emitter is heat sensitive as is the phosphor.
20 It is critical to pull the heat away from the LED
21 emitter.

22 Q And, Ken, let's go back to the figure
23 above Paragraph 67.

24 It appears what you are referencing is the
25 figure identifies heat source (LED) which is a

1 small rectangular box in gray, correct?

2 A Correct.

3 Q And then the remainder of what's shown in
4 that structure would be the heat sink, correct?

5 A That's correct.

6 Q And what is the preferred ratio of the
7 area of the LED to the area of the heat sink?

8 A Again, talking about a design team so one
9 person may handle software, one person may handle
10 hardware, one person may handle the -- or as a
11 group handle the design. I don't, as mentioned, I
12 don't specify what the exact size of the resistor
13 to use. Same thing here. But in general you are
14 trying to maintain the junction temperature blower.

15 Q Would you estimate that what's shown in
16 the figure above Paragraph 67 is a heat sink that's
17 at least three times the size of the LED?

18 MR. HOFFMAN: I will just object. Form.

19 THE WITNESS: Yeah. Again, the point of
20 suitability in film and T.V. is that it is wrapped
21 in -- there's one-size-fits-all, there's no ratio
22 here with that part, you have to look much broader,
23 how is the light to be used. If I'm designing a
24 light for the inside of a freezer versus a light
25 for the inside of an oven it is a whole different

1 criteria. There is no size one to three, it is --
2 it is case by case by case. You must look at a
3 much broader picture here with that.

4 Q BY MR. WARD: Ken, let's move back up a
5 page to Paragraph 60. Above Paragraph 60 is a
6 heading that says, "Design Constraint #1: Film and
7 TV Lighting Must Be Reliable Even Under Harsh
8 Conditions."

9 What do you mean by reliable?

10 A So I mentioned earlier in what was common
11 knowledge to the one skilled in the art at the time
12 of the invention that heat is the -- heat is the
13 death of LEDs from -- so it primarily refers to
14 proper heat management.

15 Q Is there an industry standard that a
16 manufacturer can convey that their product in
17 compliance with to make you believe it is reliable
18 for film and T.V.?

19 MR. HOFFMAN: Objection; form.

20 THE WITNESS: Again, you know, we're
21 talking about engineering, you know, specific
22 engineering components. As part of the team you
23 have people that look at the factors of safety. So
24 again if I'm part of the design team, I'm not the
25 one specifying specific individual components.

1 Q BY MR. WARD: You say in Paragraph 60,
2 "Film and television production is expensive, and
3 typically exposes equipment to harsh working
4 conditions, so lighting equipment must be reliable
5 even under adverse operating conditions."

6 A That's correct.

7 Q Do different adverse operating conditions
8 change whether or not the lighting equipment is
9 sufficiently reliable?

10 A No, it is the opposite. Certain designs
11 are inherently problematic. So the common
12 knowledge, the time of the invention is that you
13 either use large heat sinks or would you use wide
14 spacing. So, for example, on a one-by-one product
15 we used low-wattage LEDs, we used a lot more LEDs
16 to lower the junction temperature. We drilled
17 holes in the top, in the side, in the bottom, in
18 the back, in the circuit board for free air
19 ventilation so it is -- but that design, when you
20 compare that design to an encapsulated one-
21 inch-wide that's encapsulated with diffusion you
22 have -- I couldn't even give you a factor how much
23 more dangerous, how much more problematic, so it is
24 a form factor question.

25 Q So you would say a bi-color LED tube is a

1 design that is inherently problematic?

2 A I would say with the -- the invention that
3 we are discussing, the LEDs themselves have
4 inherent problems. I discussed the LED part and if
5 you look at, for example, time of the invention, if
6 you look at Page 60, 61, so I'm quoted in TV
7 Technology Magazine, this is right in and around
8 the 60, 61, right at the time of the invention just
9 to, you know, put us into a time capsule. So if
10 you look at Page 60, and I bolded so LED, so just
11 the LEDs themselves, have a lot of inherent
12 problems with LED construction. So the LEDs
13 themselves even with the big heat sink have -- have
14 inherent problems, yes.

15 In addition to the LEDs having inherent
16 problems, a very narrow, a one-inch-wide, one-inch-
17 wide so there's no extra space. So again we've
18 talked about the common knowledge, time of the
19 invention, use a big heat sink, a big oversized
20 heat sink or you use wide spacing, so the two
21 approaches that were standard. You don't have the
22 physical space in the narrow. This is the
23 distinction, one of the key distinctions here. So
24 LEDs inherent problems, a narrow one-inch-wide
25 encapsulated form factor, problematic. Bi-color is

1 problematic and these compound on each other. And
2 then you put that -- and then you -- and then you
3 positively claim suitable for film and T.V. knowing
4 they're going to wrap it in black wrap or foil or
5 stick it in the roof of a car so then you block the
6 heat sink. That's not normal. You normally don't
7 block a heat sink on a film and T.V. light but you
8 do in a one-inch-wide narrow because it is so
9 small, very portable, it goes vertical, so they jam
10 it. It is catastrophic with that.

11 Q At Paragraph 62 you state, "In 2013 (Time
12 of the Invention) -- Paragraph 62.

13 A 62. Sorry, 60 --

14 Q Paragraph 62.

15 A Okay.

16 Q At Page 28.

17 A Okay.

18 Q It says, "In 2013 (Time of the Invention),
19 the Set Lighting Technician's Handbook describes
20 the state of the art and suitability for
21 fluorescent lighting systems from Kino Flo (the top
22 tube lighting company for studio and T.V. image
23 recording): 'Kino Flo ... [tube lighting] system
24 is optimized for ... reliability even under harsh
25 conditions."

1 I want to ask you specifically with
2 respect to the Set Lighting Technician's Handbook
3 which you relied upon as Exhibit 2046 in
4 proceeding. Can you identify for me where in
5 Exhibit 2046 it delineates the parameters for a
6 sufficiently reliable T.V. lighting fixture?

7 A Again you are trying to -- you are
8 reaching for a one-size-fits-all and there is no
9 one-size-fits-all. So I gave you an example in
10 going back to Kino Flo on Page -- so if you look on
11 Page 62, so as mentioned, fluorescent itself, so
12 they're moving here from tube format to bi-color.
13 It would have been ideal for Kino Flo to -- I mean,
14 think of the ecosystem that's here. You've got
15 light fixtures, accessories all across the world.
16 You would love to do a drop-in replacement but it
17 wouldn't be reliable.

18 So in the context here -- in context here
19 you have fluorescent. This works. It doesn't work
20 going to LED so you change -- you change the
21 equation. You move to a large panel that has
22 sufficient cooling with that.

23 Q Does the Set Lighting Technician's
24 Handbook identify specifically what is --

25 A It is all common knowledge. It is common

1 knowledge on how heat sensitive a fluorescent is,
2 it is common knowledge. Does it identify it, no,
3 because, as I said earlier, there's no one size
4 that fits all, it is a case by case by case. I'm
5 giving you a case here. You are trying to over-
6 simplify and, I'm sorry, you just cannot
7 oversimplify there. There is no one size fits all.

8 Q So in order to determine whether or not a
9 lighting fixture is sufficiently reliable you would
10 have to evaluate it in the particular
11 implementation in which it was used?

12 A No. Well, that's one factor, is how close
13 are the LEDs. You have thermal sensors, you know.
14 It -- I'm saying it is all fact-dependent so how is
15 the light used. I mentioned earlier when you have
16 a two-foot-by-four-foot Mac Tech single color light
17 that only goes horizontal, that's much easier to
18 design that. It runs at nine watts or ten watts,
19 okay, great. But you change to a Colt LED that's a
20 single fixture that goes vertical when they're
21 going to block the heat sink, it is a whole
22 different, you know, it is -- I mean, one is
23 suitable, one is not suitable, and the stuff is
24 common knowledge to a designer in the film and T.V.
25 world who has on-set lighting experience so that's

1 one of the factors.

2 Q In 2013, Ken, if you were working on a set
3 and you had a junior person with no experience
4 working with you and you told that person I only
5 want you to get products, get lighting fixtures for
6 this set that are sufficiently reliable, how would
7 they be able to know whether or not they are
8 sufficiently reliable?

9 A It is an industry -- well, A, the person
10 inspecting the products is going to have
11 experience, he is going to know what
12 manufacturers --

13 Q My question to you, Ken, is the person has
14 no experience. Let's imagine it is 2013 and I'm
15 working for you without any experience and you've
16 asked me to create a lighting environment with
17 sufficiently reliable lights. How would I know
18 what is sufficiently reliable?

19 A Now you are changing the definition of one
20 normally skilled in the art. So we're saying a mix
21 of both lighting design and on-set experience. Now
22 you are changing it to -- I don't know what you are
23 asking.

24 Q My question is in a hypothetical situation
25 in which in 2013 one of ordinary skill in the art

1 which you have alleged you are is working with
2 someone who is not of ordinary skill in the art,
3 how would the person who is not of ordinary skill
4 in the art know what is a sufficiently reliable
5 lighting fixture for T.V. purposes or film purposes
6 at that time?

7 A I think you are talking more about the
8 design phrase, I'm talking about the operational
9 phase. I will say if someone is cutting major
10 corners that's going to be evident quickly because
11 you are at a expensive film shoot and all the
12 lights die so it's going to be readily apparent who
13 is reliable or who is not. I'm saying there are
14 basic design parameters and it does depend on is it
15 a large fixture, is it a small fixture, how much
16 heat sink can be put in. I'm saying that the tube
17 light is inherently problematic because you've got
18 LEDs that are having inherent problems, then you
19 would encapsulate it on a one-inch-wide surface,
20 then you've just magnified the risk. Then you go
21 to bi-color when you are increasing the wattage,
22 you magnify it again. Same with the tube light is
23 an exception. It is readily apparent that it will
24 die. No one did this. One company did it, it was
25 Colt LED, which then was copied by Quasar and they

1 make 10,000 lights. I was there in 2015 in front
2 of the top people, they were amazed with the Colt
3 LED. I was surprised. I'm rarely surprised, guys.
4 This thing was surprising results. It truly
5 counteracted everything that I looked at, that I
6 believed. I never wanted to do that, that was a
7 bad idea, and he pulled it off.

8 Q Ken, in Paragraph 63 you say, "In regard
9 to reliability, it is and has been common knowledge
10 that 'factors of safety'" --

11 A 63.

12 Q Yes. Page 29.

13 A Okay.

14 Q Starting again, "In regard to reliability,
15 it is and has been common knowledge that 'factors
16 of safety' are an important consideration in
17 electrical and thermal product design. A POSITA in
18 the film/TV lighting industry would have viewed
19 reliability under harsh conditions to increasing
20 the 'factors of safety' in the design (e.g.,
21 designing the LED lighting system to minimize the
22 chance of failure)."

23 What are the factors of safety?

24 A Again, I'm not sure what you are asking so
25 I'm not -- define what --

1 Q You said the factors of safety are an
2 important consideration. I'm asking you what those
3 factors are safety are, Ken.

4 A This was a multiple of -- so it would be a
5 multiple of what's required. So a factor of safety
6 for a bridge if you are going to have, you know --
7 or let's talk about an outdoor balcony. Its
8 maximum load is for ten people and you are going to
9 factor in a weight. It is the same thing in
10 electronics, kind of a maximum load of say 10,000
11 pounds. So factor of safety in a design standpoint
12 depending on the application, depending on multiple
13 variable, you are going to have a multiple of that.
14 If the maximum is, you know, 10,000 you may inspect
15 the system for 30,000, 40,000. It is a multiple of
16 a base. So you need a certain amount of cooling
17 and again this is more we get into the engineering
18 side and someone like Kevin Baxter handles more of
19 the hardware side, would put in a factor of safety
20 there. And it depends on the application, it
21 depends on the product design. Two-foot-by-
22 four-foot horizontal only LED fixture is going to
23 have a lower factor of safety than a single tube.
24 But again there's an inherent problem in the -- it
25 is a toxic mix especially in a bi-colored tube.

1 You just don't have the physical space. It is not
2 a close call, you just don't have it, and it is
3 none one of the major issues. You don't have --
4 you know, you don't have the large heat sink, you
5 don't have the wide spacing; destined to fail.

6 Q In Paragraph 64 you say, "This is why
7 circuit 2013 (and unlike LED tubular lights)"
8 almost all LED devices have large heat sinks and
9 fins."

10 A I'm giving you a quote and this is common
11 knowledge, this is not a debate, so this is out of
12 the Set Lighting handbook 2013 at the technician
13 level.

14 Q And --

15 A So this is what a, specifically what
16 someone in the -- skilled in the art, so the
17 relevant art at the time of the invention would
18 look at this book, and they're being shown because
19 of the harsh conditions that you've got to have
20 large heat sinks. You can't fit -- there is no
21 physical space in a T8 or T12 for a large heat
22 sink.

23 Q And a T12 is a one-and-a-half-inch form
24 factor, correct?

25 A Correct.

1 Q So you are saying that the necessary heat
2 sink for a LED device would have had to have been
3 larger than one and a half inches?

4 A That's correct. So these statements are
5 contextualized in that this is to maintain the T8
6 or T12 form factor, yes. You would have to violate
7 that to have an oversized heat sink so it is
8 undersized. It is inadequate heat sinking.

9 Q Moving to the next page, you identify
10 Design Constraint No. 2. "Excessive Heat Renders
11 LEDs Unsuitable For Commercial Image Capture."

12 Paragraph 65, you state, "LEDs, or
13 Lighting Emitting Diodes, operate by passing
14 electric current through a semiconductor material.
15 This process generates light in conventional LEDs
16 (via binding a small amount of phosphors) to the
17 top of the blue LEDs semiconductor die, as
18 illustrated below:

19 "Traditional LED technology produces light
20 by coding highly heat-sensitive phosphors directly
21 to (heat-producing) a blue LED emitter, as
22 illustrated below."

23 Paragraph 66. "But the process also
24 produces substantial heat in and around the blue
25 light emitting die as a byproduct. Without

1 effective dissipation of the heat generated during
2 operation, this thermal energy accumulates and
3 causes LEDs's temperature to rise significantly."

4 How does an LED lighting design address
5 assuring that they have effective dissipation of
6 the heat generated during operation?

7 A I just covered that in -- so in film and
8 T.V. there's two major approaches, common
9 knowledge. They use large oversized heat sinks or
10 you space widely apart the LEDs to ensure that you
11 also have an open air cooling. Both of those
12 factors are not available a building in a narrow
13 encapsulated tube so inherently problematic. So
14 you've got LEDs especially on the red dies that are
15 incredibly heat sensitive so they're very
16 vulnerable, you've got vulnerable LEDs, you've got
17 vulnerable blue die, so this is a blue emitter,
18 blue LED effectively. If you change the wave
19 length of that blue LED you have thrown the whole
20 thing off. So you've got heat sensitive to
21 vulnerable phosphors, vulnerable LED die, so that's
22 the first element. It is then compounded when you
23 put that into a narrow tube that you been
24 encapsulating. These are worst case scenarios. So
25 you've got an undersized, inadequate heat sink that

1 you've encapsulated so the heat grows and grows and
2 grows with this.

3 On top of that, you then go to bi-color.
4 You've just compounded the problem again. So you
5 are stacking problem upon problem upon problem.
6 And then you block or partially block a heat sink,
7 black wrap, putting it up against the wall, putting
8 it up against a ceiling, putting it a set. This is
9 catastrophic. The net result is that you lose the
10 CRI, you start getting more color shifts, the
11 brightness varies, the color varies, the output
12 goes down, you lose lumens, color, CRI. It is a
13 nightmare situation. It is not a close call, it is
14 a bad idea. That's how it was perceived.

15 Q In Paragraph 68 you state, "More
16 specifically, 'Light Emitting Diodes (LEDs) unlike
17 their fluorescent and tungsten counterparts, are
18 extremely sensitive to heat. Thus, when employing
19 LEDs for film and television lighting purposes,
20 highly effective thermal management of the LED
21 emitters is required."

22 What would you say are the fundamental
23 aspects of highly effective thermal management of
24 LED emitters?

25 A Like I said earlier, you want to build in

1 room, headroom. So the standard common knowledge
2 with LED lighting, someone skilled in the art at
3 the time of invention, would use a large and heavy
4 large heat sink or they would space the LEDs apart
5 and look at ways of having air flow over that to
6 reduce it so those were the two major ways at the
7 time of the invention. That was what was done.

8 Sometimes they use the fan that was a very -- you
9 know, because of the sound issues that was, you
10 know, dissuade against.

11 And I use the example like the
12 fluorescent. When I wrap I'm done. When you wrap
13 black wrap around a tube you may get a little bit
14 more green, you don't lose the CRI, so as far as
15 the heat sensitivity, it is heat resistant.
16 Tungsten the same thing. LEDs are inherently low
17 in the red die so if the 650 nanometer, 600, in
18 that range there's a lack of red so as you increase
19 the CRI using more and more red, but the red die is
20 the most heat sensitive. LEDs at the first level
21 extremely heat sensitive, the Achilles heel.

22 Q Paragraph 71 you go on. You state,
23 "Additionally, in the pursuit of high-quality
24 broad-spectrum LED lighting with a superior Color
25 Rendering Index (CRI), LED manufacturers deploy a

1 combination of different phosphors directly on top
2 of blue LED emitters (conventional LED technology
3 circuit 2013)."

4 So you agree it was known in 2013 to
5 define different phosphors on top of blue LED
6 emitters?

7 A It was a mix of phosphors, yes.

8 Q And was that necessary to achieve a high
9 CRI with LEDs?

10 A Yeah. I believe I just said that. So you
11 are going to be -- LEDs inherently, especially the
12 daylight, have lower CRI and that's because there's
13 a lack of red, there's more red in a tungsten
14 balanced, but again the red is one of the most heat
15 sensitive. So other dies are less heat sensitive
16 so when you drop out your red so excessive heat
17 changes the CRI and changes the color temperature
18 so you go from a light that's suitable for film and
19 T.V. to a light that's unsuitable and you can do
20 that quite quickly and it be permanent with that.
21 So that's -- that's the statement of the highly
22 effective heat management. But the form factor is
23 a major design constraint, you can't do that.
24 That's why no one did it.

25 Q Ken, in Paragraph 72 you say, "Adding to

1 the complexity the blue LED" --

2 A Did you say 72?

3 Q Yes.

4 A Okay.

5 Q "... the blue LED die emitters themselves
6 undergo stringent binning processes to narrow down
7 their wavelength."

8 So was it necessary to use stringent
9 binning to achieve a high-quality LED light in
10 2013?

11 A Was it -- sorry, just if you say your
12 question again, I want to make sure I understand
13 it.

14 Q Was it necessary to use stringent binning
15 processes to achieve a high-quality LED light in
16 2013?

17 MR. HOFFMAN: Objection; form.

18 THE WITNESS: Well, I mean, I can tell you
19 at a high level from a designer's standpoint if
20 that was important. As far as your specific
21 question, that would be more like Kevin Baxter.
22 Again, I don't design the, you know, the level of
23 resistor. This is at a very nano-engineering level
24 if that. But the point is here that I'm trying to
25 convey is that the blue emitter is heat sensitive

1 and you can quickly take a light that is suitable
2 for film and T.V. for commercial image capture and
3 make it unsuitable. The Achilles heel is the
4 illustration here.

5 Q BY MR. WARD: Later you say in 72, you
6 say, "... the interplay of heat sensitivity among
7 phosphors and the wavelength shift of the blue
8 emitters adds layers of intricacy to the delicate
9 balance required for achieving and preserving the
10 desired CRI color quality in LED lighting."

11 So how do you manage this delicate
12 balance?

13 A Effective heat management. You've got to
14 get the heat away. But again you've got inherent
15 problems with the narrow tube format, it is
16 inadequate, and then you compound it by diffusion
17 cover, you compound it by going to bi-color and you
18 compound it by compromising the heat sink in film
19 and T.V. It is a unique situation. What applies
20 in the consumer world is little to no value here
21 because it is materially different conditions and
22 it is a case by case.

23 Q To that point, Ken, your next design
24 constraint just above Paragraph 73 is "Design
25 Constraint #3: Narrow Linear Tube Format is a

1 Heat-Trap." How do you overcome the problems of
2 the --

3 A That's the question and that's why no one
4 went there. I don't know. No one went there. I
5 had a partner that wanted to go there. We wouldn't
6 let him. It is a bad idea. It is going to fail.
7 Inadequate. Not inadequate, inoperable for its
8 intended design. It is a bad idea. I mean, the
9 stuff is around for ten years. Bi-color was around
10 for ten years, tubes were around. Most of the
11 individual elements were around. Could we have
12 done it, yeah. There's no motivation to do it.
13 You are not going to shoot yourself in the foot.

14 Q Moving to Page 36 --

15 A Okay.

16 Q -- there's a photograph there from Exhibit
17 2043. And when you talk about vertical orientation
18 for an LED tube is this an example of that, Ken?

19 A Yes, correct. So the illustration here
20 when you look at -- if I look at coming in here,
21 replacing the tubes in this office environment,
22 these tubes are all horizontal, these tubes are
23 also spaced away from the ceiling so there's 360
24 cooling around that. We don't get that luxury in
25 film and T.V. And the horizontal, that's a nice

1 even convection cooling. You don't have hotspots.
2 When you go vertical think just -- think
3 convection -- convection, conventional convection
4 cooling. Heat from the lower LED rises so you --
5 the hot air from below is heating up. You have a
6 higher ambient temperature even before you turn on
7 the upper LEDs.

8 Q And you talk about blocking the heat sink
9 when you are either wrapping a gel or wrapping with
10 tape and is this an example of that in the photo on
11 Page 36 of your declaration?

12 A Correct.

13 Q So even though only a small portion of the
14 tube itself is covered in tape that still could be
15 a --

16 A Not the tape, the backside is a light
17 sink, so you physically pressed the heat sink
18 against the wall so there's no 360 air flow like
19 you have here. This is truly unique. The harsh
20 conditions in film and T.V. The LEDs, there's a
21 lot of hindsight bias, you've have to get back in
22 the time capsule. LEDs, the dies were incredibly
23 heat sensitive especially in 2013.

24 Q Would you say that a vertical positioning
25 capability was a necessity for an LED tube?

1 A I'm saying that what Colt did was
2 basically -- there weren't -- the LED tubes in film
3 and T.V. was the Mac Tech, those were horizontal.
4 Colt effectively brought in a new class of lighting
5 product much more flexible. This was integrated,
6 it had the switching, it had the bi-color in an
7 integrated fixture. This design creates even more
8 unique problems. But would the light be used
9 vertical? Yes, wires and tubes are always used
10 vertical. Anyone that has any experience on set
11 you will see vertical tubes a thousand times in
12 fluorescent. So a designer who has both design and
13 as well as on-set lighting experience, you have to
14 factor that in. It would be a mistake not to.
15 Again, it is one of the reasons -- most components
16 were around, no one did it, it was just -- because
17 you would see stuff like this and it would frighten
18 you in catastrophic conditions where in short order
19 the light that was suitable is no longer suitable.

20 Q So, Ken, on Page 40 you give us another
21 design constraint.

22 A Okay.

23 Q "Design Constraint #5: Heat-Induced
24 Problems are Compounded in a Two-Color LED
25 Embodiment."

1 And later in the Paragraph 85 you say,
2 "Benefits of Avoiding Droop Loss: Current and
3 thermal droop losses can be substantial. The more
4 wattage with which an LED is driven, the greater
5 the inefficiency becomes."

6 What do you mean by that?

7 A So on a lumens per watt and in all of our
8 fixtures including even in sports beams we want --
9 we want more emitters running at lower wattage so I
10 want to fill up every square inch. If I'm going to
11 do a one-inch-wide I want to fill up every single
12 square inch of space with a single color because
13 then the localized heat that heat that die, the
14 junction between the die and the heat sink, I'm
15 going to run that at lower wattage and I get more
16 efficiency with that, I get more lumens per watt.

17 Bi-color on top of the inherent problems
18 with LEDs, on top of the inherent problems with the
19 one-inch-wide encapsulated bi-color, then I've lost
20 half the space at that point. I've got to run each
21 LED at higher watts. I don't want to do that. I'm
22 already undersized, I'm already problematic even
23 before I hit the vertical or the black wrap or
24 anything else. I don't want to do a bi-color.
25 There's a reason why Mach Tech only did single

1 color because you are making -- you are stacking
2 problem three on top of problem four. It is a
3 nightmare. And it is -- it is just simple and
4 clear to one skilled in the art. This is not
5 rocket science.

6 Q At Page 44 you list "Design Constraint
7 #7."

8 A Okay.

9 Q "High-CRI, Highly Heat-Resistant 'Remote
10 Phosphor' Technology Solves" --

11 A Sorry, what number?

12 Q I'm at Page 44.

13 A Okay.

14 Q "Design Constraint #7."

15 A Okay.

16 Q It says, "High-CRI, Highly Heat-Resistant
17 'Remote Phosphor' Technology solves Many LED
18 Problems but has a Tradeoff (No Bi-Color Tubes)."

19 Ken, is what you are saying here is
20 because if you place the phosphor remotely from
21 your two sets of LEDs you wouldn't have two colors,
22 you would essentially end up with a single color?

23 A Yeah. To go to a -- to go to a bi-color
24 would require a larger fixture so this is talking
25 about a one-inch, it just simply -- I would have

1 loved -- again, this is a product 2013. I think I
2 flew to Denmark to work on this in 2012. The -- a
3 bi-color would have been a nice feature to have but
4 this stuff is, as I said, it is problematic. This
5 solves the problem but you've got to factor in the
6 tradeoffs, you've got to make a decision, you know,
7 what was the -- you can have quick, fast or high-
8 quality, it is that kind of a -- these are standard
9 design kinds of things. Pick two of the three;
10 what do you want. You don't want a problem. This
11 was a major -- this one area was a major problem.
12 Everything else was a lot simpler. I can put on a
13 big heat sink; I can space it out. This is a
14 unique challenge in a one-inch-wide format, common
15 knowledge. What a nightmare. Bad idea.

16 Q Next page is Page 46, two pages down,
17 Paragraph 92.

18 A Okay.

19 Q You identify what appears to be a BBS
20 Lighting product.

21 A Uh-huh.

22 Q And would this have been a product that
23 could have utilized remote phosphor?

24 A This wasn't remote phosphor, this is
25 remote phosphor.

1 Q And because so was able to address and
2 overcome the thermal issues?

3 A Not all but, again, we talked about
4 vulnerable dies and vulnerable blue emitters but
5 when you space them apart. So the same way we
6 would space emitters apart we are yanking the
7 phosphor off so that the phosphor is placed right
8 on top of the emitter in conventional so this
9 separates the vulnerable heat-sensitive phosphors
10 away from the heat. So, yes, it is -- both operate
11 lower because it has wider spacing. But again
12 you've got to pick two of the three and the trade-
13 off here to maintain the one-inch-wide format was
14 no bi-color so you went back to the conventional
15 problem that you physically have to change out the
16 fixture or you would have to put on a heavy gel to
17 change the color temperature, but that at the time
18 of the invention, both of this is a concurrent
19 development so this is insightful. One company
20 said no, I'm not going to do -- you know, we would
21 like to have it but no. This work, this technology
22 solved the problem.

23 Now if you want to go bigger then you
24 could do that but not maintain that nice, tight
25 format that people like and keep the -- keep the

1 cylindrical design.

2 Q On the topic of BBS lights I want to
3 direct you to Paragraph 134. It is at Page 165.

4 A 134.

5 Q Paragraph 134.

6 A 134, okay.

7 Q You stated, "The data sheet below shows
8 that BBS Lighting Pipeline tube system (which was
9 under development in 2013 and launched early 2015),
10 includes the following elements:

11 "narrow tube format (approx. 1") up to 4
12 ft length;

13 "hi CRI (95+);

14 "high lumen output (over 1000 lumens);

15 "low green bias (under 3G); but

16 "NO Bi-Color single tube (design
17 constraint)."

18 A Correct.

19 Q And you go on in the next page, you
20 provide what appears to be a screenshot of a BBS
21 Lighting brochure for the pipeline system.

22 A Correct.

23 Q And then on the following page you, at the
24 end of Paragraph 135 you provide a table. Above
25 The table you say, "... the designer must accept

1 the tradeoff loss of the Bi-Color feature due to
2 narrow circular T8 or T12 format (again teaching
3 away from the '582 invention), shown below."

4 You provide a table of features indicating
5 that there are certain features that presumably
6 were available for the BBS Pipeline tube.

7 Did the BBS Pipeline tube exist in 2013?

8 A It -- I think there were prototypes in
9 2012. It was in a -- I said things were slow
10 moving but I think it was 2012 when it was -- 2013,
11 2012, 2013, in that timeframe there were
12 prototypes.

13 Q Were you affiliated with BBS at that time?

14 A Yes.

15 Q And can you remind me what was your
16 capacity, what was your role with BBS?

17 A I had formed a company in the States that
18 was handling distribution and marketing.

19 Q And Toby Salli was your sales guy?

20 A Correct.

21 Q Was he actively seeking to sell the BBS
22 Pipeline at that time?

23 A It wasn't formally launched until -- we
24 had to wait like anything when you gear up there's
25 tooling, there's production, it's time consuming,

1 so it was ready to launch I believe in 2015.

2 Q What was the Kelvin temperature of the BBS
3 Pipeline tube?

4 A It was either daylight or tungsten so
5 separate fixtures much like the fluorescent. So if
6 you had a daylight and wanted to go to tungsten you
7 would physically take the one unit out, you put in
8 a different unit, or you would have to wrap it in
9 gel much like the fluorescent problem. It was not
10 ideal.

11 Q So you were similar to Mac Tech at the
12 time providing an LED tube that was a single color?

13 A Yes. I'm saying facing the same design
14 constraints that Colt looked at, we had polar
15 Opposite results.

16 MR. WARD: Okay. We can go off the
17 record.

18 (Recess taken from 2:21 p.m. to 2:31 p.m.)

19 BY MR. WARD:

20 Q Ken, I'm going to share with you now
21 what's been marked as Exhibit 1001 to the IPR
22 2023-613.

23 In the top right-hand corner of the first
24 page, Ken, you will see that this is U.S. Patent
25 No. 10,411,582. Do you see that?

1 A I do, yes.

2 Q Is it okay if I refer to this as the '582
3 patent?

4 A Sure.

5 Q On the left-hand side top left of the
6 first page you will see that the inventor is listed
7 as Mr. Guillermo Macias. Do you see that?

8 A I do.

9 Q Do you know Mr. Macias?

10 A Never met him, no.

11 Q You said that you had seen Colt's products
12 at trade shows, correct?

13 A Yes. I saw it at Paramount and I believe
14 at the trade show as well but specifically I
15 remember the Paramount demonstration that I
16 mentioned.

17 Q When you went to that demonstration at
18 Paramount Studios was Mr. Macias there?

19 A No.

20 Q Who was it that was demonstrating the Colt
21 to?

22 A One of the Paramount people. It may have
23 been -- I think it was Fernando, I believe, one of
24 the -- one of the people on set lighting in
25 Paramount.

1 Q Is that Fernando Silva?

2 A That name, I believe so, yes. It was
3 definitely Fernando. I believe that was him. His
4 name was Fernando.

5 Q He was an individual employed by
6 Paramount?

7 A Correct.

8 Q He did set lighting design for Paramount?

9 MR. HOFFMAN: Objection; foundation.

10 THE WITNESS: He somehow -- they have
11 different -- different people in the department but
12 like, you know, head of set lighting, this is the
13 people that coordinate with the gaffers and so they
14 had like one for sales, one for rental typically.
15 I don't know what his position is but he was I
16 think one of the -- he was either head of sales or
17 head of rental for Paramount so he is the main
18 client contact.

19 Q BY MR. WARD: And was that who invited you
20 to that event?

21 A No, I think this came through some gaffers
22 or cinematographers. It was an event happening and
23 I was invited. It may have come through a gaffer,
24 I don't remember the exact, the exact source of the
25 invite.

1 Q And we talked about this earlier but can
2 you remind me what year that was?

3 A I believe it was 2015, it may have been
4 2014, but the 2014-2015 timeframe.

5 Q And would it have been typical for a
6 Paramount employee to be demo'ing products of
7 another company or a non-Paramount company?

8 MR. HOFFMAN: Objection; foundation.

9 THE WITNESS: I mean, this was client
10 relations so, I mean, they're showing new
11 technology, you know, the -- these people are one
12 of the paths and I think at Litepanels I had given
13 lights to demonstrate and we probably even did some
14 presentations ourselves. It was a little bit more
15 on Pat's side. He had stronger connections with
16 all the studios because he also worked there as a
17 client with that.

18 Q BY MR. WARD: What would have been
19 Fernando's incentive in demo'ing this product?

20 MR. HOFFMAN: Objection; form.

21 THE WITNESS: So they make money on direct
22 rentals, they make money on sub-rentals, they're --
23 his job is to increase sales.

24 Q BY MR. WARD: And sales of what, Ken,
25 sorry?

1 A Of lighting.

2 Q Through rentals?

3 A Typically through rentals, yes, yeah. So
4 they will own lights and rent or they will
5 sub-hire. So sometimes at FisherLight we had some
6 xenon lights that they would sub-rent from us so
7 they would sub-rent and mark it up. Their job is
8 to take care of their clients so whatever lighting
9 is needed, that's their job.

10 Q Would you have been seen as a competitor
11 at an event like that?

12 A We hadn't launched the -- at that time it
13 wasn't launched, the tube light. I even thought
14 about -- I think I inquired. I think Paramount was
15 the exclusive rental agent I even thought about it
16 and didn't want to pursue it that much but even
17 tried to help rep the product. The product had
18 impact with that, people were -- I looked at the
19 faces of the gaffers and cinematographers. They
20 were truly impressed with the light. It was
21 something different.

22 Q Do you remember any other individuals that
23 were there other than Fernando?

24 A There was a Swedish cinematographer. His
25 first name is Par, I'm not sure of his last name.

1 He is a well-known cinematographer. He was there.

2 There were several gaffers there as well.

3 Q Do you recall the names of any of those
4 gaffers?

5 A Not off hand. This is eight, nine years
6 ago with that. But it was a product demonstration.

7 Q And it was just of the Colt bi-color LED?

8 A Correct.

9 Q How was it shown?

10 A Right in the set lighting department a
11 table had been set up, they were on display.
12 People could -- you know, it was tactile, hands-on
13 demonstration. People were lighting each other
14 with that, doing the color switching. Yeah. No,
15 as I said earlier, I'm rarely surprised and this
16 light surprised me with that. I -- we specifically
17 stayed way from it.

18 Q So in your surprise, Ken, did you ask any
19 questions?

20 A You know, the -- I think -- I mean, some
21 general questions on wattage, you know, what's --
22 there was different sizes, just some general
23 questions, yes, with that and as did some of the
24 other. I don't know if there was one that blended.
25 I remember one specifically on the switch where you

1 could, so --

2 Q You are talking about the cross-fade?

3 A Cross-fade on this is you basically could
4 switch it from warm to cool.

5 Q Are there bi-colored tubes that don't
6 enable you to switch?

7 A Well, if it is bi-color it is meant to
8 switch.

9 Q Yes.

10 A So -- I think some had a battery too. I
11 think we were looking at some of the battery
12 features like a USB charger, I think two for that,
13 just kind of going through the features of the
14 light.

15 Q So you said earlier that the components of
16 the product had been known for many years prior to
17 that, correct?

18 A Certainly most of them, yes. I mean, as I
19 said, the feature set was long desired. I mean,
20 our bi-color was a huge success, it just -- the
21 being able to switch it in situ where you could
22 just do it is a very sought-after feature. But it,
23 you know, as I said, the -- this format for a
24 multitude of reasons, almost anything else is
25 especially problematic. It is one inch wide. You

1 don't have the space. You have a heat-sensitive
2 product and inadequate heat sink. That just going
3 into the game is just a bad idea.

4 Q Did you ask how they did it, Ken?

5 A Well, it was a rental agent that wasn't
6 the -- it wasn't the -- it wasn't the -- I don't
7 know how they did it. As I said, it -- I'm rarely
8 surprised. This surprised me. And I have done a
9 lot of patents and a lot of stuff and I'm rarely
10 surprised. This was surprising.

11 Q At that demo you did not ask the question
12 how did you accomplish this?

13 A Well, it wasn't the engineers, it wasn't
14 the designers. We had a rental agent who was there
15 wanting to get his customers running the light.

16 Q So Fernando wasn't knowledgeable about the
17 product?

18 A Well, on the basic features, not at the
19 engineering stage. This was there to learn about
20 it with that, so --

21 Q Did anyone else ask how they did it?

22 A I don't remember. As I just said, it was
23 more just -- it was impressive and, I mean, our
24 partner Pat can be quite insistent, this was
25 something that he wanted, and we just didn't do it.

1 Q Did you investigate later how Colt was
2 able to do it?

3 A No. You know, a few years earlier I would
4 have, I didn't. There was no incentive to do that.
5 Does that make sense? I was duly impressed but it
6 wasn't something where it -- at that stage I was
7 more doing less, wasn't doing hardly any at that
8 time or fading out of that. We had a product that
9 we were going to launch, yeah. I believe that I
10 saw this before we launched the tube light, the
11 pipeline system with that. It just was -- as I
12 said, we had a mono-color. I mean, and he did it.
13 So imagine if you got most of the components
14 available for years and years and no one assembles
15 it. There's a reason for that. There's a long-
16 felt need, yes, long-felt unmet need, yeah. People
17 wanted this. We wouldn't do it.

18 Q So at the time of this demo, you said it
19 was 2015 or 2016, you were involved with the BBS
20 Pipeline product at the same time, correct?

21 A Correct.

22 Q And the BBS Pipeline product had all of
23 the features expect for bi-color, correct?

24 A Correct.

25 MR. HOFFMAN: Objection; compound.

1 Q BY MR. WARD: And you, Ken, an individual
2 with more than two decades of experience in LED
3 lighting and more than 20 patents related to
4 lighting and primarily LED lighting --

5 A Uh-huh.

6 Q -- did not investigate how they were able
7 to provide a bi-color LED tube?

8 A There -- as I said, I mean, there wasn't a
9 need to with that. If we handled distribution, if,
10 you know, there was a vested interest, yes, but I
11 still --

12 Q Wouldn't this have been a good feature to
13 add to the BBS Pipeline product?

14 A I still had concerns that it might not --
15 you know, it worked but there still were times -- I
16 mean, something like this could launch and then
17 fail. I still -- I mean, I was very impressed. I
18 still had worries that the thing would -- would
19 fail. It didn't. So a lot of it working came even
20 later. I mean, millions of dollars in rental.
21 Wow, that's impressive. It is quite an
22 accomplishment with that.

23 Q Have you --

24 A But by the time it proved out is the time
25 that I was moving away from film and T.V. with

1 that, so --

2 Q So you haven't used the product itself in
3 way that's proven to you that it is reliable to
4 your standards?

5 A Well, the standards, it is acid test. I
6 mean, put it out there on a lot of rentals and you
7 will find out if it works or not. And it -- it
8 stood the test of time. So there's the initial and
9 then there's the long-term performance. It
10 performed, that's great, well done, patentable
11 incite because no one else would go there.

12 Q Ken, have you developed any products for
13 Colt?

14 A No.

15 Q Have you invested in any Colt companies?

16 A No.

17 Q Have you invested in any other companies
18 owned by Mr. Macias?

19 A No.

20 Q Any companies that Mr. Macias is an
21 affiliate of, have you invested in any of those?

22 A No.

23 Q Do you have any compensation related to
24 this case other than your hourly fee?

25 A No.

1 Q So you are not working on a contingency in
2 this matter?

3 A No, absolutely not.

4 Q Do you have another compensation
5 arrangement with Mr. Macias?

6 A No.

7 The main reason I'm here is I saw a great
8 invention and I -- I was surprised I saw a great
9 invention.

10 Q Ken, I want to ask you looking at Exhibit
11 1001 here, I want to ask you just to take a look at
12 the application number which is in the middle of
13 the first page, Application No. 15/818,306, and I
14 ask you that specifically because I want to -- I
15 want you to keep that in mind as I show you this
16 next exhibit which is the Child patent. It is
17 Exhibit 1001 from IPR 2023-21 -- I'm sorry,
18 2023-614.

19 Do you see at the top right-hand corner
20 this is listed as U.S. Patent No. 10,566,895, Ken?

21 A Yes.

22 Q I'm going to refer to this as the '895
23 patent. Does that sounds good?

24 A Yes.

25 Q I want to direct your attention to Line 63

1 on the first page where it lists the continuation
2 number. It says continuation of Application No.
3 15,818,306.

4 A Okay.

5 Q Do you agree that that corresponds to the
6 application number we just looked at from the '582
7 patent?

8 A Yes.

9 Q So you would understand that the '895
10 patent is the continuation of the '582 patent,
11 correct?

12 A Yes.

13 Q And do you understand that a continuation
14 patent shares the same specification as the parent
15 other than the claims?

16 A Yes.

17 Q So there would be no differences in the
18 detailed description of the specification between
19 the '582 patent and the '895 patent, correct?

20 A In theory.

21 Q I want to go back to the '582 patent and I
22 would like for you to turn to Page 8 of the '582
23 patent.

24 A Okay.

25 Q Column 1. And you will see in Column 1

1 there's a heading around Line 16 labeled
2 "Background." And then there's a subheading under
3 "Background" labeled "Description Of The Related
4 Art."

5 Do you understand that the "Background"
6 section of a patent is where a description is
7 provided of the prior art?

8 MR. HOFFMAN: Objection to the extent it
9 calls for a legal conclusion.

10 THE WITNESS: In general, yes, or related
11 art.

12 Q BY MR. WARD: So the "Background" section
13 is one in which the patentee discusses what is
14 known in the art, correct?

15 MR. HOFFMAN: Same objection.

16 THE WITNESS: Likely in a general
17 standpoint, yes.

18 Q BY MR. WARD: Moving up to Column 2 over
19 there at Line 2, it says, "The two most frequently
20 used and desired color temperature ranges in the
21 lighting industry for stage and set lighting have
22 been found to be 3050 to 3300 K for tungsten (warm
23 white) and 5400 to 5600 K for daylight white.
24 These ranges represent ideal color temperature
25 ranges for producing ideal lighting for TV

1 photography and film studio scenarios."

2 As of the filing of the '582 patent would
3 you have agreed with that statement, Ken?

4 A In general, yes. I mean, this may be a
5 little bit more narrow but it is -- but that would
6 be typical.

7 Q So you would agree that it was known that
8 tungsten and daylight white were the preferred
9 color temperature ranges for T.V. film lighting?

10 A But you may go down lower, you may go up
11 higher. I mean, as a general rule, this we already
12 covered, bi-color, we -- Litepanels a decade
13 earlier in -- we have covered this already. So
14 this element was known in the art and it was never
15 put into -- never put into a tube embodiment.

16 Q Down to Line 36 the patent states, "There
17 are two primary types of LED lighting used to
18 create white light. One is to use individual LEDs
19 to emit three primary colors (red, green, and blue)
20 and mix the colors to form white light. The other
21 is to use a phosphor material to convert
22 monochromatic light from a blue or ultraviolet LED
23 to broad-spectrum white light, also referred to as
24 phosphor based LEDs."

25 Would you agree that at this time

1 phosphor-based LEDs were known in the art?

2 A Yes. The -- we specifically launched
3 phosphor-based bi-color five years earlier. It was
4 well known.

5 Q Would you agree that they were known,
6 phosphor-based LEDs were known to produce broad-
7 spectrum white light?

8 A Yes. But not in a tube format but yes.

9 Q And what do you understand the term broad-
10 spectrum white light to refer to?

11 A It refers to, for example, RGB would be
12 the opposite and so you've got -- you've got three
13 defined peaks and it falls off quickly so you have
14 large gaps in the bandwidth. So broad spectrum as
15 a general rule refers to a continuous light source
16 where you have -- you don't have this RGB, you
17 know, deep dropouts.

18 Q Down at Line 43 it states, "In order to
19 match the tubular form of a fluorescent bulb,
20 arrays of LEDs may be placed within a tube having
21 the same form factor as a florescent lamp, such as
22 a T8 or T12 size florescent bulb."

23 So you would agree an LED tube in a T8 or
24 T12 form factor was known at this time, Ken?

25 A Yeah. We've already covered that with

1 respect to the Mac Tech so it was known to have a
2 mono-chromatic or a mono-color, single color,
3 either, you know, typically daylight or tungsten
4 balanced. They were two separate.

5 Q And it says in the next sentence, "One
6 such bulb is made by Dialight is called DuroSite."

7 Were you familiar with DuroSite?

8 A No.

9 Q Were you familiar with Dialight?

10 A No.

11 Q But to your knowledge the Mac Tech product
12 would have been an equivalent example of an LED
13 tube in a fluorescent form factor at that time,
14 correct?

15 MR. HOFFMAN: Objection; foundation.

16 THE WITNESS: So let's cover -- so again
17 you've got to contextualize this to understand the
18 invention.

19 So I toured Mac Tech probably 2012, I saw
20 everything they had, I saw them at trade shows.
21 I'm readily familiar with Mac Tech in and around
22 the time of the invention. They were large banks
23 of multiple single color typically in the
24 horizontal. They may have had a couple of like
25 little what we call Chinese lanterns that may have

1 been vertical, I don't know on that, but what they
2 were renting was primarily the horizontal, let's
3 say the two-foot-by-four-foot or four-foot-by-
4 eight-foot horizontal single color. There was
5 no -- there was no bi-color. And they didn't
6 have -- from what I saw they never had any single
7 tubes, so you have tubes and you have fixtures.

8 Mac Tech was tubes that popped into a
9 frame where the Colt didn't require frames, it was
10 an integrated single -- a single fixture where --
11 you could have single fixtures. Single fixtures
12 are much more problematic than a, for example, two-
13 foot-by-four-foot that's only in the horizontal
14 orientation.

15 Q BY MR. WARD: The next sentence. The '582
16 patent states, "For example, in size T8, the bulb
17 in one form uses SMD LEDs in a four foot long tube
18 and provides 1500 Lumens of Natural White light
19 using 17 Watts, 300 LEDs, with 90 volts to 277
20 volts, and is ETL/UL approved."

21 What is an SMD LED, Ken?

22 A It is a surface-mount device. A surface-
23 mount device. It is a higher wattage, higher
24 output LED. Again, is this consumer or not.
25 There's no what's the CRI, there's just a lot of

1 factors. With that part I don't know what's being
2 referred to here.

3 Q You agree with the statement that it was
4 known to have an LED tube and a T8 form factor with
5 1,500 lumens of natural white light?

6 A I don't know. I never saw -- I never saw
7 that. I saw in the context of film and T.V. I saw
8 some nine- or ten-watt Mac Tech fixtures that were
9 single color that required a large group to get a
10 significant output so I don't think a single tube
11 was at that wattage. If you had a consumer product
12 that was very low CRI, you know, not suitable,
13 that's a more efficient source, so again it is
14 context-based, there's no one-size-fits-all.

15 This sounds like a -- you know, lot of the
16 tube lights green is the most -- is the highest
17 output so you could put a lot of power if you have
18 20, 30 points of green. It is not in context. I
19 can't comment on that.

20 Q So, Ken, in your declaration you stated
21 that for a bi-color LED tube it is necessary to
22 have sound thermal design to provide highly
23 effective thermal management.

24 A Again, it is context based. What's the
25 wattage of a single color. Everything is context

1 based. What LEDs you're using, what is the
2 wattage. So I'm just saying it is not contained
3 just to that. I'm saying that -- my point is that
4 the tube format, this one-inch-wide or one and a
5 half inches wide is inherently problematic for film
6 and T.V. applications. It is undersized, it is
7 inadequate out of the gate. Even before.

8 So you have LEDs that are -- that are
9 inherently problematic, you've got a narrow
10 one-inch format encased in diffusion, so you are
11 stacking problems upon problems. You then compound
12 the problems by stacking a third problem called
13 bi-color because then you've just lost half the
14 real estate. I'm saying that a relevant artisan at
15 the time of the invention would view -- at any
16 significant wattage would view the tube format
17 itself just at a conceptual level as likely to
18 fail, is that if you were to put in something --
19 you know, you have higher CRI, you've got lower
20 lumens, it is heat sensitive. They would view that
21 within short order it would die and then it would
22 be inadequate -- not inadequate, inoperable for its
23 intended purpose. What was suitable is no longer
24 suitable in short order. It is a fundamental, the
25 tube light is in a unique class all on its own.

1 You've got problem one, problem two, problem three,
2 problem four. Don't walk away, run away. That's
3 what we did.

4 Q So you would agree sound thermal design is
5 necessary for a reliable LED tube product?

6 A I'm saying you can't get there. I'm
7 saying it is out of the gate perceived by one
8 skilled in the art at the time of the invention,
9 you can't do it, it is inadequate. And I use the
10 example of when you have a single tube like the
11 Colt when you get the vertical against the wall.
12 You compromise the entire design at that point.
13 You turned it vertical and you compromised an
14 already inadequate heat sink. It doesn't work. It
15 is not rocket science. There's a reason why no one
16 did it. I'm sorry, guys, but this patent is valid.

17 Q Ken, can you identify for me where the
18 '582 patent discloses the ability to overcome the
19 thermal issues you've identified?

20 A I'd have to read the whole -- I'd have to
21 read the whole patent with that.

22 Q Okay. It is a relatively short one.

23 A Do you have a larger version of this?

24 Q I do not, Ken, sorry.

25 A Okay.

1 MR. WARD: David, do you have a larger
2 version?

3 MR. HOFFMAN: I don't think I have a
4 larger version. Let me check here.

5 (Discussion off record)

6 THE WITNESS: On the initial pass I don't
7 see it. I think what I'm referring to in general
8 is that that was the perception, right or wrong, I
9 think I put in the report, that the perception was
10 twofold; that it was problematic and if you had
11 better options and what everybody did was go for
12 the safe option, and I think part of the patentable
13 insight was he went against the general convention
14 here with that.

15 Q BY MR. WARD: What do you mean by
16 patentable insight?

17 A I mean that one skilled in the art at the
18 time of the invention had better options. Why, why
19 risk it. It was -- it was viewed as, right or
20 wrong, it was viewed that you don't go there. I
21 mean, it is just a clear -- you have better
22 options. If you are looking at you have forks in
23 the road, you can turn left or turn right, and
24 right is a rocky pothole, the other one is safer,
25 you are going to head down the safe route. The

1 insight was everyone went down the safer route.
2 Kino Flo didn't do it, Airy didn't do it,
3 Litepanels didn't do it, Mac Tech didn't do it.
4 Every other manufacturers wouldn't go there except
5 for Colt, right or wrong. The patentable insight
6 is going against the crowd so I don't see
7 specifically on that but I will tell you that it
8 was -- I had a business, I lived this stuff. I had
9 a business partner that wanted it. I said no.
10 Were we wrong? Could be. Colt was not wrong.
11 Colt had the insight, made the product, pushed the
12 envelope and did it, that -- at that point I was
13 surprised that it worked. So --

14 Q Ken, you would agree there's no disclosure
15 in the --

16 A I skimmed it, I don't see -- I don't see
17 disclosure with that one. I mean, it is -- it is
18 small, small text, but no. On scanning it on the
19 first pass I don't see it, no.

20 Q Ken, I need to know with certainty whether
21 or not the '582 patent --

22 A It doesn't matter. I'm letting you know
23 what the outlook on -- I lived this, we designed
24 products, and currently at the same time we would
25 not go there; no one else would go there.

1 Q Is there any --

2 A It doesn't matter. It doesn't matter.

3 Q Ken, I'm asking a question.

4 A Okay.

5 Q The question is, is there disclosure in
6 the '582 patent about --

7 A From what I saw on the pass, no.

8 Q Let me finish my question.

9 A Okay.

10 Q Is there disclosure in the '582 patent
11 about thermal management?

12 MR. HOFFMAN: Objection; asked and
13 answered.

14 THE WITNESS: From what I saw, no.

15 Q BY MR. WARD: And what do you mean by from
16 what I saw?

17 A I've got a shrunk down thing that I just
18 scanned, you know, but from scanning it I don't see
19 it.

20 Q I need you to review it in full.

21 A Then give me a proper copy and I'm happy
22 to do it.

23 Q Okay. I can put it on a computer screen,
24 I can put it on an iPad, I can put it on this
25 screen. How big do you want it?

1 A iPad is great or a print-out.

2 MR. WARD: I have an iPad right here.

3 Let's go off the record.

4 (Recess taken from 3:08 p.m. to 3:08 p.m.)

5 BY MR. WARD:

6 Q Ken, I'm going to pass you now an iPad

7 with --

8 A Much appreciated.

9 Q Yeah. A copy of Exhibit 1001, the '582
10 patent, for your review. Please take your time.

11 A I'm looking at the claims now. I don't
12 see thermal in here having read through it.

13 Q So you would agree that the '582 patent
14 does not provide any disclosure about overcoming
15 thermal issues?

16 A I would agree. And I was wrong so --

17 Q Does the '582 patent provide any
18 disclosure about the type of heat sink that's
19 necessary for a bi-color LED tube?

20 A I think I've said I don't see disclosure
21 as far as thermal. That would be inclusive of
22 thermal so I can't answer that.

23 Q There's no disclosure in the '582 patent
24 about a heat sink?

25 A That I just saw, no.

1 Q Is there any disclosure in the '582 patent
2 about the binning process?

3 A I didn't look for that.

4 Q There should be a search functionality.

5 A It looks like an image.

6 Q Yeah, that -- if I --

7 A I'm searching for the word binning. I see
8 two references in the -- just in the other
9 publications, I don't see any in the patent itself.
10 I'm searching for the word binning.

11 Q So you would agree there's no disclosure
12 in the '582 patent about using the binning process?

13 A Based on this search that's correct.

14 Q How about your review of the patent
15 itself?

16 A I'd have -- it could be under a different
17 word, I don't know.

18 So in Column 9, let's look at starting at
19 about six, this talks about spectrometer reading
20 testing for LED lamps, map, map color perception in
21 terms of parameters X and Y, the chromaticity
22 coordinates with respect to heat saturation,
23 conventional CIE. Testing of daylight indicates a
24 light color temperature of 5,000. Color rendering
25 index CRI is indicated, found to be 92 to 93. So

1 the disclosure on testing and disclosure on
2 chromaticity coordinates and mapping which is --

3 Q In your declaration, Ken, you identified
4 binning as a way to overcome some of the critical
5 issues that you referenced in your declaration.

6 MR. HOFFMAN: Objection; foundation.

7 THE WITNESS: Can you give me a reference?

8 Q BY MR. WARD: Sure. If you look at your
9 declaration.

10 A I think you misconstrued what I said but
11 let's -- can you point me to the right direction
12 and then say it again?

13 Q Yes. Look at your declaration Page 72.

14 A Page 72, okay.

15 Q "According to the complexity in blue LED
16 die emitters themselves undergo stringent binning
17 processes to narrow down the wavelength."

18 A It is apples and oranges. How about the
19 blue emitter? And this is not binning. Well, I
20 mean, it is binning in the context of a sub-
21 component so what we're saying here is that the
22 phosphors are mixed for very narrow blue so it is a
23 blue emitter phosphor. The phosphors are set for a
24 very narrow blue output so blue engine will
25 fluoresce -- you know, the deep blue die emits blue

1 light. That blue lights hits the phosphor and then
2 you have white light. I'm saying here this is a
3 heat-sensitive issue making the fact that the
4 phosphors are set for a very specific blue. If it
5 gets too hot the nanometer of this very narrow blue
6 changes and that affects everything else. This is
7 not -- although it says binning this is not what
8 you are thinking about in the conventional binning
9 of the CRI. It is apples and oranges.

10 Q Is there any disclosure in the '582 patent
11 of that consideration with respect to binning?

12 A It is not a consideration, it is an
13 effects if it overheats. This is just part of the
14 manufacturing process and it is a secondary reason
15 why LEDs are inherently problematic. They're
16 incredibly -- so there are two vulnerable
17 components with LEDs unlike tungsten, unlike
18 fluorescent. One is the phosphor itself, the other
19 one is the blue emitter.

20 The blue emitter, again this is a Kevin
21 question, I don't know if it is a two nanometer,
22 but it is set at a specific nanometer blue output.
23 It gets hot, it shifts the blue, that changes all
24 the color, all the CRI, all your things, so it is
25 just an inherent landmine. It gets too hot.

1 Q Is there any disclosure in the '582 patent
2 of --

3 A Not important. I'm giving you some
4 insight on why it is heat sensitive. This is not
5 something that is pertinent to the discussion, it
6 is just -- it is if and only if there is excess
7 heat it becomes a problem. They are -- they are
8 binned. It is not the binning process referred to
9 any other -- Mr. Holmes puts through some 2016 and
10 2017 bin as 2012 but that is a separate where you
11 test each LED and like microprocessors there's a
12 binning process so this is an Intel 3.2 megahertz,
13 it is the same chip, you just test it. Depending
14 on the process you have variables so it will
15 scatter around so you basically group the LEDs.
16 That's not what this is, this is just simply a
17 heat-sensitive issue that only comes into play if
18 and only if there's excess heat.

19 Q Ken, you said your expectation for a
20 bi-color LED tube would be that there would be
21 excess heat, correct?

22 A I'm saying the question as I understand it
23 is is what one that is normally skilled in the art
24 at the time of the invention would view, view this
25 as it being problematic. The reality is no one

1 went there. The perception by one skilled in the
2 art at the time is that this would not work. I'm
3 not saying that I am right or they are right, the
4 question is what is the decision at the time of the
5 invention by one skilled in the art and I am
6 confident in saying, right or wrong, the impression
7 is that it will not work, do not go there. Said
8 conversely, you've got better options, go with the
9 better option. No one went there. No one went
10 there except for two companies. One was Colt and
11 one was your client. No one else went there and it
12 was around for years.

13 Q So, Ken --

14 A That's the real world.

15 Q At Paragraph 72 of your declaration --

16 A Okay, 72.

17 Q -- you say, "... the interplay of light
18 sensitivity among phosphors and the wavelength
19 shift of the blue emitters adds layers of intricacy
20 to the delicate balance required for achieving and
21 preserving the desired CRI color quality."

22 Does the '582 patent contain any
23 disclosure about how to manage the layers of
24 intricacy and this delicate balance that you have
25 identified?

1 A It does not. That was the prevalent
2 impression at the time of the invention.

3 Q Ken, you said one design constraint was a
4 narrow linear tube format is a heat trap. Does the
5 '582 patent contain any disclosure about how to
6 overcome the heat trap that is a narrow linear tube
7 format?

8 A Again, I'm saying that we have the
9 perception was that it will not work. The
10 perception is it is a heat trap. We looked at it;
11 we felt that it was too risky. You had one -- you
12 had one company push the envelope and it worked.

13 Q Ken, does the patent itself --

14 A I already said no.

15 Q Does the patent itself, the '582 patent,
16 contain any disclosure about how to overcome the
17 problem that you have identified that the narrow
18 tube format is a heat trap?

19 A I'm saying the perceived problem, no, it
20 has no disclosure about the perceived problem that
21 one normally skilled in the art would look at. No,
22 there's no disclosure for that.

23 Q Is there any disclosure in the '582 patent
24 about how to overcome the problems with vertical
25 orientation that you identified?

1 A Okay. And again clarify that as the
2 perceived problem by one skilled in the art. As
3 far as the perceived problem at the time of the
4 invention there's no disclosure to address the
5 perceived problem with that, no.

6 Q Does the '582 patent have any disclosure
7 about how to overcome heat issues encountered
8 within encapsulation with a gel or black wrap that
9 you identified in your declaration?

10 A I do not see that, no.

11 Q Does the '582 patent contain any
12 disclosure about how to overcome current and
13 thermal droop losses?

14 A I do not see that.

15 Q Have you had a chance to review the '582
16 patent for that disclosure?

17 A Well, in general the thermal -- that would
18 be part of the thermal so I did not see anything
19 with regards to the droop.

20 Q Does the '582 patent have any disclosure
21 about the use of remote phosphor to address thermal
22 issues?

23 A It does not.

24 Q You mentioned one way to address thermal
25 issues is to space the LEDs apart. Does the '582

1 patent have any disclosure about spacing the LEDs
2 apart?

3 A What I was referring to was the standard
4 approach so there are two standard approaches and
5 this is why the -- this is what led to the
6 perception. The perception right or wrong at the
7 time of the invention by the relevant artist is
8 that you use big heat sinks or you do the wide
9 spacing. There's no disclosure with that but there
10 is a reason why no one went there.

11 Q You would agree that there's no disclosure
12 in the '582 patent about thermal issues or how to
13 overcome them, correct?

14 MR. HOFFMAN: Objection; asked and
15 answered.

16 THE WITNESS: To address perceived
17 problems, no.

18 Q BY MR. WARD: Ken, are you aware of anyone
19 actually attempting to put together the known
20 components for a bi-color LED tube in 2013 or
21 earlier?

22 A In -- there's a Mac Tech reference, it is
23 probably 2014, where they teach away. I think they
24 said they tried it and didn't get the color and
25 direct teaching away from the bi-color. They say

1 that the -- the 2014 Mac, there's an FAQ section,
2 are Mac Tech LEDs bi-color; we no. We found that
3 brightness/color fidelity is far better on a
4 mono-color.

5 Q Did you know anyone personally that tried
6 it?

7 A I know Kevin looked at it. You know, I
8 don't have any reports but I know Litepanels looked
9 at it, I know we had a partner that wanted to do
10 it. Kevin ran some tests and decided no.

11 Q As we looked at earlier Kevin Baxter
12 testified all of the components for a bi-color LED
13 tube were known at that time, correct?

14 MR. HOFFMAN: Objection; foundation.

15 THE WITNESS: I mean, ten years earlier
16 the components were known for Litepanels and we did
17 new combinations of known components. So the same
18 thing that Colt did in 2013, Litepanels did in
19 2003, '4, '5, '6, '7, '8, '9. You've got to view
20 it as the invention that's claimed. You take it
21 out of context. To look at it on an element-by-
22 element basis is improper. You've got to look at
23 it in the invention as a whole. You cannot go this
24 existed, this existed, this existed. The question
25 is did the combination exist, did it -- you know,

1 you cannot ignore the claimed invention, and all I
2 see in the report is ignoring the claimed
3 invention. This element existed. That's not --
4 what I'm saying is I never saw it at every trade
5 show; no one did this. The impression was it was a
6 bad idea right or wrong. I'm not saying that we
7 were right but that was the impression.

8 Q BY MR. WARD: And when you saw the Colt
9 bi-color LED tube for the first time in the
10 Fernando Silva demo did you know immediately this
11 product overcomes the issues that I thought it
12 would have?

13 A Well, A, it surprised me. B, I still had
14 questions on would it, would it prove out. But, I
15 mean, I was surprised, it was -- it was if I can
16 use the term patentable insight where we as
17 Litepanels would not go he went and great.

18 Q And at this Fernando demo, talk to me
19 again about was the LED tube mounted at that point?
20 How did you see it?

21 A There was a table. They were laid out on
22 tables on one -- one large table as I remember.

23 Q Can you mount the Colt LED tube in a
24 stand? Is it something you can pop in and out of a
25 stand?

1 MR. HOFFMAN: Objection; scope.

2 THE WITNESS: I haven't seen any stand
3 adapters.

4 Q BY MR. WARD: What was it in when you
5 first saw it?

6 A This was a self-contained tube like a
7 large pencil.

8 Q But you are not aware of an adapter for
9 the Colt bi-color LED tube?

10 MR. HOFFMAN: I'm going to object to scope
11 again and I have to say there's no purpose to go
12 there in this -- in this case. That relates to a
13 patent of Vitec's or I should say of Litepanels'
14 and that has nothing to do with this litigation and
15 it appears to be fishing for support for something
16 that is not related to this litigation and an
17 improper use of this proceeding and therefore I
18 would object on that basis.

19 THE WITNESS: So I have not seen a stand
20 adapter.

21 Q BY MR. WARD: In the demo with Fernando
22 Silva was it in the harsh adverse conditions that
23 you were concerned about?

24 A Well, as I mentioned, there was the large
25 cable, they were laid out, so no. Not taped to a

1 wall or wrapped in black wrap. My point is that it
2 is -- the one skilled in the art, relevant artist
3 at the time of the invention, would just choose a
4 different form factor. There's every reason for
5 Kino Flo to -- I mean, you don't know the
6 infrastructure. We are talking tens of thousands
7 of fixtures worldwide, every reason, every -- I
8 mean, highly desired, unmet need to change that to
9 a bi-color LED, all -- every -- everything. Every
10 bracket, every -- oh, my God. I mean, it is highly
11 desired and they wouldn't go there because it was
12 not suitable for filming T.V. The biggest company
13 in the world didn't go there. They had every
14 reason to do it. It just -- the old ways were
15 labor intensive, big hassle to change out tubes or
16 to add thick gels. They didn't go there.

17 Q Again, would you agree no one single
18 element of Mr. Macias' claimed invention in the
19 '582 patent or the '895 patent was unknown in the
20 art?

21 A Well, again, if you want to look at I
22 think my statement earlier --

23 MR. HOFFMAN: Objection; legal conclusion.

24 Go ahead. You can answer.

25 THE WITNESS: Sure.

1 I think I was clear earlier inventions are
2 new combinations of known elements, what we did it
3 at Litepanels. The components were known. What we
4 did was a new combination of known elements. You
5 got a -- LEDs are clear right now that they work,
6 much less ten years ago, much less almost 20 years
7 ago with that part. You've got to get back in the
8 time capsule and view it within. You cannot ignore
9 the invention as it is claimed with that.

10 Q BY MR. WARD: But you would agree Mr.
11 Macias did not invent tungsten LEDs, correct?

12 A That's not the point. Litepanels didn't
13 invent. It is on an element-by-element basis and
14 as I understand it, I'm not a patent attorney, as I
15 understand it from about 20 years' experience the
16 fact that the Element A, B and C existed doesn't
17 make it the combination, the combination is how to
18 view it. And with Litepanels the elements existed.
19 We did new combinations of known elements. Colt
20 did new combinations of known elements. Both are
21 patentable. He earned millions of dollars and your
22 client copied it, made 10,000 copies. That's an
23 incredible endorsement. The real world has an
24 effect here with this. You can't view it in
25 isolation; it is just improper. Yeah, the

1 components existed, I think probably every single
2 component existed. The combination, though, did
3 not exist and everybody ran away from that. You've
4 got to bring in the real word here with this, you
5 can't just -- this is not an academic thing, there
6 was reasons it was perceived as not workable. One
7 guy said it would work and garnered millions of
8 dollars. This guy went to the biggest studio and
9 asked them what they need and the guy tells him
10 what his long felt but unmet need and the guy
11 solved it. We didn't do it. That's patentable
12 weight.

13 Q Ken, have you advised on patent
14 prosecution for any Colt patents?

15 A No.

16 Q So you haven't given any assistance as far
17 as active patent prosecution for Colt?

18 MR. HOFFMAN: Objection; foundation, form,
19 asked and answered.

20 THE WITNESS: No. I saw -- I think when I
21 was reading one of the more recent applications I
22 see, I assume it was David, had cut some stuff out
23 of the expert report and added that onto -- added
24 that onto one of the most recent patents with that,
25 so --

1 Q BY MR. WARD: So you have reviewed active
2 patent applications for Colt?

3 A No. I'm saying that as part of the prep I
4 read the Colt patents and I believe what I saw on
5 one of the more recent ones that he took a sentence
6 or two out of one of my expert report and put that
7 into a new patent.

8 Q Is it a newly-issued patent or a newly-
9 applied for application?

10 A I think it was an issued patent.

11 Q And in what context were you reviewing
12 that application or patent?

13 A Part of this case. Kind of went back to
14 some of the prior stuff that had been done.

15 Q Was that an exhibit in this case?

16 A I don't think so.

17 Q So you have been involved in reexamination
18 proceedings for Colt, correct?

19 A Correct.

20 Q But you have not been involved in any
21 active patent application prosecution for Colt.

22 A Correct. I have not.

23 Q Have you advised on potential new claims
24 for Colt to pursue?

25 A I don't believe so. You know, there may

1 have been a comment here or two on whatever, the
2 color was too narrow or something, you know, more
3 just as a criticism on one of the existing ones,
4 existing patents.

5 Q You are saying in the review of an
6 existing patent you may have provided a comment as
7 to how to broaden the claim?

8 A No, just a criticism of an existing
9 patent.

10 Q How did you criticize it?

11 A Well, I think color, it was very narrow.

12 Q Color temperatures?

13 A Yeah, like a color temperature range.
14 With that just a passing comment that that's
15 narrow; I don't like it.

16 MR. WARD: Okay. Let's go off the record.

17 (Recess taken from 3:44 p.m. to 3:55 p.m.)

18 BY MR. WARD:

19 Q Ken, have you had a chance to review
20 Colt's bi-color LED tubes recently?

21 A No.

22 Q So have you -- when is the last time you
23 saw the bi-color LED tube?

24 MR. HOFFMAN: Objection; foundation.

25 THE WITNESS: It has mostly just been

1 pictures. Some of the pictures for this looking
2 back at some of the -- looked at like one or two
3 photos but I don't have a lot of detail photos on
4 it.

5 Q BY MR. WARD: Do you know if there's been
6 improvements that's been made to the bi-color LED
7 tube?

8 A I don't know.

9 Q Do you know, do they -- you talked about
10 switching versus cross-fading earlier. Do they
11 have a cross-fade bi-color LED tube?

12 A Yes, I believe there's -- I mean, going
13 back they were switchblade and I believe cross-fade
14 as well.

15 Q And can you tell me as a non-expert in the
16 area what does cross-fade allow you to do?

17 A Well, switching tends to be A or B, warm
18 or cool. With cross-fade you can hit some dim
19 points as well so it is inclusive of warm and cool
20 but you pick up some additional midpoints.

21 Q The photos I've seen of the Colt product
22 shows a switch that has a three zero on one side
23 and a five six.

24 A That would be switchblade.

25 Q And that's associated with essentially a

1 low 3,000 Kelvin color temperature and a 5,600

2 Kelvin color temperature, correct?

3 A In general, yes, correct.

4 Q And so with one that can do a cross-fade

5 tell me what is happening there? Are both LEDs

6 being driven or --

7 A At different it depending on -- so you are

8 going to -- like the term cross-fade means you are

9 increasing the intensity of one setting and you are

10 decreasing the intensity on the other setting. So

11 you go two to the extreme so it could go from a

12 3,200 all the way through whatever, 5,500 or any

13 point in between.

14 Q Are these -- is it dimmable? Can I

15 control the intensity?

16 A That's what I'm saying. I'm saying you

17 are going to be increasing intensity in one and

18 decreasing it on the other, that's the term of the

19 cross-fade, so it will fade up on one set, you will

20 be fading down to use a different terminology on

21 the other set.

22 Q And is it dimmable? I can dim each set of

23 LEDs individually?

24 A Yeah. As groups, correct, correct.

25 I can't ask him a question? That's okay.

1 Q How does one perceive that light then? So
2 if I had a -- the first LED let's say is providing
3 a tungsten Kelvin color temperature light at
4 roughly 3,000K at a 50% intensity and the second
5 LED set is providing daylight at 5,600K at 100%
6 intensity. How does the eye perceive that, what
7 color does that look like? Does it look like
8 something in between 3,000 and 5,600 or a blend of
9 both?

10 A Well, the net result is a blend of both
11 depending on what's more intense so you will be
12 more blue or you will be more warm depending on
13 what the relative balance is.

14 Q And as a set guy if you are on set do you
15 prefer to have just a mix of daylight and tungsten
16 tubes where they are at a single color temperature
17 or you are independently dimming and cross-fading
18 each tube?

19 MR. HOFFMAN: Objection; scope,
20 foundation.

21 THE WITNESS: Well, what you -- I mean,
22 what you want is -- well, I don't know. I mean,
23 the invention is bi-color within the same tube so
24 is there a preference? I don't know. That's
25 outside the scope of this. I haven't looked at

1 that or thought about that.

2 MR. WARD: No further questions.

3 THE WITNESS: Okay.

4 MR. HOFFMAN: Okay. I need about ten
5 minutes or so and then we can go with some direct.

6 MR. WARD: Okay.

7 (Recess taken from 4:00 p.m. to 4:14 p.m.)

8

9 EXAMINATION

10 BY MR. HOFFMAN:

11 Q I am going to hand out Exhibit 2126 from
12 IPR 2023-0613. And, Mr. Fisher, I'm going to ask
13 you have you seen this email chain before dated
14 March 27, for the most recent email on that.

15 MR. WARD: Objection; foundation.

16 THE WITNESS: Yes, this looks familiar.

17 Q BY MR. HOFFMAN: Is this an email chain
18 between you and me?

19 A Yes.

20 Q I'm going to hand out Exhibit 2127 for IPR
21 2023-613. I'm going to ask you to review that for
22 a moment, Mr. Fisher. And what is that?

23 A This is just a retainer agreement, a base
24 retainer agreement.

25 Q Who is that retainer agreement between?

1 A It is between the law firm, between
2 yourself and your law firm and my company.

3 Q Okay. And what is the date of that
4 retainer agreement?

5 A It is dated February 16, 2023.

6 Q Do these two documents, Exhibit 2126 and
7 2127, refresh your recollection as to when I
8 retained you or when Nolan Heimann retained you?

9 A Yeah. I think I mentioned third quarter
10 so looking at this it would be earlier. Earlier I
11 mentioned third quarter I thought in 2023. This
12 looks like February of 2023 so it was earlier.

13 Q Okay. So that would be -- you would
14 consider yourself to have been retained on February
15 16, 2023, the date of this statement of work --

16 A Yes.

17 Q -- on Exhibit 2127?

18 A Yes.

19 MR. HOFFMAN: Okay. I'm going to hand out
20 Exhibit 2126 for IPR 2023-614.

21 Q And, Mr. Fisher, I'm just going to ask you
22 to take a moment to review it.

23 A Is this the same as the first one?

24 Q Okay. So you saying --

25 A I've got two copies of 2126; is that

1 right?

2 Q Oh, oh, okay, I'm sorry. I meant to give
3 you this. This is Exhibit 2126 which is for IPR
4 2023-00614. No, I'm sorry, it is 2125. It is
5 Exhibit 2125. Is that what you -- yes, I did.
6 Exhibit 2125.

7 A I think it is the same.

8 Q Yes, yes, it is the same document but let
9 me identify it first before we get too confused
10 here.

11 So I've handed you Exhibit 2125, it is
12 labeled by me for IPR 2023-00614, and as best you
13 can tell is that the same document as Exhibit 2126
14 for IPR 2023-00613?

15 A It appears to be, yes.

16 Q Okay. I'm going to hand you what I have
17 marked as Exhibit 2126 for IPR 2023-00614 and I'm
18 going to ask you to take a moment to review that,
19 Mr. Fisher, and tell me if that is the same as
20 Exhibit 2125 for IPR 2023-00613, this statement of
21 work.

22 A It is the same, yes.

23 Q Okay. Mr. Fisher, I'm going to ask you to
24 take a look at Exhibit 1001 again and I'm going to
25 ask you to look at Column 1 near the top.

1 A Uh-huh.

2 Q I'm sorry, yes, Column 1, and then I'm
3 going to ask you to take a look at the next page,
4 Page 2 of Exhibit 1001 from IPR 2023-00613.

5 A Okay.

6 Q Do you see the section entitled "Related
7 U.S. Application Data" near the top left?

8 A I do.

9 Q And can you read the last two lines of
10 that?

11 A On (60)?

12 Q Yes, Section (60), yes.

13 A "Provisional application No. 61/648,554
14 filed on May 17, 2012."

15 Q Okay. And so when Mr. Ward asked you
16 earlier about what was disclosed in Exhibit 1001,
17 the '582 patent --

18 A Uh-huh.

19 Q -- were you referring at all to having
20 reviewed the provisional application?

21 A No, that was restricted to the, just the
22 '582 patent without the incorporated provisional.

23 Q Okay. There was a point in time when Mr.
24 Ward was asking you questions where you pointed to
25 a document and said this was, something to the

1 effect of this was too much engineering. Do you
2 remember that point where he pointed to a document?

3 A I do, yes. What I said is that it is
4 referring to Exhibit 1003 and I believe I said it
5 was too much engineering and not enough on-set
6 lighting experience.

7 Q And that document, Exhibit 1003, is the
8 declaration of Fred Fellmeth?

9 A That's correct.

10 Q And is that true, your characterization of
11 that document, is that true for both Exhibit 1003
12 of IPR 2023-00613 and Exhibit 1003 for IPR
13 2023-00614?

14 A That's correct.

15 And, you know, as part of that, you know,
16 it is my opinion that the definition of one skilled
17 in the art is too narrow, it is not reflective of
18 the real world, and I mentioned specifically, for
19 example, the company Kino Flo was founded by two
20 gaffers. Litepanels founders include, also include
21 two gaffers, the -- according to the Quasar web
22 page it is multiple gaffers on the founders of
23 Quasar. I believe the website says that over 100
24 years of set lighting experience with that. In Mr.
25 Holmes' -- his defense is solely engineering

1 focused. I do not believe that accurately reflects
2 the one who is skilled in the art, normally skilled
3 in the art at the time of the invention, it is too
4 narrow.

5 Q Okay. Just to identify the part of the
6 record a little more clearly that we're talking
7 about here, the question to you at the time was
8 can -- I'm just asking about in your mind who do
9 you -- I'm not sure of this next word -- but
10 consider as this person as an expert on LED
11 lighting for T.V. and film, so do you remember that
12 question being about the point in time where you
13 pointed to this document, Exhibit 1003?

14 A Yes.

15 Q And when you talked about having
16 prosecuted some applications, those applications
17 were for yourself; is that correct?

18 MR. WARD: Objection; form.

19 MR. HOFFMAN: Let me strike that.

20 Q Let me refresh your recollection about the
21 or let me ask you, during Mr. Ward's questioning he
22 asked you about experience prosecuting
23 applications. Is that --

24 A Yes. I remember.

25 Q Okay. And what type of -- who were the

1 inventors of -- let me strike that.

2 Were you included as an inventor on the
3 applications that you prosecuted?

4 A Yes.

5 Q There also was a time when Mr. Ward asked
6 you about Fernando Silva and the demonstration of
7 the Colt product at Paramount. Do you recall that?

8 A I do, yes.

9 Q And you said something about they make
10 money off of sales and rentals. Do you recall
11 saying something to that effect?

12 MR. WARD: Objection; form.

13 THE WITNESS: I do, yes.

14 Q BY MR. HOFFMAN: When -- do you have any
15 knowledge as to whether or not Fernando Silva
16 personally made money from any of the
17 demonstrations of products at Paramount?

18 A I have no knowledge. I would assume, you
19 know, that he is the, you know, one of the top
20 people there. I would assume not but I have no
21 knowledge.

22 Q Do you consider yourself to have helped in
23 the prosecution of any Colt patents or applications
24 other than having written expert reports?

25 A No, I believe I had mentioned that there

1 have been four projects prior. I want to clarify.
2 I think that one of them I took part of my report
3 and gave you an expert report for a patent
4 prosecution. I mentioned earlier that I thought
5 there was something that was included in a -- in a
6 patent. I believe you asked me to take parts of my
7 existing expert report and put that into an expert
8 report that you attach to a patent application so
9 one of the projects was an expert report for a
10 patent application.

11 Q Okay. And in my questions that I have
12 just asked you right now about that is your
13 understanding that I'm using expert -- I've used
14 the term expert report but it is really an expert
15 declaration when it is filed in the Patent and
16 Trademark Office in a patent application or
17 reexamination proceeding?

18 A I understand, yes, that would have been an
19 expert declaration attached to a patent
20 application. I thought you stole it but I guess
21 you didn't.

22 Q Okay. And I'm going to show you, and I
23 can pass my screen around, but I'm going to just
24 show you to refresh.

25 A Uh-huh.

1 Q To refresh your recollection here is
2 Exhibit 1002 from the IPR 2023-00613 and it is --

3 A IPR.

4 Q IPR 2023-00613. No, I'm sorry. Yes, the
5 exhibit is from the IPR but the document itself is
6 Exhibit 1002 which is from the file wrapper history
7 of the '582 patent and it is at -- we're looking at
8 Page 403 of that Exhibit 1002.

9 Does that refresh your recollection as to
10 whether or not you did a declaration, expert
11 declaration for the '582 patent during its
12 prosecution?

13 A Yes, it does.

14 Q Okay. And is your recollection that you
15 did one or that you didn't do one?

16 A So I believe the -- your earlier question
17 involved was I involved in any patent applications
18 and I -- so seeing this I now remember that one of
19 the projects was an expert declaration for a patent
20 application.

21 Q Okay. Is it possible that you might have
22 done another expert declaration for a Colt patent
23 application that was the subject of, later the
24 subject of a reexamination?

25 A Yeah. I know there's been four projects

1 total so two could have been IPRs and two could
2 have been expert declarations for pending patent
3 applications.

4 MR. HOFFMAN: Okay. I have nothing
5 further.

6 THE REPORTER: Did you want a copy of the
7 transcript?

8 MR. HOFFMAN: A rough and then I will make
9 a decision as to whether I want a regular. We're
10 going to reserve reading and signing.

11 (Whereupon the deposition concluded at
12 4:33 p.m.)

13 ///

14 ///

15 ///

16 _____
17 KEN SCOTT FISHER

18 Subscribed and sworn to
19 before me this day
20 of 2024.

21

22 _____
23 (Notary Public) MY COMMISSION EXPIRES:

24

25

REPORTER'S CERTIFICATE

I, SUSAN A. O'LEARY, CALIFORNIA CSR No.
3522, RPR, CRR, do hereby certify:

That KEN SCOTT FISHER, the witness whose
examination is hereinbefore set forth, was first
duly sworn by me and that this transcript of said
testimony is a true record of the testimony given
by said witness.

I further certify that I am not related to
any of the parties to this action by blood or
marriage, and that I am in no way interested in the
outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my
hand this 22nd day of April, 2024.

CSR

DEPOSITION ERRATA SHEET

Our Assignment No. J11101850
Case Caption: QUASAR SCIENCE LLC
vs. COLT INTERNATIONAL CLOTHING, INC

DECLARATION UNDER PENALTY OF PERJURY

I declare under penalty of perjury
that I have read the entire transcript of
my Deposition taken in the captioned matter
or the same has been read to me, and
the same is true and accurate, save and
except for changes and/or corrections, if
any, as indicated by me on the DEPOSITION
ERRATA SHEET hereof, with the understanding
that I offer these changes as if still under
oath.

Signed on the _____ day of
_____, 2024.

KEN SCOTT FISHER

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