

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VF OUTDOOR, LLC,
Petitioner,

v.

COCONA, INC.,
Patent Owner.

Case IPR 2018-00190
Patent 8,945,287 B2

Record of Oral Hearing
Held: February 28, 2019

Before KRISTINA M. KALAN, CHRISTOPHER M. KAISER, and
ELIZABETH M. ROESEL, *Administrative Patent Judges*.

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The above-entitled matter came on for hearing on Thursday, February 28, 2019, commencing at 1:00 p.m. at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

PROCEEDINGS

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Proceedings begin at 1:01 p.m.

JUDGE ROESEL: We will now hear argument in Case IPR2018-00190, VF Outdoor, LLC v. Cocona Inc., concerning U.S. Patent 8,945,287. I am Judge Elizabeth M. Roesel and with me on the panel on the screen from Denver, Colorado are Judges Kristina Kalan and Christopher Kaiser.

Counsel, would you please introduce yourselves starting with the Petitioner?

MS. OTT: Good afternoon, Your Honors, my name is Kathleen Ott, I'm the Lead Counsel for VF Outdoor. I'm joined here today with my co-counsel Andrew Larsen and Peter Gergely, who will be presenting oral arguments today. We're also joined by our client, Jennifer Sim, GC of VF Outdoor.

JUDGE ROESEL: Thank you. Patent Owner?

MR. JACKSON: Your Honors, my name is Jason Jackson, I'm the lead counsel for Patent Owner, Cocona Inc. I'm joined by my colleague Jacob Song. Also with us is a client representative, Jeff Bowman.

JUDGE ROESEL: Thank you. I would like to remind the parties that this hearing is open to the public and a transcript of it will become part of the record. Each side will have a total of one hour to present your arguments. The Petitioner will be first and may reserve time for rebuttal and Patent Owner will argue second and may also reserve time.

When referring to an exhibit on the screen, please tell us the slide numbers so that we can follow along and that will also help the court

1 reporter to prepare an accurate transcript. Before we begin, I'd like to turn
2 the microphone over to Judge Kalan who will address the objections to
3 demonstratives.

4 JUDGE KALAN: Thank you and welcome. Thank you for flying to
5 Alexandria and we hope the next time we have a hearing with this
6 configuration we can do it from Denver. Regarding the objections, we know
7 the Patent Owner filed objections to certain slides of the Petitioner's
8 demonstratives on the grounds they contain new argument or new evidence
9 not previously raised in the petition or the reply brief.

10 And Petitioner has submitted revised demonstratives which we hope
11 address some of those objections, but on this record we'd like to note that the
12 demonstratives themselves are not evidence and they're just argument aids
13 and they've been filed with the legend "Demonstrative Exhibit—Not
14 Evidence."

15 So we will take into account Patent Owner's objections, which are
16 preserved, and we will refer them when we prepare our final written
17 decision. But for the purposes of this proceeding, Petitioner may use its
18 demonstratives with the understanding that any new material or new
19 argument presented in the demonstratives will not be given any weight in
20 our final written decision.

21 Any questions from the parties?

22 MR. GERGELY: No, Your Honor.

23 MR. JACKSON: No, Your Honor.

24 JUDGE KALAN: Back to you, Judge Roesel.

1 JUDGE ROESEL: Thank you. So Petitioner may approach the
2 podium and begin their argument.

3 MR. GERGELY: Thank you, Your Honor. I'm Peter Gergely from
4 Merchant & Gould on behalf of VF Outdoor, LLC. Again, with me today is
5 Jennifer Sim who's the General Counsel of VF Outdoor, LLC, and that is the
6 corporate name of the North Face, which is --

7 JUDGE ROESEL: Okay, before you begin, would you like reserve
8 rebuttal time?

9 MR. GERGELY: Yes, I'll reserve 15 minutes, thank you. Ms. Sim is
10 General Counsel of The North Face, which is a brand that should be
11 well-known to most everyone in this room. It is a leader and has been for
12 the past 50 years in the outdoor apparel, equipment, and footwear industry.

13 This patent, U.S. Patent 8,945,287, concerns a waterproof
14 composition and that waterproof composition has some additional
15 limitations, and I'd like to go through those and highlight which ones I
16 believe are at issue.

17 The first element is a liquid impermeable breathable cured base
18 material comprising of first thickness. The second element is the plurality of
19 active particles in contact with the liquid impermeable breathable cured base
20 material, the plurality of active particles comprising the second thickness.

21 And wherein the first thickness comprises a thickness at least 2.5
22 times larger than the second thickness but less than an order of magnitude
23 larger than the second thickness. The active particles improve the moisture
24 vapor transport capacity of the composition and a moisture vapor

1 transmission rate of the waterproof composition comprises 600 grams per
2 meter-squared per day to about 11,000 grams per meter squared per day.

3 So, what do you think about when you hear liquid impermeable
4 breathable materials? I know what I think about, I think about Gore-Tex,
5 which is a famous breathable material that's sold and licensed by W.L. Gore
6 and Associates.

7 So, it's not surprising that the key prior art in this case is assigned to
8 W.L. Gore and Associates and was developed and filed for in the 1990s, and
9 published years before the '287 patent was filed for. And of course, as we
10 know, that is the Dutta reference and the Halley reference.

11 So, in our view, there's really three issues here. It's the issues around
12 what is the meaning of first thickness, what is the meaning of second
13 thickness, and what is the meaning of active particles? And number two,
14 how are those elements disclosed in prior art or how would they be
15 combined with the Haggquist reference?

16 The Board in its institution decision construed first thickness to mean
17 the thickness of a base material, in which base material may include active
18 particles. The second thickness was construed by the Board to mean the
19 thickness of a plurality of active particles which may be the particle size of
20 the active particles.

21 And the third issue concerned the construction of active particles
22 themselves, which were construed as particles that have the capacity to
23 cause chemical reactions at the surface or physical reactions such as adsorb
24 or trap substances. That was the Board's decision in its Board order granting
25 institution.

1 It's not been changed, there's been no petition for rehearing or
2 reconsideration, however, the Patent Owner is now telling the Board that it
3 got it wrong and its case is dependent on changing those claim constructions
4 because its analysis of the prior art is completely dependent on achieving the
5 claim constructions which they think are correct.

6 But there is no basis to change those constructions. In our view, they
7 are consistent with and aligned with the broadest reasonable interpretation of
8 the claim in view of the specification and prosecution history.

9 Applying the Board's claim construction of those elements that are at
10 issue, all the elements of the challenged claims are shown by either Dutta or
11 Halley so they're anticipated under Section 102. There is a debate in this
12 case as to whether or not the particles that are in Dutta or Halley actually are
13 active particles.

14 In that case we also have grounds asserting obviousness which the
15 Board also instituted on, and in that case, if you were to substitute the
16 admittedly active particles from the Haggquist reference for the Sephadex or
17 Black Pearls 2000 particles in Dutta or Halley respectively, you would have
18 all the elements of the claims.

19 JUDGE ROESEL: But then there's the encapsulation claims, right?

20 MR. GERGELY: There is the encapsulation claims, which are
21 Claims 38 and 39 and so those are challenged on grounds of obviousness
22 under Section 103 and that's based on a combination of Dutta and Haggquist
23 on the one hand, or Halley and Haggquist. And we're only relying on the
24 Halley-Haggquist combination.

1 We're not trying to invalidate -- I'm sorry, let me take a step back.
2 We're not trying to invalidate all of the challenged claims based on the
3 Halley-Haggquist combination, just 38 and 39. Whereas, the combination of
4 Dutta and Haggquist would invalidate all of the challenged claims.

5 So, where does that leave us? I just want to address some of the
6 analysis with respect to these elements. First of all, the claim construction is
7 correct. The first thickness was construed to mean the thickness of a base
8 material, in which base material may include the active particles.

9 And that's straight out of the specification.

10 JUDGE ROESEL: Once again, could you please name the slide?

11 MR. GERGELY: Sure, let me just grab my version. Turn to Slide 5.
12 So, this is the specification support for the first thickness element and you'll
13 see up top on slide 5 there is a call-out of the '287 patent specification which
14 talks about -- actually, it's probably better to go down to Example 1 first.

15 It talks about how the protective activated carbon was suspended in
16 the polyurethane solution and the mixture was applied to a nylon woven
17 fabric. The mixture was dried and cured, and it resulted in the membrane
18 coated on a substrate, the membrane having thickness of one mil.

19 So that is the cured base material and the active particles mixed
20 together. And then above that it also shows a further discussion of that
21 example where it discusses the membranes being produced by drawing
22 down the mixture on release paper.

23 Membranes were cured and dried in an oven and then removed from
24 the release paper, yielding a subsequent membrane. The membrane was one

1 mil thick. Again, that is the base material and the activated particles
2 combined together.

3 JUDGE ROESEL: Is there any disclosure in the challenged patent of
4 a layered configuration where you have base material and then the plurality
5 of active particles adhered to the top of the base material?

6 MR. GERGELY: No. I didn't see that in the specification at all. And
7 the other point which we'll get to, which is important, is you have to look at
8 the claim as a whole. And you have this first thickness and second thickness
9 and those two thicknesses have to be in a certain ratio, what I've called the
10 2.5:10 ratio.

11 And the only support for the claim as a whole for first and second
12 thickness as they're configured in Claim 27 is this particular example
13 because you've got the overall membrane being one mil thick, which is 25.4
14 microns, and then you've got the Asbury carbons, activated carbon, which is
15 about 10 microns.

16 And so that is the only support for that claim, Claim 27, for those
17 elements, first and second thickness as well as the ratio. So, I don't see
18 anything in the patent with respect to laying down activated particles on top
19 of the cured base material in a separate layer, much less that would yield that
20 particular ratio.

21 JUDGE KALAN: Is there anything in any of the incorporated by
22 reference patents that would indicate that there's a layered construction?

23 MR. GERGELY: No, what's incorporated by reference is the
24 Haggquist patent application and, no, it doesn't go into any of that kind of
25 detail. And then, Kathy, if you would turn to slide 4, just back up, again, on

1 slide 4 this was the argument that accompanied the amendment in the first
2 thickness element.

3 And it said: Example 1, membrane comprises a thickness of about 1
4 mil or of about 25.4 microns. And again, if you continue reading the text, it
5 shows that the activated Asbury carbon is included in that cured base
6 material. So, the Board's construction is consistent with the broadest
7 reasonable interpretation.

8 I would suggest it would meet the Phillips standard because it's
9 straight out of the specification and consistent with the file history. So,
10 there's really no basis to change this construction at this point.

11 JUDGE KALAN: Can I ask if the substrate ever factors into the
12 calculation of the thickness?

13 MR. GERGELY: No, it doesn't. There is discussion of the
14 background of the specification about applying this particular membrane to
15 yet another substrate, which could be a nylon, it could be a woven, it could
16 be a non-woven. But in each case, when they're measuring the membrane
17 which is the cured base solution in the activated particles, in each case it's
18 one mil thick.

19 So there's no disclosure of any thickness of a substrate. So, you look
20 at Dutta and where is that shown in Dutta? It's shown in Dutta in Example
21 B. Kathy, if you could turn to slide 14? So slide 14 is Example 1B from
22 Dutta, which shows the first thickness of the material, which is the cured
23 polyurethane solution combined with Sephadex.

24 It was measured to be 31-thousandths of an inch, which translates to
25 76.2 microns. So that's the first thickness that's shown in Dutta. So that

1 element is shown according to the Board's construction. Next there is the
2 second thickness element, and the issue around this is can this second
3 thickness be defined by particle size?

4 And the Board construed second thickness again to mean the
5 thickness of the plurality of active particles, which may be the particle size
6 of the active particles. And again, that comes from the file history. And so
7 what happened here is there was an amendment adding the second thickness
8 element.

9 The only support in the specification for the second thickness was this
10 disclosure of the Asbury 5564 activated carbons, which Applicant's attorney
11 stated comprises about 10 microns (the second thickness). So, it was clearly
12 defined in the file history as being equal to particle size.

13 JUDGE ROESEL: So how does Petitioner interpret particle size
14 when it's used to refer to the second thickness? Is it the average or mean or
15 the D50 or the D90? How does the Petitioner interpret that?

16 MR. GERGELY: Actually, that's an interesting issue. I don't believe
17 that issue is in front of the Board but I would interpret it as the size of any of
18 those particles. It could be any of those particles.

19 JUDGE ROESEL: So even two particles --

20 MR. GERGELY: Correct.

21 JUDGE ROESEL: -- that meet the range limitation is good enough?

22 MR. GERGELY: Correct. It's an interesting claim because it talks
23 about the plurality of active particles and then it says comprising a second
24 thickness. And we all know what comprising means, it means including but
25 not limited to.

1 So in this case if you have a collection of active particles, let's say for
2 sake of argument a million particles, it would include a second thickness,
3 any one of those particles could be the second thickness. Because I would
4 include a particle that is sized to be 10 microns or less.

5 JUDGE ROESEL: Normally when you talk about particle size you're
6 talking about particle size of a bulk amount of particles, right?

7 MR. GERGELY: I'm not sure I follow you. What do you mean?

8 JUDGE ROESEL: For example, in the file history where it talked
9 about the Asbury carbon and they said it was about 10 microns, that's not 1
10 or 2 particles, right?

11 MR. GERGELY: It says as seen in the attached product data sheet for
12 Asbury 5564 powdered coconut activated carbon, the particle size for the
13 Asbury 5564 powdered coconut activated carbon comprises about 10
14 microns. So they're referring to individual particles. Are you saying that
15 you think they're referring to an aggregate?

16 JUDGE ROESEL: I'm asking.

17 MR. GERGELY: I don't think so. I think when they say particle size,
18 I think they mean particle size as written. If they meant an aggregate of
19 particles of a collection of particles, they would have said a cluster or an
20 aggregate of particles are this size.

21 JUDGE ROESEL: No, I wasn't referring to an aggregate, but rather a
22 bell curve. A bunch of particles, if you measure their size it will fall on a
23 bell curve. Most of the particles will fall within a certain range but you get
24 tails, right, on both ends often times.

1 MR. GERGELY: I see what you're saying, that there's some that
2 could be below 10 and there could be some that could be above 10.

3 JUDGE ROESEL: Right.

4 MR. GERGELY: I hadn't considered that issue but it makes sense to
5 me that they're probably not all exactly 10.

6 JUDGE KALAN: A follow-up question to that, how is the second
7 thickness typically measured? We have our idea of how that might happen,
8 but if you can provide some clarity on that, that would be helpful.

9 MR. GERGELY: I think the issue is the Patent Owner didn't provide
10 any clarity beyond what's in the specification. But just based on my own
11 knowledge from college chemistry, you could measure particle size through
12 a Coulter counter, for example.

13 You would run the particles through a Coulter counter and would be
14 able to determine diameters. Or you could put it under a high-powered
15 microscope I suppose.

16 JUDGE KALAN: Okay, I think I'm meaning a more low-tech
17 situation. I understand you can have the diameter of a particle size being the
18 second thickness, but in an aggregate situation would it be like a loaf of
19 banana bread with walnuts in it and you take a cross-section and somehow
20 measure the presence of walnuts within that slice?

21 Or when you're looking at the actual base material with the active
22 particles interspersed, how are you accounting for what might be the
23 plurality of active particles within that base layer at any given point to get
24 your numerical value for a second thickness?

1 MR. GERGELY: I think in this case you have to look at what the
2 specification says and what the file history says. And they simply said that
3 the particle size comprises about 10 microns, so it wasn't based on any type
4 of laboratory test measurement. They simply said here's a spec sheet and
5 these particles are about 10 microns.

6 And so they asked the patent office to take it on face value that this
7 particles comprised about a 10 micron particle size. And there's really
8 nothing beyond that. In fact, I think if you look at the file history, the
9 specification sheet wasn't even tendered to the office. It's not there, it's
10 missing.

11 So, this is all we have, this is the only support in the entire patent and
12 file record for this element.

13 JUDGE KAISER: This issue of what does particle size mean when
14 we're talking about possibly a distribution of particle sizes is not really
15 unimportant. The Dutta reference gives range a of 20 to 50 microns and at
16 the 20 micron level I think they fall within the range of the claim, but at the
17 50 micron level they don't.

18 So there's some line there where it's your burden to show the claim is
19 unpatentable. So we need to know for sure what particle size means in that
20 distribution. Is it really we can pick any arbitrary particle as long as we can
21 find one or two or some plurality that are the right size, or is it the average
22 size, or is it something else altogether?

23 Is there anything in the record to support your argument that we can
24 just pick one?

1 MR. GERGELY: So I think the issue is can you anticipate or render a
2 claim as obvious based on ranges? And the argument was made -- I don't
3 recall off the top of my head which particle size was picked, I'd have to look
4 it up. But it was a size that met that 2.5:10 ratio. And again, it was an issue
5 that was briefed.

6 The argument was made and the Board instituted -- I don't believe the
7 Patent Owner ever challenged anticipation by ranges or obviousness based
8 on ranges so it's not really an issue in front of the Board. But I would
9 respectfully submit that that range, that 20 to 50 range, is a discrete range.
10 It's not a big range.

11 So, yes, I think a person of ordinary skill in the art would assume that
12 there are in fact particles sized from 20 to 50 in that range. Again, indulging
13 your argument that it's probably a bell curve of particles. If you're creating a
14 number of particles, they probably will not all be exactly the same size so I
15 think that's why in Dutta they said 20 to 50.

16 It's just because I think that's the size of those particular particles.
17 They're not uniform. So I think a person of ordinary skill in the art reading
18 Dutta seeing that it disclosed 20 to 50, the assumption, and I think it's a
19 reasonable assumption, is that there will be particles in fact sized from 20 to
20 50 in a range.

21 Does that answer your question?

22 JUDGE KAISER: Yes, I think so. I guess I'm more concerned about
23 the issue you raised which is I agree with you that comprising means
24 including. So it seems like if we've got range of particle sizes, we can pick

1 any arbitrary particle size within that range and that is included within
2 particles that are there.

3 But it strikes me as almost a little bit too facile. That seems too easy
4 for a claim where the most natural reading of the claim language divorced
5 from the specification and the fact that the specification doesn't seem to talk
6 about layering would be some sort of a layering.

7 It just seems like maybe that's a step too far and I just wondered if
8 there's anything you could point to that would support that view? Because I
9 think that view would help you.

10 MR. GERGELY: Sure, the other point to be made, again, is if you're
11 looking at this claim as a whole, it talks about the ratio of the first thickness
12 to the second thickness and it has to be in a certain ratio. And the first
13 thickness have to be at least 2.5 times greater than the second thickness but
14 not more than 10 times thicker. So it's that 2.5 to 10 range.

15 There was testimony during Dr. Daniels's deposition, and he's one of
16 Cocona's experts, where he said that if you're putting these particles into a
17 base material, it's unlikely that you're going to get a perfect monolayer of
18 particles laid down, that they're going to tend to cluster and aggregate.

19 So, in that respect, for example, if I have a bunch of 10 micron
20 particles in my hand and I throw them on the floor, it's more likely than not
21 they're not going to spread out in a perfect monolayer on the floor. They're
22 going to tend to cluster, there's going to be some areas which are probably
23 20 microns or 30 microns or 40 microns depending on how those particles
24 stack up.

1 So, bringing it back to this invention, likewise if you're putting these
2 activated carbon particles into a base material solution, Dr. Daniels testified
3 it's unlikely that you're going to lay them down in a perfect monolayer. So,
4 that being the case, you are probably going to have those particles stacked
5 up and they're going to be 20 microns, 30 microns, 40 microns.

6 In that case, if you're dealing with a base material that's 76.2 microns,
7 you will never meet the 2.5 to 10 ratio because say you have two 10-micron
8 particles stacked on top of one another, we'd have 20 microns. Simple math
9 dictates that if you -- well, strike that.

10 Let me get back to that point.

11 JUDGE ROESEL: Doesn't the file history tell us, the part you're
12 pointing to, that the particle size that's relevant here is the one of the
13 particles before they're mixed with the base material?

14 MR. GERGELY: Yes, I think off the shelf that's correct. I may come
15 back my other point, I lost my train of thought. I need to come back to it.
16 I'm sorry, I remembered, it was a math issue.

17 This is my point, if you are putting the activated particles into the base
18 material and they had a tendency to stack up on top of one another, we know
19 that the base material plus the active particles combined when they're
20 measured is 25.4 microns.

21 So if you have those 10-micron particles stacking up on top of one
22 another, knowing that it's unlikely they're going to be laid down in a perfect
23 monolayer, if you have two of those stacked up you're going to have 20
24 microns. So, you will not meet that 2.5:10 ratio because 2.5 times 20 equals
25 50.

1 So, you're going to be bigger than the base material so it won't meet
2 that ratio because the base material would be 25.4 microns. It's going to be
3 out of that range. So the only way this claim has 35 U.S.C. Section 112
4 support is if you equate the second thickness with the individual particle
5 size, that's the only way it makes sense.

6 And that's the only support for it.

7 JUDGE KALAN: So can we retain the portion of the claim
8 construction that talks about plurality of active particles?

9 MR. GERGELY: So it was our contention that the second thickness
10 meant the particle size but, yes, I think that could be retained because, again,
11 back to my earlier example, you can have a plurality of particles, say 1000,
12 10,000, 1,000,000 particles, which can comprise a second thickness.

13 If you were defining the second thickness as possibly being particle
14 size, then you can retain that. Because I think the Board's construction is
15 broad enough to cover both examples. It actually talks about we construe
16 second thickness to mean the thickness of a plurality of active particles
17 which may be the particle size of the active particles.

18 So I think under the Board's construction, it allows the possibility of
19 the second thickness being the plurality of active particles of there's some
20 ability to measure that thickness. I don't know how that would be done and
21 it's definitely shown in this patent. But the Board's construction also
22 allows the possibility that the second thickness may be the particle size of
23 the active particles. I think you could retain it, I think probably the better
24 construction if you were to apply 112 to this would be to equate the second

1 thickness with the particle size, but I could see leaving the Board's
2 construction as is.

3 JUDGE ROESEL: But the point you're making with your
4 mathematical example is that particle size we're talking about here is the
5 particle size of the individual particles, not aggregates.

6 MR. GERGELY: In this case, yes, that's right, because again, we're
7 just going off of what the Patent Owner told the examiner, which is just raw
8 particle size. It doesn't say anything about aggregates or clustering or
9 anything like that.

10 I realize that it's an issue that on its face you look at it and it may not
11 make particular sense but this is the argument that the Patent Owner made
12 based on the support in the specification and based on the arguments in the
13 file history in order to obtain the allowance. They made this argument, this
14 is the language they've used, so they have to live with it.

15 And is it the broadest reasonable interpretation? Absolutely. You
16 look at the BRI in view of the specification and file history and it is
17 absolutely consistent with the file history and it is absolutely consistent with
18 -- excuse me, it is absolutely consistent with both the specification and the
19 file history.

20 And it's also consistent with the 2.5:10 ratio, knowing that you
21 couldn't lay these down in a perfect monolayer, that there would be highly
22 unlikely.

23 May I go on?

24 JUDGE ROESEL: Yes, please.

1 MR. GERGELY: So, the issue of the second thickness is, is that
2 shown in the Dutta reference? Yes. We've discussed that Example 1B talks
3 about this range of Sephadex particles as being sized 20 to 50 microns. And
4 the ratio would be met as well.

5 And since you asked, I am just looking up where in our brief -- so the
6 particle size that was chosen was one of the end points, which was 20. And
7 then it was the range of 20 to 30.

8 JUDGE ROESEL: So the Sephadex particles that are sized 30 to 50
9 microns don't meet those ratio limitations, is that right?

10 MR. GERGELY: Actually, I take that back. If you look at our brief
11 on Page 35 the math shows that any particle size from 20 to 30 microns
12 within the 20 to 50 micron range meets the claim thickness ratio. So, yes, to
13 answer your question I think that's right.

14 If it was 31 I think you're correct, because it's 76.2 so if it was 31, it's
15 62 plus, say, 15, yes, that would just be right outside it. So 20 to 30 would
16 meet it, and again, that's within the range and again, that's what was said in
17 the Petition which was instituted and there was no contention from the
18 Patent Owner that somehow that range was not anticipatory.

19 So, the third element at issue is active particles. And the active
20 particles were construed as particles that have the capacity to cause chemical
21 reactions at the surface or physical reactions such as adsorb or trap
22 substances.

23 And again, I think the Board just took that straight out of the '287
24 patent specification and it's also consistent as well. I think the Board said in

1 its institution decision that it considered Haggquist but based its decision on
2 the '287 definition.

3 But it is also consistent with Haggquist and there's no reason to
4 change that at this point in time.

5 JUDGE KALAN: Patent Owner seems to say in their sur-reply that
6 you're presenting a new argument regarding this claim construction. I just
7 wanted to confirm that you're agreeing with our initial construction and not
8 proposing anything new.

9 MR. GERGELY: Agreed. I think we made arguments in the reply
10 brief simply noting that the Patent Owner was advocating a much narrower
11 construction and the point we were simply making is the specification has a
12 very broad disclosure that goes beyond adsorptive activity.

13 It talks about all different kinds of activities in performance,
14 enhancement activities which are not necessarily related to adsorption. So I
15 think it would be a mistake to read it in the term, surface. I don't think this is
16 necessarily limited to surface activity. If you read the specification you'll
17 see there are other parts which are not limited to surface activity and not
18 limited to adsorption.

19 So I think the broadest reasonable interpretation is the Board's current
20 definition. And, no, we are not advocating different construction, we are
21 simply pointing out there are other portions of the spec which would support
22 a broader construction so it would be inappropriate to narrow it at this point
23 in time.

1 JUDGE KALAN: But would it be redundant to say physical reactions
2 at the surface? Are adsorption and trapping substances necessarily physical
3 reactions? So we don't need to change anything there?

4 MR. GERGELY: Yes, I think those are examples of physical
5 reactions because the Board's construction says physical reactions such as
6 adsorb or trap substances. Is it redundant? Possibly, it gives an example of
7 type of physical reaction. I don't have an issue with it because it's consistent
8 with the specification but is it technically redundant? Possibly, yes.

9 But I think it's a non-issue because when you look at what a person of
10 ordinary skill in the art would know with respect to Sephadex and you look
11 at the Sherma reference, which was cited to the Board and actually credited
12 by the Board in its institution decision, Sherma says that Sephadex has the
13 capacity to adsorb water. And there's a host of arguments made by the
14 Patent Owner in its response disputing that Sephadex adsorbs water. They
15 actually didn't cite any references that says that Sephadex does not adsorb
16 water. So Sherma stands and we actually cited in reply to some of the
17 response arguments additional scientific references, namely the Texter
18 reference which states that Sephadex adsorbs water.

19 We cited the Pavia textbook which states that Sephadex adsorbs
20 water. Moreover, Pavia says that Sephadex adsorbs water on the polymer
21 and Cocona's expert has said that the surface of Sephadex is simply the
22 chemical itself, it's the entire chemical and that water adheres to Sephadex
23 starting on the exterior of the bead and then moves to the interior.

24 So, these references would show not only is Sephadex adsorbing or
25 trapping substances but it would actually meet the narrower limitation the

1 Patent Owner is advocating in their response brief. And in the Board's
2 definition they also said that an active particle can trap substances. Again,
3 that's shown in Sherma.

4 Our expert cited Sherma for that point because if a particle is
5 adsorbing substances, by definition it's trapping them. And that's also shown
6 by references we cited in our reply of the Marengo reference, which says
7 that Sephadex traps water both within the bead itself and actually on the
8 surface of the bead in a film.

9 So, again, not only is it trapping water but it would be trapping water
10 on the surface, thus meeting Patent Owner's narrower definition. Again, I
11 don't think there's any basis at this point in time to change that definition but
12 since they were advocating a narrower definition, we did additional research
13 and found these other references, which would meet that narrower
14 definition.

15 And to top it off, the question was asked of Cocona's expert, does
16 Sephadex trap water? So, there it is. You'll also certainly agree with me
17 that Sephadex traps water, correct? Answer: yes. That's straight out of this
18 deposition.

19 So that meets the Board's definition as well. So, in our view, there's
20 no question that Dutta is a 102 reference that anticipates the challenged
21 claims. We've also asserted a ground based on Halley. Another
22 anticipation argument which shows Black Pearls 2000, again, marching
23 through the elements it shows the first thickness, which I believe is the
24 thickness of the polymer coating, 5 to 100 microns where the thickness
25 could be the dot height, 70 to 140.

1 JUDGE ROESEL: You are out of time. Would you like to go into
2 your rebuttal time?

3 MR. GERGELY: Yes.

4 JUDGE ROESEL: How much would you like?

5 MR. GERGELY: I'll do another 10 minutes. So the first thickness is
6 shown in Halley, the second thickness is shown in the specification. Again,
7 there are ranges of particle sizes. Again, there's ranges set forth in the
8 background of Halley.

9 If you choose particles, I believe we chose the 20 micron which was
10 one of the end points of one of the ranges. At the bottom it says 1 to 20
11 microns, medium particle size. If you compare that to the first thickness
12 you'll get the 2.5:10 ratio and the active particles are shown because Black
13 Pearls 2000 was tested and improved the MVTR.

14 And again, you have to look at what a person with ordinary skill in the
15 art would know with respect to Black Pearls 2000, and this goes to the Wang
16 references, which I believe are Exhibit 1028 and off the top of my head,
17 what's Wang II, the next slide? 1051. And these reference and show that
18 Black Pearls 2000 is porous, has high surface area, it adsorbs water.

19 It is active under the Board's definition so it's 102. So then the issue
20 becomes in the alternative would it be obvious to combine Haggquist with
21 either Dutta or Halley? And I believe the answer is yes. And it really is a
22 simple substitution under KSR.

23 Under Dutta and Halley you have these particles which are known to
24 work, they improved the MVTR, they meet all the elements of the claims.

1 Haggquist discloses admittedly active particles which provide the enhanced
2 property of moisture management.

3 Moreover, in the case of Dutta, Sephadex is a known molecular filter
4 particle which is actually claimed in the '287 as an active particle. So you
5 have a particle that's known to adsorb or trap water and it's a molecular
6 filtered particle.

7 One of ordinary skill in the art could easily substitute the active
8 particles in Haggquist for the Dutta particles, and one would reasonably
9 expect the same type of materials to behave the same because they're doing
10 the same thing. They're adsorbing, they're trapping water, they're molecular
11 filter materials.

12 Moreover, in the gel filtration art, silica gel particles which are active
13 and Sephadex particles have been used interchangeably. So, it's an easy
14 substitution.

15 JUDGE ROESEL: Did Petitioner put in evidence that the moisture
16 vapor transmission rate limitation would be met by Dutta and Halley after
17 you substitute the Haggquist particles?

18 MR. GERGELY: So those MVTR ranges are disclosed by Dutta and
19 Halley so the issue is when you switch out a different particle which is the
20 same class of particles, they're particles that adsorb or trap substances,
21 they're molecular filter particles, would there be a reasonable expectation of
22 success?

23 Our expert opined that it would be. In their sur-reply --

24 JUDGE ROESEL: Did they specifically address the moisture vapor
25 transmission rate limitation?

1 MR. GERGELY: It's shown in the combination and so our expert
2 opined that in Haggquist, because you have better moisture management
3 result of including these particles, you would reasonably expect that if you
4 took very similar particles or, in fact, the same types of particles like a
5 molecular filter particle and switched it for the particle, say, in Dutta, you
6 would meet that limitation.

7 So, I understand the Patent Owner is saying there isn't absolute proof
8 of that, but that's not the test. Absolute predictability is not the test, it's just a
9 reasonable expectation of success and our expert opined that there was a
10 reasonable expectation of success that you would achieve all those claim
11 elements.

12 And I think that's consistent with the Federal Circuit law on that issue
13 and I believe we actually cited that in the response to the motion to exclude
14 because they were saying that -- I'm not sure why this was raised in their
15 motion to exclude but they did, so we cited some case law, a reasonable
16 expectation of success.

17 And so we believe that's consistent with Federal circuit law and
18 reasonable expectation of success. It's a reasonable expectation, not an
19 absolute expectation. So, I think I'm getting close to the end of my time. I'll
20 reserve whatever I have for rebuttal.

21 JUDGE ROESEL: Okay, that'll be 10 minutes.

22 MR. JACKSON: Good afternoon, Your Honors. My name is Jason
23 Jackson, I'm Counsel for Patent Owner and if you give me one minute I will
24 get our laptop hooked up. Your Honors, we would like to reserve 15
25 minutes of rebuttal if that's possible?

1 JUDGE ROESEL: Certainly.

2 MR. JACKSON: Thank you, Your Honors, and again, good
3 afternoon. This is a very interesting patent that raises a number of very
4 interesting patent law issues. And I'd like to jump right in. Slide 1 is an
5 overview of Claim 27. I won't belabor talking through the claim.

6 Counsel for VF has already provided some overview of that claim but
7 what I would like to do is provide a quick bit of context for the Board so that
8 it understands issues relevant to this dispute. As described in Haggquist
9 declarations, Exhibit 2001 and 2011, Dr. Haggquist was a co-founder of
10 Cocona and a named inventor of the '287 patent and also the Haggquist
11 application, which is Exhibit 1004. As he explains in his second declaration,
12 Exhibit 2011, Dr. Haggquist set out to improve water vapor transmission
13 across a membrane. And he was familiar with and confronted by the state of
14 the art at the time, and he overcame that art by using active particles. And
15 at 50,000 feet, before we dive into some of the details, I'd like to note that
16 despite the significant amount of evidence offered by Petitioner here
17 regarding the state of the art and the alleged prior art, there is not a single
18 reference that discloses the use of a surface active particle to increase water
19 vapor transport as claimed in Claim 27 of the '287 patent. That is not in the
20 references.

21 Instead, they rely on an absorptive theory of invalidity and then later
22 on in the reply pivot to argue an adsorptive theory. And I'll talk more about
23 that in a moment. My second background point is very relevant here, why
24 are we here, Your Honors? That's because Petitioner, the North Face, was
25 previously a licensee of this technology.

1 It is undisputed that Dr. Haggquist and Cocona brought the
2 technology to them, brought them demonstrations, they licensed it, and they
3 loved it. We have a slide showing very strong praise from their president
4 that they love the technology. They were very familiar with existing Gore-
5 Tex technology.

6 JUDGE ROESEL: Did they license this patent?

7 MR. JACKSON: Yes, they did. They licensed this patent. And if
8 you'll see on the overhead, Your Honors, that bit of testimony is shown in
9 Slide 47, Todd Spaletto, President of the North Face, told me FlashDry was
10 one of the biggest innovations in the history of the company.

11 And in the same breath, he's referring to the prior art Gore-Tex
12 material, which agree is shown by Dutta. Dutta was a monolayer of super
13 swelling hydrophilic absorptive particles, with a B. That was the prior art.
14 Cocona's active particle technology is much better, that's why they loved it.

15 And as to that relationship, it has not been disputed in this case that
16 the technology was licensed to the North Face and implemented was a two-
17 layer waterproof breathable composition. Not a one layer, not a Dutta one
18 layer, not a Halley one layer, a two-layer.

19 And this is consistent again and again in our evidence in this case, not
20 just on substantive issues of claim construction, but also in the evidence of
21 secondary considerations. Everyone understood this technology to be a two-
22 layer waterproof breathable composition, not a one layer. They understood
23 it, they paid to use a two-layer composition and they loved it.

24 And that's to me very telling evidence about what a person of skill in
25 the art would really understand this to be. If they thought it was a one-layer

1 composition, if they thought it was Gore-Tex, why take a license from
2 Cocona? It's in the prior art.

3 Moving on, Your Honor, to the third review point I would like to
4 make, when you read the original petition, it is based on an absorptive theory
5 of invalidity and they talk about Dutta, they talk about Halley. And as I'll
6 discuss in a minute, those are clearly references that disclose an absorptive
7 mechanism of water vapor transfer.

8 There's no discussion of adsorption and Dutta, which was the state of
9 the art at the time, which was a Gore-Tex engineer who had every incentive
10 to discover, to invent, to disclose and to claim the use of surface active
11 particles of absorptive particles to transport water vapor.

12 Despite all those incentives, he says particles that are not super-
13 swelling hydrophilic particles like Sephadex, 24 grams per gram swells to
14 1000 times its own weight. Other particles, not super-swelling particles, are
15 inert and play no role in water vapor transport. That was the state of the art.

16 JUDGE ROESEL: So if a particle both adsorbs with a D and absorbs
17 with a B, is that an active particle as claimed?

18 MR. JACKSON: That's a great question. Some of the new evidence
19 that the Petitioners submit is submitted for the proposition that Sephadex, for
20 example, has an adsorptive particle. Under their theory as I understand it,
21 they say, well, some water vapor, some water molecules might be trapped to
22 the surface.

23 One of the references talks about I think it was a monofilm, a
24 monolayer of water. That doesn't make it an active particle. The fact that

1 there might be some attraction to water on the surface doesn't make it an
2 active particle for several reasons.

3 First, they argue that Sephadex is active, and one understanding of my
4 papers is that because it moves through the surface and touches the surface,
5 apparently that makes it surface-active. That's not correct. The mechanism
6 of Sephadex is clearly absorption. Dutta is swelling, swelling, swelling,
7 absorption, absorption, absorption. That's the mechanism.

8 Other mechanisms fall under the category of inert particles that Dutta
9 tells us played no role in water vapor transmission. And second, let's
10 assume for purposes of argument that Sephadex engages in hydrogen
11 bonding or has some Van der Waals forces that attract a small number of
12 water molecules. That doesn't make it an active particle.

13 Again, Dutta tells us no role, every incentive to talk about that in the
14 claim, no role, but second, it wouldn't make it an active particle in Claim 27.
15 Claim 27 claims a very high range of water vapor transport. It's like talking
16 about the difference in heat between a match that's burning and a forest fire.

17 Are they both on fire? Yes, but the heat produced by one is nowhere
18 the heat produced by the other. Dutta and Halley, which they submit
19 disclose active particles, we disagree, don't assign any value, especially
20 Dutta. Dutta is addressing the same problems as the '287 patent in the same
21 field. We concede that.

22 He says if it's not super swelling, it's inert. Yet, he had discovered or
23 believed even a marginal increase in water vapor transport was the result of
24 surface action. He had every possible incentive as a skilled artisan being
25 employed by Gore to say that. And we don't dispute, Your Honor -- in fact

1 some of the new evidence that they submit shows the concept of surface
2 action adsorption.

3 It's been known for decades. Activated carbon has been around a
4 while. Dutta, addressing the same problem as Haggquist, was obviously
5 aware of active carbon under the process of adsorption. Even at the time it
6 was a rudimentary, high school level chemistry concept, adsorption. It's not
7 new.

8 Dutta tells us adsorptive particles are qualified or characterized as
9 inert. They play no role. So I guess that was a long-winded answer to your
10 question, Your Honor, but to the extent that Sephadex, for example,
11 arguably has an absorptive characteristic, it is so nominal and unrecognized
12 that it's not an active particle to a skilled artisan.

13 We have three POSITAs offering testimony to this effect, Dr.
14 Haggquist and two experts. And number two, it doesn't meet the claimed
15 water vapor transport range.

16 JUDGE KALAN: To go back to your first point, there's a tipping
17 point at which a particle is so adsorbent that it is no longer absorbent,
18 according to your experts?

19 MR. JACKSON: No, and it is a difficult concept, I agree, Your
20 Honor. But the claim recites active particles that are surface active, that
21 have to be surface active to create or to provide the claimed water vapor
22 transport range.

23 Just because Sephadex or another particle has a nominal amount of
24 surface action, a) doesn't make it an active particle, and b) there's no

1 evidence in the record that it would meet the claimed range. Again, Your
2 Honor --

3 (Simultaneous Speaking.)

4 JUDGE KAISER: Can we stop there for a second? Because you
5 keep saying the claim recites surface-active particles. The claim recites
6 active particles.

7 MR. JACKSON: You're correct, Your Honor.

8 JUDGE KAISER: The spec talks about surface activity as a type of
9 activity, right? Active particles can be called active particles because they
10 have surface activity but I don't know that it necessarily requires that.

11 MR. JACKSON: That's a great question, Your Honor. Jacob, can
12 you go to Slide 4? So to answer your question, Your Honor, there are over
13 100 references to active particles and numerous references to surface
14 activity. In both the '287 patent and as shown on slide 5, in the Haggquist
15 application, all of the discussion of active particles characterizes them as
16 surface active particles.

17 Every single time, there were stray references to absorption with a B,
18 which even now I sometimes mix up when I'm speaking. Those stray
19 references were typos and were corrected by a certificate of correction that
20 was issued by the patent office. And it's very easy to mix those up, I
21 probably will do it a couple of times today.

22 But it is just permeated with reference to surface activity and the
23 Haggquist application on this point provides a lot of great context on slide 5.
24 Again, in paragraph 28, active particles are particles that have pores or traps
25 to adsorb substances in different phases. Paragraph 29 on the right-hand

1 side of the screen, active particles are particles that can adsorb a substance or
2 have the potential to adsorb a substance. So this is all about surface action
3 and outside of what I think what are fairly understandable typos, there's no
4 discussion that active particles encompasses absorption with a B.

5 For example, Your Honors, there's no discussion that these active
6 particles work in a bulk process where water vapor molecules come inside
7 the particle and cause it to swell. There's no discussion indicating an
8 absorptive process of water vapor transport.

9 JUDGE KALAN: So could you address the figure on slide 6 and
10 reconcile that with the drawing we have of Sephadex where, although it
11 appears that Sephadex is conducting surface processes, they are very far
12 inside the molecule.

13 At what point does something cease to be a surface reaction and
14 become a bulk reaction? What's the line you can draw there?

15 MR. JACKSON: That's a great question. Referring to paragraph 11
16 of Haggquist 1, that's Exhibit 2001, this is on slide 6, those are of course
17 very simplified drawings of adsorption versus absorption with a B, very
18 different processes.

19 As to your line-drawing question, Your Honor, I think I have two or
20 three responses. First, as is made clear in the Haggquist application at
21 paragraph 28, and it was made clear in the testimony of our three POSITAs,
22 some particles which might have an absorptive property can be activated,
23 can be treated, to become surface active. The easiest example of that is
24 carbon can be treated with heat and other processes to become activated
25 carbon. So, for many of these particles, it requires an activation step and

1 there's a great hook in the intrinsic record, again, this is paragraph 28 of the
2 Haggquist application. Our POSITAs say the same thing.

3 And second, Your Honor, it has to be active enough to meet the
4 claimed moisture vapor transport range. A nominal degree of surface action,
5 for example, a swollen Sephadex might have weak hydrogen bonding, it
6 doesn't make it an active particle. And there's no discussion -- I'm sorry, go
7 ahead.

8 JUDGE KALAN: So in Dutta's Example 1B where Petitioner alleges
9 that the MVTR is present, how does that not define into Dutta an active
10 particle status for Sephadex?

11 MR. JACKSON: I think I understand your question, Your Honor. I'll
12 try to break it down as succinctly as I can.

13 So the first thing is before you get to the range, Dutta doesn't disclose
14 active particles and to summarize it, Jacob, if you can throw up first Dutta
15 slide 23, please go to slide 24. Dutta is only about these super hydrophilic
16 swelling particles. Dutta says they absorb 24 grams per gram, they swell to
17 1000 times their own weight.

18 Swelling, swelling, swelling. Absorbance is identified as the
19 mechanism of action in Dutta. Other particles are called inert. So as an
20 initial matter, Your Honor, our position is that these super hydrophilic
21 particles in Dutta that are identified by the fundamental characteristic that
22 they swell with water are not active particles. Activated carbon that's
23 described in the '287 patent doesn't work by imbibing water and blowing up.
24 It works by a surface-active process. So these are simply not active
25 particles.

1 JUDGE KAISER: How do you get around the language in the spec of
2 the '287 patent that says surface active particles are active because they have
3 the capacity to cause physical reactions? Even if that's physical reactions at
4 the surface, there's evidence in the record that Dutta is doing something at
5 the surface.

6 Maybe that's not it's primary mechanism of action, maybe that's a tiny,
7 tiny effect of Dutta but it's there it seems like and that seems like language
8 you've got to run away from somehow.

9 Where do you get this idea that the adsorption needs to be the biggest
10 thing or the only thing or the primary thing, or whatever it is you're saying?

11 MR. JACKSON: That's a great question, Your Honor. First, if you
12 turn to slide 4, Jacob, jumping back to our active particle discussion, this
13 paragraph is the genesis, I think, of the Petitioner's proposal that surface
14 action and active particles in this patent have the capacity to cause chemical
15 reactions at the surface or physical reactions.

16 Our experts have testified that in view of the specification, that is
17 inartful writing. That's inartful writing. I agree it's inartful writing. I would
18 red-line this if one of my associates handed it to me. But if you read the
19 entirety of the patent, it's about surface, surface, surface, and there's no
20 discussion of swelling, imbibing, absorption. The bulk process of
21 absorption is not referenced once.

22 So is this inartful? Yes. But I don't think that changes the broadest
23 reasonable interpretation of active particles and surface active particles.

24 Did that answer the question, Your Honor?

1 JUDGE KAISER: Yes, I think so. I think we understand where both
2 sides are coming from on that. I'm not sure I know what the right answer is
3 at this point.

4 MR. JACKSON: Understood, Your Honor. And again, if you look at
5 the numerous references in the '287 patent and look at the Haggquist
6 application, Figure 1 of the Haggquist application shows a cross-section
7 which is obviously not to scale, it's for illustrative purposes only, this is in
8 slide 5, there's no water being imbibed into that particle.

9 There's no swelling. If it imbibes the water in a bulk process, the
10 volume of the particle must increase. Matter is being added, there is no
11 discussion that these particles are swelling. They're trapping water, yes; are
12 they getting bigger in terms of volume? There's no discussion.

13 These are not the super-swelling, super-hydrophilic particles in the
14 Dutta science.

15 JUDGE ROESEL: But if the particle is porous and there's material
16 entering the pores and reacting with the surface of the pores, then isn't that
17 surface active?

18 MR. JACKSON: In the context, for example, of activated carbon,
19 yes, that's surface active. But that is not imbibing water into the insides into
20 a solution, which is absorption, which is akin to putting salt in water.
21 Absorption. That is not a surface active process.

22 The particles shown in Figure 1, which is again just demonstrative, is
23 not expanding in size. And Your Honors, when you take a step back, the
24 question, of course, is have they shown these issues by a preponderance of
25 the evidence?

1 We have the intrinsic record replete with discussion of surface active
2 particles and we have three POSITAs who likewise conclude that surface
3 action is the appropriate construction, trapping or absorbing substances on
4 the surface covers the construction.

5 And again, Your Honor, one thing that's just really telling to me is that
6 Dutta was addressing the same problem, Dutta had the same goal. He had
7 an employer looking to create membranes used in clothing. Dutta had the
8 same goal, we concede.

9 Gore-Tex, every incentive, every opportunity had knowledge of
10 adsorptive processes and particles. What does he call them? He calls them
11 inert. To Gore's inventor, Dutta, who presumably is a person of ordinary
12 skill in the art, aware of all the information Petitioners provide, assigns no
13 value to adsorption, none whatsoever. To me that's very telling about what
14 Dutta discloses and about what a POSITA would understand at that time.
15 POSITA would not say, a-ha, this is easy, let me use active particles,
16 activated carbon. No. Dutta is talking about super hydrophilic swelling
17 particles.

18 JUDGE KALAN: Whether that recognition is there or not in Dutta,
19 does that eliminate the characteristics of Sephadex as being both absorbent
20 and adsorbent?

21 MR. JACKSON: If I understand your question, Your Honor, the
22 Petitioner has provided new evidence alleging that there is some adsorptive
23 characteristic to Sephadex. Assuming that's true, again, that doesn't make it
24 an active particle, that the water might move through the exterior on its way
25 to the interior doesn't make it an active particle.

1 That characteristic was not recognized by Dutta or Halley as
2 contributing to water vapor transport at all and there's no evidence in the
3 record saying that the adsorptive nature of Sephadex, for example, would
4 come anywhere close to replicating the claimed moisture vapor transport
5 range.

6 I agree the claim has to be read as a whole. The claim doesn't recite a
7 particle that attracts one water molecule on its surface. That is not an active
8 particle, that is well beyond a reasonable interpretation of active particle.

9 So, Your Honors, I will now actually turn to active particles, after
10 having taken a significant detour. Please turn to slide 2, Jacob. So, as we've
11 been discussing, Your Honors, Cocona's proposed construction is particles
12 that adsorb or trap substances on their surfaces.

13 The North Face proposes a construction in their petition of particles
14 capable of causing chemical reactions at their surface, surface action, or
15 capable of physical reactions. Well, that takes us out of the universe of a
16 reasonable interpretation, Your Honors. That is a bridge too far. That is, to
17 my knowledge, I'm not a physicist, any particle.

18 There are conditions you can place any particle in to cause it to
19 engage in the reaction. That is simply not a broadest reasonable
20 interpretation. It is not any particle, it's surface active particles.

21 And moving to the Board's construction, I was a little unclear about
22 the Board's interpretation of this construction, the Board's construction being
23 particles that have the capacity to cause chemical reactions at the surface,
24 that's good, or physical reactions.

1 Now, I know why the Board liked this language, it's in the spec and
2 it's not entirely artfully written. But the overwhelming weight of the
3 evidence of the specification tells us what are they talking about? They're
4 talking about surface action.

5 Move to slide 3, please.

6 JUDGE KALAN: Can I ask a question about slide 2? What would
7 you consider hydrogen bonding, a chemical reaction at the surface or a
8 physical reaction, or something else?

9 MR. JACKSON: That's a hard question. I think we have to delve
10 down into what type of hydrogen bonding. Weak? There are various forms
11 of hydrogen bonding.

12 I'm not an expert in them but I know there are different types having
13 different strengths. We might respond in our closing statement, Your
14 Honor. I don't know if I can slice the different modes of hydrogen bonding
15 to respond to that question.

16 JUDGE KAISER: Can I ask you to speak for just a second to the
17 difference, if there is any, between adsorption and trapping?

18 MR. JACKSON: Yes, Your Honor, of course. I think trapping is
19 being used as an understandable way to describe the surface action of
20 adsorption. I think it is a useful word that's in the specification in our claim
21 construction to convey to the finder of fact what's happening.

22 It's trapping substances on the surface, a less chemistry way of
23 describing adsorption.

1 JUDGE KAISER: Is this being used as a more understandable
2 synonym for adsorption there as opposed to a separate second mechanism
3 that also is active?

4 MR. JACKSON: Correct. My experience, Your Honor, is I've used
5 fancy words before to a fact-finder in District Court and it doesn't go well.
6 The fancier, the less well it goes.

7 Moving to slide 3. So TNF's proposal encompasses categories of
8 particles far beyond those that are surface active and the effect of that claim
9 construction is simply to read the word active out of the claim. And that
10 violates a number of tenets of claim construction the Board is familiar with.
11 Every word has meaning, you can't rewrite, you can't delete, so on and so
12 forth. So TNF's proposal is not the broadest reasonable interpretation.

13 Slides 4 and 5 we've already discussed. We have samples of
14 discussion in the intrinsic record of surface action and there are numerous
15 references for examples to pores, what are pores, surface action. Not a bulk
16 process of absorption.

17 Turning to Slide 6, very briefly, this is from the Haggquist First
18 Declaration in 2001. He's providing his understanding and this is
19 foundational science, it's undisputed. Absorption with a B and adsorption
20 with a D are very different processes. Dutta is all about absorption, super-
21 swelling, hydrophilic particles, different processes.

22 Moving to slide 7, very briefly, one of our experts, Mr. Daniels,
23 reviews the record and concludes our construction is correct, surface action
24 is the focus. Moving to slide 8, there's a bit of testimony here which I found
25 interesting.

1 Paragraph 22, this is Exhibit 2005, at the bottom, this is from Mr.
2 Callan. He is a very well-known polymer chemist. He says at the bottom of
3 paragraph 22, Cocona's proposed definition is the ordinary meaning in the
4 plastics industry, and the only definition that aligns with the specification.

5 He knows what he's talking about, he's not just reading a claim and
6 parroting back what someone wants him to say. This is consistent with his
7 understanding of polymer chemistry.

8 Looking at the right-hand side of the slide, again, there is a, I think
9 useful summary and I'll quote, this is in Paragraph 29, there is nothing in the
10 patent claim's specification or prosecution history that would lead a person
11 of ordinary skill in the art to include absorption within the definition of
12 active or within the scope of the claims. Moving on, Your Honors, to
13 first thickness, slide 9, we have the claim language and we have the parties'
14 proposed constructions. Cocona proposes first layer or membrane, the
15 number of phase, the thickness of the waterproof composition which
16 includes the base material and active particles, and in the Board's provisional
17 construction, the thickness of a base material, in which base material may
18 include active particles.

19 Turning to slide 10 very briefly, the North Face's proposal violates a
20 number of tenets of claim construction. They don't argue that the preamble
21 is limiting and, yet, their analysis hinges on shifting this phrase in the body
22 that has meaning comprising a first thickness up into the preamble.

23 That is not a reasonable interpretation, shifting an element from a
24 claim to the preamble. That's more than even reinterpretation. That violates
25 a number of tenets of claim construction and is unreasonable.

1 JUDGE KAISER: How do you get around the language in the spec
2 that defines first thickness, though?

3 MR. JACKSON: That's a great question, Your Honor. If I can skip
4 forward to slide 12 and address this issue head-on? So the Petitioner's
5 conception of this case is built upon the notion that the '287 patent only
6 discloses a one-layer invention.

7 What I mean by that, that's short-hand for a one-layer waterproof
8 breathable composition, where the active particles are in the layer like fruit
9 in a fruitcake.

10 That is simply not the case. In the specification, there is discussed
11 one-layer embodiments and two-layer embodiments, and Claim 27
12 corresponds to those two-layer embodiments. So if you look at slide 12,
13 Your Honor, we have Figure 1 on the left-hand side. On the right-hand
14 side we have some of the corresponding discussion, and as you'll see in the
15 patent, the embodiment of Figure 1 discloses a mixture which contains
16 active particles in a solution -- that's Step 130 so it's a liquid phase -- being
17 applied to a substrate. The substrate is a solid-phase polymer. It can be
18 any number of things, I think polyurethane is a common example in the
19 specification and the specification does disclose that polyurethane can be
20 both the binder for the active particles in Step 130. It can also be the
21 substrate in Step 140. So the same material can be used.

22 And then if we flip back to slide 11, I just want to hit this real quick to
23 emphasize that there are a number of discreet references in the patent that
24 disclose a two-layer composition. In fact, it's in the last sentence of the

1 abstract. The membrane may be applied to a substrate, one case. It may be
2 used independently of the substrate, a second case.

3 There are a number of embodiments disclosing a two-layer
4 composition. We don't present in our slides, Your Honors, but in our
5 briefing we go over numerous citations to the Haggquist application. And
6 the Haggquist application discloses laminating or printing by a xerographic
7 process, a mixture of active particles onto a substrate. And that is, in fact,
8 one of the commercial embodiments of the Cocona technology that is
9 licensed today that you can buy and see inside a jacket. That is also the two-
10 layer technology that was licensed by the North Face, two-layer not one-
11 layer. If they thought they were practicing Dutta, I doubt being as
12 sophisticated as they are they would have taken a license from Cocona.

13 And slide 13 is very telling, Your Honor. On the right-hand side,
14 again, is the Figure 1 embodiment that tells us, yes, this mixture can be
15 applied to a solid-phase substrate. To the extent that there is any ambiguity
16 that the substrate is solid-phase when the mixture of active particles is
17 applied, the Petitioners clarified for us.

18 They tell us in the petition at Page 10 as part of their proposed claim
19 construction, Claim 27 of the '287 patent recites a cured base material, claim
20 language, which means a non-solution form of a substrate that was
21 converted from a solution state via any conventional curing technique.

22 They expressly acknowledge that a person of skill in the art reading
23 this patent understands substrate and cured base material to be the same and
24 not to be a solid-phase polymer. They are not just discussing embodiments
25 in the patent, they are talking about claim language, cured base material.

1 That's a pretty direct connection to the language in Figure 1.

2 JUDGE ROESEL: Is it Patent Owner's position that first thickness
3 refers to the thickness of the substrate, for example this woven or non-woven
4 paper or knitted material?

5 MR. JACKSON: That is correct, Your Honor, that is correct. So,
6 again, conceptually, one of the underlying arguments between the parties
7 here, first, does the '287 patent disclose a two-layer embodiment?

8 They say no, that's not reasonable. At a minimum, it discloses a
9 number of two-layer embodiments and I think their own discussion of cured
10 base material leads to that result.

11 JUDGE ROESEL: How does Patent Owner square that position with
12 the prosecution history?

13 MR. JACKSON: That's a great question, Your Honor. So I noticed --
14 I kept carrying again and again this notion, well, 112 support, 112 support.
15 Well, the Petitioner has turned the rules in the hierarchy of claim
16 construction completely on its head.

17 First, as this Board is aware, in IPR proceedings issues of 112 support
18 are not addressed in IPR proceedings. The appropriate hierarchy of claim
19 construction is, and I believe Judge Kaiser referred to this, starts with the
20 language of the claim. Language, language, language. Look at the claim,
21 what does it say? That is the focus of the broadest reasonable interpretation
22 standard: claim, claim, claim.

23 Second, if there's ambiguity, what does the specification say? Does it
24 contradict the ordinary meaning or does it give a POSITA a reason to

1 redefine the ordinary import of the claim language away from the ordinary
2 meaning? That hasn't been done here.

3 The claim language recites a plurality of active particles comprising a
4 second thickness. Second thickness is a characteristic of all of the particles.

5 For example, Your Honors, the claim could say wherein the particles
6 are read as a characteristic of all of the particles. And Jacob, if you will
7 move --

8 JUDGE KAISER: Can I just stop you for a second?

9 MR. JACKSON: Yes, sir.

10 JUDGE KAISER: A characteristic of all of the particles is potentially
11 ambiguous, right? That may be a characteristic that's possessed by each
12 individual particle or the particles as a whole, or maybe some portion of
13 them. Maybe there are three options there.

14 I guess what I'm wondering is if you wanted to be clear in the claim,
15 you could have said something like a plurality of active particles having a
16 second thickness, and even that would probably be ambiguous.

17 The use the word comprising, that's a term of art that says including
18 and as your opponent says, we can just pick a good thickness that works for
19 the purposes of invalidating the claim and then it's included.

20 MR. JACKSON: Your Honor, I completely understand what you're
21 saying and let me address that with two or three points. First, the plain
22 language of the claim recites a plurality of particles comprising a
23 characteristic.

1 The North Face's proposed construction where the thickness is the size
2 of one particle reads the word plurality out of the claim. It is a property of
3 the group together.

4 JUDGE ROESEL: That could be determined based on the particle
5 size of a group of particles as in this Asbury carbon, right?

6 MR. JACKSON: Kind of. What I want to say is that the plain
7 language of the claim says a plurality of active particles comprising a second
8 thickness. If you look at the -- Jacob, please turn to slide 19 -- the dependent
9 claims from Claim 27 refer to properties of all the particles together.

10 So as a matter of claim construction principles, it's clear that whatever
11 the second thickness is a characteristic of the particles together. It would
12 make no sense, Your Honors, to say when the active particles comprise a
13 portion of total weight and say, well, that's just one particle.

14 Clearly it's all the particles in composition, not just one. You're not
15 going to have one particle that's 75 percent of the weight, that's kind of
16 ridiculous.

17 And when we depose VF's expert, which is shown in the upper
18 right-hand corner of the screen, she agreed that in these dependent claims,
19 the characteristic of the plurality of particles is characteristic of all of them
20 and not one of them. That is the ordinary meaning of the claim.

21 And I'm not done answering your question, Judge Kaiser, because I
22 know it's sticky.

23 JUDGE ROESEL: But all of the particles, not one of them -- when?
24 Before or after they're mixed with the base material?

1 MR. JACKSON: After, as they are applied. So the way the
2 technology works --

3 JUDGE ROESEL: How does that square with the prosecution history
4 where the support for second thickness was particle size in the product data
5 sheet for Asbury carbon black?

6 MR. JACKSON: I understand your question, Your Honor. I have
7 two or three points in response. First, that amendment was offered to
8 provide 112 support.

9 JUDGE ROESEL: So the claim has to at least cover that, right, the
10 112 support?

11 MR. JACKSON: I have to think about that. It was offered for
12 support and accepted but if you look at the language of the claim, the
13 examiner accepted the language of the claim which was repeated in the
14 amendment, a plurality of active particles comprising a second thickness.

15 And contrary to the assertions of opposing counsel, there actually is
16 evidence of record explaining support for the thickness and the thickness
17 ratio.

18 In the deposition of Dr. Haggquist, he was specifically asked to find
19 support in the specification and he explained that in columns 8 and 9 of the
20 patent when it discusses using a 1 mil draw-down rod and having a slurry of
21 active particles; to him, and I'm paraphrasing, that slurry when cured or
22 evaporated reduces in size from 1 mil to something like 0.4.

23 And the POSITA would understand --

24 MR. GERGELY: I have to object. I don't think there is evidence of
25 this in the record.

1 JUDGE ROESEL: I'd like counsel to keep your objections to your
2 own argument time.

3 MR. JACKSON: Well, Your Honor, I wanted to respond to the
4 allegation first and foremost and there was nothing in the record. There is,
5 and we have a citation to that, I won't belabor it. That is the Haggquist
6 deposition, Exhibit 1046, Page 49, Line 17 to 24, and Page 58, Lines 3 to 8.

7 And Dr. Haggquist, a POSITA, clearly explains how the patent
8 describes the claim and provides support. And that particular testimony is
9 un rebutted. I don't have much time left.

10 To round that out, Judge Kaiser, to answer your question, I agree the
11 prosecution history is less than clear. It's being offered for 112 support, it's
12 less than clear, I can see that. I've written patents, I've litigated patents,
13 there's often a record where all of the evidence doesn't point to exactly the
14 same goal.

15 But I think in this context under broadest reasonable interpretation,
16 the Board should start with the plain language of the claims. If ambiguous,
17 look at the patent specification and then only later does it get to prosecution
18 history.

19 The weight of the evidence, Your Honor, to Cocona indicates that the
20 plain meaning controls that the second thickness is a characteristic of the
21 plurality of active particles. And on that point, Your Honor, we have other
22 support in our presentation equating or describing the use of the phrases,
23 layers and membranes.

24 JUDGE ROESEL: Does Claim 27 read on Example 1 of the '287
25 patent?

1 MR. JACKSON: In the first part of Example 1 in Column 8 my
2 understanding is that it does. It discloses a solution of active particles being
3 applied and that, as Dr. Haggquist explained in his deposition, when they are
4 cured they shrink.

5 And so he did the math and said, well, this falls within the range when
6 compared to a standard one-mil base layer or substrate of I think it was
7 polyurethane, something like that.

8 JUDGE ROESEL: And example 1 is a one-layer embodiment?

9 MR. JACKSON: Actually, it discloses a two-layer. So, looking at
10 Column A starting a Line 54, actually Line 55, protected activated carbon
11 was suspended in the polyurethane solution and the mixture was applied to a
12 nylon woven fabric.

13 That nylon woven fabric in this case would be the solid-phase
14 substrate. That is referred to in Figure 1 and also in numerous embodiments
15 in the Haggquist application.

16 JUDGE ROESEL: Is there any disclosure of the thickness of that
17 solid substrate?

18 MR. JACKSON: As I believe Dr. Haggquist explains, a POSITA
19 would understand that would be in the examples 1 mil thick. We will
20 reserve our remaining time for rebuttal, Your Honors, unless you have any
21 further questions at this time.

22 JUDGE ROESEL: Thank you. You have 15 minutes for rebuttal.

23 MR. JACKSON: Thank you.

24 MR. GERGELY: Thank you, Your Honors. First of all, I'd like to
25 address this issue that somehow we changed our theory. Absolutely not,

1 Sherma was cited in the petition, cited by the Board, and credited by the
2 Board as disclosing Sephadex as having an adsorptive property with a D. So
3 there's been no pivoting or changing.

4 That was in the original petition and cited by the Board. Likewise, the
5 Wang reference was cited by the Board with respect to Halley, which
6 demonstrates that Black Pearls 2000 adsorbs water. So there's been no
7 change in theory.

8 There was a statement that somehow Dutta was the prior art Gore-Tex
9 material that was mentioned in some press release. There's absolutely no
10 evidence of that. I think Dutta is a PCT application that was published by
11 Gore, but whatever is in the press release I don't think is Dutta necessarily
12 and there's no evidence of that in the record. They said that my client
13 licensed a two-layer system, there's no evidence in the record of that. They
14 actually went so far as to say that my client licensed this particular patent.
15 Again, absolutely no evidence in the record of that whatsoever. I don't mind
16 advocacy but that's just flat-out wrong.

17 The evidence in the record is that my client took a trademark license
18 from Cocona and did not license any patent. In fact, if you look at the
19 timeline, they had rolled out a product called FlashDry long before this
20 patent ever issued. So, there was no patent license of the '287 patent to my
21 client, just absolutely no evidence in the record of that.

22 They said Halley describes absorption only, it doesn't say anything
23 about absorption only. I believe the polyurethane film may absorb but
24 there's no discussion of what the particles in Halley are doing. Again, you

1 would look to the Wang reference to see what Black Pearls 2000 is doing. It
2 adsorbs water. They said Sephadex is just absorptive.

3 Again, a person of ordinary skill in the art, you would look at Sherma,
4 you would look at Texter, you would look at Pavia. They all disclose that
5 Sephadex is adsorbent. Again, they're saying that if you just look at Dutta it
6 talks about absorptive particles.

7 In an obviousness combination, you would look at Dutta and
8 Haggquist together and it would show that you could substitute out an
9 adsorptive particle for those Dutta particles. There was also discussion, they
10 said that the MVTR ranges were not met in Dutta and Halley.

11 That's absolutely incorrect. A range claim can be anticipated by
12 disclosure of a point within the range and that's clearly shown in our claim
13 charts. So, I don't understand this argument that the improved MVTR and
14 that the MVTR range claim is not met. It's clearly met.

15 There was a discussion about how the patent is just talking completely
16 about surface activity and they invited you to review the entire patent in that
17 regard. I would likewise invite the Board to do that, I would draw your
18 attention to Columns 5 and 6 of the '287 patent, which talks about other
19 activities besides adsorption in Column 5 and actually talks about other
20 activities other than surface activity in Column 6.

21 So, not every single embodiment, as Cocona argues, is talking about
22 surface activity. They said that there was a certificate of correction on the
23 '287 patent. There's no certificate of correction. The certificate of
24 correction was on the Haggquist application and I would draw your attention

1 to Column 2 which actually talks about odor absorbing, with a B, and IR
2 absorption.

3 So those references to absorption remain in '287 and were not subject
4 to any correction. By the way, that correction occurred years after the fact
5 during this IPR so I don't think it's very persuasive.

6 Again, there was a discussion how Dutta mentioned some inert
7 particles. Again, when you're doing a combination, you're not writing on
8 just the slate of Dutta, you're combining Dutta and Haggquist. And the
9 Haggquist particles are clearly active so one of ordinary skill in the art
10 would look at Haggquist and understand that those particles are active.

11 There was a question about hydrogen bonding and where is that
12 occurring? It's occurring on the surface of the polymer. Their expert
13 testified that the surface of Sephadex is the entire chemical itself. There is
14 both the edges of the bead and the interior of the bead, and I would note that
15 they put up a cartoon of activated carbon attaching to the outside of a
16 particle and that's not entirely accurate. We have an exhibit cited with our
17 reply which shows that in activated carbon those pores actually go fairly
18 deep into the particle itself. So the particle is not attaching to the outside of
19 the particle. It actually goes into the inside. They are advocating a two-
20 layer, that there must be a two-layer construction.

21 No, I think as the Board noted, what's in the specification is a one-
22 layer construction, particularly with respect to the cured base material and
23 the active particles combined. And there's no basis to limit Claim 27 to a
24 two-layer construction, particularly when the only thing that's disclosed in
25 the certification is one layer.

1 There was a reference to substrate. Again, the issue is what is the
2 cured base material? And the cured base material is coming out of a
3 solution. There's a reference in the specification to substrate, however,
4 there's nothing that shows that that substrate is created from a cured base
5 solution.

6 So, again, the substrate isn't part of Claim 27. It is part of Claim 50 so
7 there is a difference between the cured base material and the substrate, and
8 they actually claimed it in Claim 50. There was criticism of our 112
9 support. There has to be 112 support for a claim, otherwise it's invalid.

10 So you would construe a claim to uphold its validity in view of the
11 specification and file history. And the positions that are advocated by VF
12 and which were adopted by the Board uphold the validity of the claim under
13 112. That's the only support for the first and second thickness in those
14 ratios, is what's in that specification and that file history.

15 Particularly if you're looking at the claims as a whole which you must
16 do and a further limitation is the 2.5:10 ratio. Again, the only thing that
17 supports that in the specification and file history is this one-layer
18 construction which has the active particles mixed in. There was a reference
19 to dependent claims as being somehow persuasive. Those dependent claims
20 are directed to weight percentages. So in that case, you would be actually
21 trying to determine the weight of that plurality of the active particles. So
22 there's a different claim scope with respect to those dependent claims.

23 Just briefly, there was really no discussion about secondary
24 considerations. I would just simply note that it's been briefed by us. The
25 issue isn't praise or what's in the press release, the issue is nexus and if you

1 look at the three samples that were discussed by the other side's experts, they
2 completely fail to show that this invention -- excuse me, what was actually
3 sold or licensed to third parties is actually patented and covered by the
4 patent.

5 There's no analysis, there's no claim chart, there's no measurements of
6 the thicknesses, the ratios. There's just no proof whatsoever.

7 And with respect to my client, again, there's no showing that what
8 they sell has an active particle. There's a showing that maybe what's in their
9 material has carbon or silicon but as we've heard today, active particle has a
10 very special definition. And so simply pointing to something and saying,
11 well, the element of carbon or silicon is in there, that's not enough to show
12 activity or an active particle under either side's definition.

13 And there's no showing of improved MVTR, there was no control
14 experiment done in Cocona's infringement contentions. So their secondary
15 considerations completely fall apart on the issue of nexus so we ask that be
16 disregarded. I see the light's on and my time is up. Thank you.

17 Unless you have any questions?

18 JUDGE ROESEL: Thank you for your arguments.

19 MR. SONG: Good afternoon, Your Honors, may I begin?

20 JUDGE ROESEL: Yes.

21 MR. SONG: Thank you. I think it's helpful to review the petition,
22 review the supporting evidence that was submitted initially with the petition.
23 And that really has to form the framework of the entire theory of the
24 Petitioner's case.

1 In our papers we cite to the Aisin Seiki case and this stands for the
2 proposition that once the Board starts to determine that new arguments and
3 new evidence are being injected into the proceedings that go beyond the
4 scope of the original petition, it is not incumbent on the Board to sift through
5 the reply evidence or the reply arguments to determine what is new and what
6 is based in the original petition. And it is --

7 JUDGE ROESEL: You're responding to the Petitioner's arguments
8 that he just made?

9 MR. SONG: Yes, Your Honor. And so many of their positions,
10 including the fact that they're relying on Sephadex for absorptive properties
11 represents, using my co-counsel's words, a hard pivot from the positions
12 taken in the original petition. And what they've done is they've --

13 JUDGE KALAN: We addressed in the institution decision that
14 argument on Page 17, so it was before us in the preliminary proceeding. So
15 you're saying what Petitioner's putting into the record now is beyond the
16 scope of what they're allowed to introduce?

17 MR. SONG: That would be our position. I believe we weave some of
18 that into the sur-reply. To the extent that Your Honors believe that there is
19 support or that it's based on what was argued in the original petition, they
20 rely on, again, pointing to Sephadex by way of example in the Dutta
21 reference, it really is a super hydrophilic swelling phenomenon, it's a bulk
22 swelling phenomenon.

23 And I think it speaks volumes that Dutta makes no reference to
24 adsorption, no reference to active particles. Anything that does not fall

1 within the realm of this bulk swelling process where weight goes up by a
2 factor of up to 1000 is not considered contributing to MVTR in Dutta.

3 So, to the extent that there is any interpretative phenomena that may
4 or may not be occurring in Dutta, there is no assignable attribution of MVTR
5 to any potential adsorption that may be occurring.

6 Forgive me, Your Honors, Counsel went through a number of points
7 and I'm looking through my notes. Counsel made the assertion that the
8 Petitioner never licensed the Cocona technology that underpinned the '287
9 patent and that it merely took a trademark. That is simply an incorrect
10 assertion.

11 The un rebutted testimony of Dr. Haggquist at Exhibit 2011 as well as
12 the un rebutted testimony of Cocona's CEO Mr. Bowman at Exhibit 212
13 confirms that the Petitioner took a license of Cocona's emphasis on
14 technology, not a trademark.

15 And that can be seen in part at Exhibit 212 at Paragraphs 3 through 6,
16 where Mr. Bowman talks about the fact that Claim 27 practices the
17 technology that was licensed to the Petitioner.

18 JUDGE ROESEL: I believe I asked your co-counsel about whether
19 there was a license taken under the '287 patent and he said yes. Is that in the
20 record?

21 MR. SONG: I believe that's in the record at Dr. Haggquist's second
22 declaration, Exhibit 2011, and it's Paragraphs 13 through 17 and paragraphs
23 21 through 22. I believe there's discussion of the fact that the Petitioner
24 specifically took a license to the technology that eventually matured into the
25 '287 patent from Cocona, Your Honor, if that's answering your question.

1 JUDGE KAISER: What does a license to technology look like? I
2 apologize, it's been a while since I've been in the private sector. I can
3 understand what a license to a patent looks like.

4 It says we own this patent, you want to use it, you're going to pay us
5 X dollars and then we won't sue you. It doesn't sound like there was
6 anything like that here. So what is the form of the license they took?

7 MR. SONG: I believe the license was in the form -- and I would have
8 to defer to the specific deposition testimony of Mr. Bowman and Dr.
9 Haggquist -- but I believe that the license was the know-how and the internal
10 development of the technology that eventually matured into the '287 patent.

11 So, it's potentially the patent application that eventually matured into
12 the '287 patent. So when we refer to Cocona technology, working
13 backwards in time, starting from the '287 patent and working backwards, it
14 would have been the work and the technology and the know-how and the
15 research and development that evolved into the patent application, which
16 then evolves into, ultimately, the '287 patent.

17 JUDGE ROESEL: So the license pre-dates the claim --
18 (Simultaneous Speaking.)

19 JUDGE KALAN: But no license in itself in the -- go ahead.

20 JUDGE ROESEL: The license pre-dates the claims that are being
21 challenged?

22 MR. SONG: The license pre-dates -- I'm sorry, the claims that are
23 challenged? I would have to check with the record, I can't recall offhand
24 right now, I apologize.

1 JUDGE KALAN: My question was so we have no actual copy of the
2 license in the record that references the '287 patent?

3 MR. SONG: I don't believe a documentary exhibit of the actual
4 license is made of record but I think it is noteworthy that Cocona presents
5 testimony from two witnesses, the inventor and the CEO, on this point and
6 effectively, the Petitioner is silent on it and makes only legal argument as to
7 nexus.

8 So, in terms of substantively challenging the existence of the license, I
9 don't believe that's been contested and so I would submit that it's conceded at
10 this point.

11 So irrespective of whether the physical paper license is made of
12 record, I think that the two witnesses testifying at Exhibit 2011 and 2012
13 have knowledge of this and are able to confidently testify to that fact.

14 So moving on to the combination of the Haggquist application with
15 either Dutta or Halley, in the Petitioner's counsel's opening remarks I
16 believe, if I'm recalling correctly, he cited to some case law that they may
17 have cited in the papers and then says that there only must be a reasonable
18 expectation of success, or something to that effect.

19 He uses the word reasonable. But that's not followed up with any
20 kind of substantive analysis, any citation to the record, and I believe if you
21 look at what Dr. Oelker says in her second declaration, Exhibit 1044, which
22 is admittedly a quite lengthy document, when she speaks to reasonable
23 expectation of success, there's a missing step there.

1 She simply says that there would have been a reasonable expectation
2 of success and doesn't really provide any analysis or any substantive
3 comments on why that would particularly be the case.

4 So in effect, many of Dr. Oelker's comments in 1044 sort of devolve
5 into a conclusory assertion by an admittedly qualified expert, but the
6 conclusion itself appears on its face to be quite speculative and conclusory.
7 And I believe that would be entitled little to no weight and possibly excluded
8 from the proceedings.

9 Moving onto Petitioner's counsel's contention that the MVTR ranges
10 on that when this Dutta-Haggquist or Halley-Haggquist combination is
11 made, the MVTR tables that are pointed to are for Dutta alone or for Halley
12 alone.

13 There's no evidence of record to show that when an activated particle
14 is substituted in Dutta or is substituted in Halley that you get to the MVTR
15 ranges that are in the original tables of Exhibit 1002 and 1003.

16 So, again, there's sort of a cognitive disconnect between saying that
17 the substitution can be made and the MVTR is met because while they may
18 contend that the MVTR in the table falls within a certain claimed range,
19 there's no evidence of record.

20 And I don't think that there's any connection made between how you
21 can go from the standalone Dutta reference or the standalone Halley
22 reference and then substitute in new active particles, and then fall within the
23 claimed MVTR range. That last piece, the claimed MVTR range, with the
24 active particles is simply absent from the record and, really, is absent from
25 the argument presented to the Board here today.

1 Petitioner's Counsel makes some comments about the certificate of
2 correction. I would note that that's really not substantively challenged in the
3 papers and we get at that. In terms of 112 support, I would point to Exhibit
4 1046, Page 49, 17 to 24, and Page 58, 3 to 8, as providing that support that I
5 believe the Board is looking for.

6 And going back to the idea that the '287 patent really does disclose a
7 one-layer and a two-layer invention, and that Claim 27 truly does capture the
8 two-layer invention. And again, going back to Your Honor's comment about
9 if I start with a claim, the thrust of my analytical process goes to this is a
10 layered invention, this sounds like a layered invention when I start with the
11 claims.

12 And I think that, again, speaking to the hierarchy in terms of weight
13 given when engaging in the claim construction, it's that you start with the
14 claims, you move to the specification, and then you consider the intrinsic
15 record, but the claims control.

16 And as co-counsel I think said correctly, the numerous tools of claim
17 construction, canons of claim construction, don't always point perfectly in
18 the same direction.

19 So to the extent that there may arguably be some inconsistency within
20 or maybe some lack of clarity within the intrinsic record, it is the totality of
21 that record that should guide the ultimate claim construction, which I think
22 would support the constructions proposed by Patent Owner.

23 And one final point, depending on how much time I have, Claim 27,
24 again we submit that Claim 27 is directed to a two-layer invention.

25 JUDGE KALAN: Can I interrupt you?

1 MR. SONG: Yes.

2 JUDGE KALAN: So the cured base material in Claim 27 is being
3 equated to the substrate, is that correct?

4 MR. SONG: I think it's referred to as a substrate and possibly
5 membrane or layer throughout the spec.

6 JUDGE KALAN: So can you address Petitioner's contentions that
7 Claim 50 separately discusses a substrate?

8 MR. SONG: Your Honor, may I grab a copy of Claim 50? I
9 apologize. Okay, Your Honor, is there particular language that I'm focusing
10 on at this moment?

11 JUDGE KALAN: In Claim 50 where it says the mixture is adapted
12 for application to a substrate.

13 MR. SONG: So actually, this dovetails kind of well with where I was
14 trying to go. So it refers to Claim 1 and I would point to Claim 1's language
15 and at first glance, Claim 1 looks quite similar to Claim 27.

16 But I would direct attention to the phrase, cured base material solution
17 in Claim 1, versus the phrase cured base material in Claim 27. And it's our
18 position that Claim 1 is directed towards that one-layer embodiment.

19 JUDGE KAISER: Because of the word solution?

20 MR. SONG: Yes, Your Honor.

21 JUDGE KAISER: Is there a difference between a cured base material
22 and a cured base material solution? I can imagine solution means the liquid-
23 phase stuff with particles maybe floating in it that you apply to the substrate
24 and then you cure it into something else, which would be the cured base
25 material, I guess.

1 But I'm not sure then that there's any difference between cured base
2 material and cured base material solution.

3 MR. SONG: So, if I'm understanding the question correctly or the
4 inquiry correctly, I think that the Petitioner's conception of what cured base
5 material means that was presented earlier in my co-counsel's presentation as
6 instructive. I believe she calls it a non-solution solid or non-solution
7 substrate.

8 And so I think that informs the inquiry fairly directly, such that cured
9 base material is a solid and the Petitioner's own expert calls it non-solution.
10 So I think that informs the understanding of what Claim 27 would
11 encompass versus, again, when you position the solution in there, it sounds
12 very much the same but conceptually it is distinct.

13 So we would submit that Claim 1 would cover at least in part the one-
14 layer embodiment. Claim 27 would constitute a two-layer embodiment and
15 going back to Your Honor's original question about Claim 50, the membrane
16 of Claim 1, again it's incorporating the one-layer embodiment as a dependent
17 claim.

18 Finally, Your Honors, moving on to secondary considerations, it's our
19 position that Cocona has presented significant un rebutted --

20 JUDGE ROESEL: You can finish your sentence.

21 MR. SONG: -- significant un rebutted evidence that requires the
22 Board to afford substantial weight to our evidence insofar as Petitioner's
23 contentions with our testing really only go towards partially addressing the
24 copying secondary considerations, but the secondary considerations of
25 industry praise and licensing stand alone and are un rebutted, and those alone

1 defeat any obviousness arguments they may make based on Dutta plus
2 Haggquist or Halley plus Haggquist.

3 I know I incorporated semicolons and commas in there and I
4 appreciate you indulging me on it.

5 JUDGE ROESEL: Thank you for your arguments. The case is
6 submitted, and the hearing is adjourned.

7 (Concluded at 3:09 p.m.)

Case IPR2018-00190

Patent 8,945,287 B2

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