

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLASTERS, INC.,
Petitioner,

v.

WATERBLASTING, LLC,
Patent Owner.

IPR2018-00504
Patent 7,255,116 B2

Record of Oral Hearing
Held: March 29, 2019

Before JEFFREY W. ABRAHAM, MICHAEL L. WOODS, and
JOHN R. KENNY, *Administrative Patent Judges*.

APPEARANCES:

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The above-entitled matter came on for hearing on Friday, March 29, 2019, commencing at 1 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

P R O C E E D I N G S

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2 JUDGE KENNY: Good afternoon. Welcome to the
3 Board. Judge Jeffrey Abraham is in the hearing room and Judge
4 Michael Woods and I are at remote locations. Let me remind
5 counsel that Judge Woods and I can only see you if you're
6 standing at the podium. Also we can't see any displays in the
7 hearing room, therefore, if you are referring to a particular slide
8 or an exhibit, be sure to call it out so that we can access it and
9 also do that for the record.

10 This is the oral hearing for IPR 2018-00504. Both
11 sides have 60 minutes of argument time. Let's begin with the
12 introduction of counsels, starting with Petitioner followed by
13 Patent Owner.

14 MR. PFEIFER: Good afternoon. My name is
15 Nicholas Pfeifer. I represent the Petitioner.

16 JUDGE ABRAHAM: Counsel, can you come to the
17 podium so that they can see you.

18 MR. PFEIFER: Sorry, yes. Sorry about that. My
19 name is Nicholas Pfeifer and I'm representing Petitioner, and
20 also I have with me Andriy Lytvyn as co-counsel.

21 MR. COHEN: Good afternoon. I'm Kenneth Cohen
22 on behalf of the Patent Owner, Waterblasting Technologies.
23 With me in the courtroom today is my co-counsel, Edward
24 McHale. Also present here today is James Crocker who is the

1 founder and CEO of Waterblasting. He is also the inventor on
2 the patent at issue here today.

3 JUDGE KENNY: Okay. Mr. Pfeifer, do you want to
4 reserve some time for rebuttal?

5 MR. PFEIFER: Yes, Your Honor. We'd like to
6 reserve 15 minutes rebuttal time.

7 JUDGE KENNY: Okay. And Mr. Cohen, do you
8 want to reserve any rebuttal time?

9 MR. COHEN: I would like to reserve ten minutes, if
10 necessary.

11 JUDGE KENNY: Okay. Mr. Pfeifer, you can begin
12 whenever you're ready.

13 MR. PFEIFER: Good afternoon. May it please the
14 Board. Today we are gathered here to discuss the invalidity of
15 U.S. patent No. 7,255,116. In this presentation I want to address
16 three themes. The first is that the prior art is analogous to the
17 116 patent and each of the references. The second is that the
18 prior art teaches every claim limitation in the 116 patent, and the
19 third is that the mere substitution of one known element for
20 another is obvious when that substitution yields predictable
21 results.

22 So I would like to begin with the first slide, or it's
23 actually the second slide sorry, of the demonstratives. Here we
24 have two images. On the left we have figure 2 of the 116 patent
25 and on the right we have figure 1. Now, before I get into the
26 details I'd like to address the fact that the 116 patent in the

1 background section clearly establishes that Patent Owner did not
2 invent a cleaning system that uses high pressure water to remove
3 stripes from a highway. The Patent Owner did not invent a
4 cleaning system that relies on a tractor and the Patent Owner did
5 not invent such a system that uses a blast head. This is all in the
6 background section of the 116 patent and yet, Patent Owner
7 sought to attain these untenably narrow, or untenably broad
8 claims to a cleaning system.

9 So if we look here at figure 2, the 116 patent
10 discloses this cleaning system that relies on a tractor, you can
11 see that there. Attached to the tractor is a blast head, the
12 articulating link, and then you can see there that there are two
13 hoses, a vacuum hose and a water hose which extend from that
14 blast head back to the support truck. As we can see in figure 1,
15 which provides a support truck, it includes a vacuum pump, a
16 vacuum tank and a water tank and then the support truck also
17 tows the high pressure pump.

18 Now the way the system works, it takes water from
19 the vacuum tank, the water pump pressurizes that water, it is
20 then discharged through the blast head and the resulting debris
21 and spent liquid is vacuumed up and deposited in the vacuum
22 tank.

23 So now I want to move on to the third slide, and this
24 is the Jones reference. As you can see here, Jones also includes
25 a tractor. Attached to that tractor is a blast head, it's highlighted
26 there in yellow, and then you can see there's a blue water line

1 and a brown vacuum line which extends back to the support truck
2 shown there in figure 2, and that support truck includes the
3 vacuum tank, the vacuum pump, and the water pump.

4 The Jones reference does not include an integrated
5 water tank, however, as we provided in the petition, a person of
6 ordinary skill in the art understanding that the intent of the
7 system is to be portable would have been motivated to take the
8 integrated water tank from the Breither reference and incorporate
9 it onto the Jones truck to again include the portability and also
10 insure that there is an adequate water supply, and again Jones
11 says that the water can come from any suitable source.

12 The way that the Jones system works is exactly the
13 same as the 116 patent. Water is pressurized, it's delivered to
14 the blast head, the discharged liquid and resulting debris is then
15 vacuumed up and deposited in the vacuum tank. Same principle
16 of operation.

17 Now let's please move on to slide four. Here we have
18 an image of the StripeJet system over on the left. On the right is
19 figure 1 of the 116 patent. As you can see, they're incredibly
20 similar and if we look specifically at the StripeJet it includes a
21 tractor and a blast head. Attached to the tractor would be an
22 articulating link, and then attached to the blast head is the water
23 hose and vacuum hose which extends back to their respective
24 tanks and pumps.

25 Now the NLB system has the exact same principle of
26 operation. It pressurizes water which is discharged through the

1 blast head and then the resulting debris and spent liquid is
2 vacuumed up and deposited in a vacuum tank. In addition, the
3 NLB reference establishes that high pressure water is particular
4 useful for removing floor coatings because it is faster, more
5 thorough and doesn't damage the underlying surface. So here we
6 can further evidence the fact that Patent Owner did not invent a
7 water cleaning system using high pressure liquid to remove
8 stripes from the highway. Again, the same principle of
9 operation.

10 Moving on to claim 5. This is the Clemons reference
11 and actually let me backtrack for a quick second. The Jones
12 reference in combination with Breither and NLB, that's for
13 grounds 1 through 3. Here we're transitioning to grounds 4
14 through 5 which include the Clemons reference and the NLB. As
15 we can see in claim 5 this is figure 1 of Clemons. Clemons
16 discloses a cleaning system having a truck with a blast head
17 attached thereto, the articulating arm 42 and that's highlighted in
18 yellow. There is a water line and a vacuum line which extend
19 from the blast head back to their respective tanks and pumps.
20 Again, similar components and the same principle of operation.
21 Water is pressurized, it is discharged from the blast head, the
22 resulting debris and spent liquid is vacuumed and deposited in
23 the water tank, or excuse me, the vacuum tank.

24 Moving on to slide 6. This is the combination of
25 Clemons and NLB. Clemons does not disclose the use of a
26 tractor, however NLB does explain that a compact utility vehicle

1 is particularly useful in cleaning areas with limited access such
2 as parking lots, garages and intersections and for that reason, a
3 person of ordinary skill in the art would have been motivated to
4 include a compact utility vehicle to address these areas of
5 limited access along with the system that's disclosed in Clemons,
6 and we have two arrows there which show that the water line
7 would be hooked up to the pump and the water tank and then the
8 brown line would be the vacuum hose extending to the vacuum
9 tank and its respective pump.

10 So now that we've done the overview, I want to move
11 on to independent claim 1 which is shown here on slide 7. On
12 the left hand side there I've highlighted two sections of claim 1.
13 The reason why I highlighted these sections is because these are
14 the sections which pertain to Patent Owner's arguments. The
15 first section is related to the preamble. It states,

16 "A cleaning system for removing coatings from a hard
17 surface by a high pressure liquid."

18 Patent Owner argues that the prior art are not cleaning
19 systems. In addition, Patent Owner argues that the specific
20 definition of high pressure would not result in a person of
21 ordinary skill in the art modifying Jones or Clemons in view of
22 NLB and then the second highlighted section there is an
23 articulating link, and the reason why I highlighted that is
24 because Patent Owner argues that this is the only limitation not
25 found in the prior art references and so we will address each of
26 these in the following slides.

1 So on slide 8 I have presented two quotations from the
2 Institution decision. Over on the left we have the Jones/Breither
3 and NLB section and this is related to grounds 1 through 3 again.
4 As the Board correctly found each of these references is in fact a
5 cleaning system. Jones is titled an artificial turf cleaner.
6 Breither is titled a vehicle for cleaning streets and NLB
7 describes heads for cleaning paths where the cleaning leaves the
8 concrete clean at every level and NLB discloses completely
9 removing coatings while leaving concrete and asphalt
10 undamaged, and then over on the right side there we have the
11 Institution decision with respect to Clemons, again grounds 4
12 through 5 where the Board has correctly identified that Clemons
13 is in fact a cleaning system for removing debris from a hard
14 surface such as a runway or a street.

15 (Short break while monitor connection is re-
16 established.)

17 MR. PFEIFER: All right. So as I was saying on the
18 right side we have Clemons where the Board has identified it is
19 in fact a cleaning system. We also draw attention to the fact that
20 the title of Clemons includes the term clean in it and that term
21 also appears over 220 times in that reference. So we do in fact
22 agree with the Board's decision that the references are cleaning
23 systems. In addition, I would like to point out the fact that
24 Patent Owner seems to argue that these are non-analogous
25 references with respect to the invention. However as case law
26 dictates and Federal Circuit has established in State Contracting

1 & Engineering Corp., v. Condotte America Inc., that a reference
2 is analogous if it is from the same field of endeavor as the
3 invention and similarity in the structure and function of the
4 invention and the prior art is indicative that the prior art is
5 within the inventor's field of endeavor. In other words, if you
6 have similar structure and function the references are analogous
7 to the invention.

8 As we've already discussed, all these references have
9 generally the same components. They all have the blast head,
10 the two hoses going back to their respective pumps and tanks and
11 they all operate under the same principle of operation, the same
12 function, they pressurize water which is discharged through the
13 blast head and then the resulting debris and spent liquid is
14 vacuumed up and discharged into the vacuum tank. So all of the
15 prior art references are in fact analogous cleaning systems.

16 Now I would like to move on to the single limitation
17 which Patent Owner disputes is not in the cited references and
18 that's articulating link. As you can see here on slide 9, we have
19 Jones over to the left which again is for grounds 1 through 3.
20 Jones discloses an articulating link that enables the cleaning
21 head to move in a horizontal plane, a vertical plane, and then be
22 flipped up and back. Likewise, on the right side of that slide, the
23 combination of Clemons and NLB pertaining to grounds 4
24 through 5 discloses an articulating link that allows the blast head
25 to move left to right, up and down, and then flipped up and back.

1 Now, we believe that the term articulating link --
2 sorry, I've moved on to slide 10 -- we believe that the
3 construction of articulating link under broadest reasonable
4 interpretation should be in accordance with the ordinary meaning
5 of the term. Now, anybody with a mechanical degree,
6 mechanical engineering degree, would understand that a link is a
7 connecting structure between two objects. When modified with
8 the term articulating we looked to the definition of articulation
9 which is permitting relative movement, so when we combine
10 these terms we come up with the ordinary meaning of a
11 connecting structure that connects two parts and in such a way as
12 to permit relative movement.

13 Now, Patent Owner would like you to come up with
14 this untenably narrow construction where articulating link
15 somehow incorporates at least three degrees of freedom.
16 Specifically Patent Owner proposes the construction a structure
17 that allows the blast head to have at least two transitional
18 degrees of freedom and at least one rotational degree of freedom.

19 As the Board has already established in the Institution
20 decision, any special definition for a claim term must be set forth
21 in the specification with reasonable clarity, deliberateness and
22 precision. The 116 patent does not include this. There is no
23 specified definition for articulating link. Rather, the term is
24 used in several instances where they provide exemplary
25 embodiments having specific degrees of movement. However,
26 there is no reasonable clarity, deliberateness or precision in

1 defining articulating link as having three degrees of freedom.
2 Regardless though, articulating link is found in each of the prior
3 art references even under Patent Owner's untenably narrow
4 construction and I would like to show you that now.

5 So if we move on to slide 11, here we present two
6 figures from the Jones reference. On the left side we have figure
7 5 and then on the right side we have figure 4. As you can see, in
8 figure 5 there is a yellow piece there that's identified as a swivel
9 joint 52 and it has a pin, or excuse me, it's referred to as a bolt
10 53 which permits horizontal movement of the blast head with
11 respect to the tractor.

12 Now looking at claim 4, or sorry, figure 4, we can see
13 there that there is this handle 57 which can be actuated by the
14 driver and it's connected via this linkage system which has both
15 pin 56 and pin 54 -- unfortunately I don't have a laser pointer to
16 point that out -- but I believe you can see those there and with
17 the dash lines in figure 4 you can see that the blast head is able
18 to articulate in a vertical direction. Now in addition to that, a
19 person of ordinary skill in the art would understand that pin 54
20 being a pivoting joint would allow the blast head to be manually
21 flipped up and back about that point of rotation.

22 So, as you can see on the left in figure 5 Jones can
23 move in a horizontal direction. On the right in figure 4 it can
24 move in a vertical direction, and then via pin 54 it can also be
25 flipped up and back which satisfies Patent Owner's untenably
26 narrow definition of articulated link.

1 JUDGE KENNY: Can you explain that a little more
2 counsel, why you say that the structure show in in figure 4 could
3 be flipped up and back?

4 MR. PFEIFER: Yes. So you see pin 54 we have that
5 call-out box on the left side.

6 JUDGE KENNY: Right.

7 MR. PFEIFER: It goes right to it. So that is simply a
8 pin which extends, you can actually see it on figure 5 as well, it
9 extends through that square bar and because it is a pin it has a
10 rotatable access so anything extending to the left side of that pin
11 can be rotated about that access, in other words flipped up and
12 back. Does that make sense?

13 JUDGE KENNY: I mean the pin itself but what about
14 the overall structure?

15 MR. PFEIFER: Well the structure, the swivel joint
16 52 includes this pin 54 which extends -- you can kind of see it's a
17 horseshoe in figure 5 that extends around both sides of bar 55
18 right there and the pin extends through that bar.

19 JUDGE KENNY: Okay. There's nothing in the
20 reference itself that talks about the structures around 54 and
21 everything else flipping up, you know, up and back, right? I
22 mean is just reading what this pin is doing is why you're saying
23 that it can flip up and back.

24 MR. PFEIFER: Correct. There's no mechanical
25 actuation disclosed in Jones that pulls the blast head to be
26 flipped up and back. However -- sorry, go ahead.

1 JUDGE KENNY: Go ahead.

2 MR. PFEIFER: I was going to say however, a person
3 of ordinary skill in the art would understand that it could be
4 manually flipped up and back and if we look to the 116 patent
5 the specific disclosure of the articulating link being flipped up
6 and back, it specifically says that it can be manually flipped up
7 and back. So under the same principles, we can manually flip
8 this up and back about that pin.

9 JUDGE ABRAHAM: What about in figure 4 the part,
10 let's say the vacuum tube 39 and reference numeral 40 there, it's
11 some structure. How are you going to flip this part up when
12 you've got that structure there? It looks like -- I mean is that
13 detachable? Do you have to basically disassemble the whole
14 thing if you're going to flip it up, and just practically speaking --
15 there's no disclosure in the reference of how you're -- I'm having
16 trouble how you're getting there other than the fact that there's a
17 pin so it's physically possible to?

18 MR. PFEIFER: Yes. So I believe that if we look at
19 39, I don't actually see 40 there, but 39 of the vacuum hose is
20 extending around what appears to be an extended coupler or
21 cylindrical coupling right there. Do you see that?

22 JUDGE ABRAHAM: Is there (indiscernible) 44?

23 JUDGE KENNY: I think 40 is blocked by your call-
24 out --

25 MR. PFEIFER: Oh, is it?

1 JUDGE KENNY: -- but if you take a look at the --
2 you can see there is a little number that's being pointed to on that
3 horizontal structure after 39 and that's 40.

4 MR. PFEIFER: Yes, yes, I see it now.

5 JUDGE KENNY: Okay.

6 MR. PFEIFER: So yes, there's no disclosure in the
7 Jones reference where their intent is to flip this up and back.
8 However, I think if you look closely at the figures you can see
9 there that that appears to be some clamps around the flexible
10 tubing of 40 right where it attaches which is, you know, standard
11 method of attaching flexible tubing to a rigid coupler. So, you
12 know, it's the -- it's like a circular clamp; you know what I'm
13 talking about? You slide it on, then you twist it tight. It's a
14 similar fastener to that, so I don't believe that it would be
15 particularly difficult for a person of ordinary skill in the art to
16 detach that and flip it up. However, there's nothing in the 116
17 patent that supports the definition of articulating link being three
18 degrees of freedom with it being able to flip up and back.

19 JUDGE KENNY: Well, okay. But your argument is
20 that even under their definition this would satisfy it so that's why
21 we're partly exploring this issue.

22 MR. PFEIFER: Understood.

23 JUDGE KENNY: And as well I think this also comes
24 up with respect to your arguments with respect to claim 5 and the
25 size. So just looking at the structure, I mean how -- if we were
26 to flip this up on figure 4, I mean how would that work? I mean

1 obviously the motion that's shown here, I assume that the motion
2 that they do show with the pin and the joint is what's shown
3 between the solid lines and the dotted lines. You've got a
4 relatively minor motion which seems in which the wheel would
5 stay basically on the ground, but what -- I mean we've got the
6 hose 40 going across, what would this look like if we were to
7 flip up and around that joint so that basically 33 and 50 and 36
8 were now above the pin?

9 MR. PFEIFER: Yes. So I think if you were to look at
10 figure 5 where we shift it off to the right which is what is
11 disclosed in the 116 patent, you turn it to a side, all the way to
12 the right I believe they say, and then you flip it up. So we can
13 move out of the way of element 66 which is running down the
14 lateral but longitudinal axis and then if you just detach that
15 element 40, you know, using a simple clamp or a simple
16 screwdriver to unfasten that clamp you could rotate it up and
17 back.

18 Now this is also, when you're talking about claim 5,
19 there's no specific requirements that it be a certain size, however
20 Jones specifically says that it uses a tractor and any suitable size
21 would work. So if we're going to talk about the total length of
22 the tractor and the blast head, a person of ordinary skill in the art
23 would understand that that is a specific design choice which
24 could easily be adjusted as needed.

1 JUDGE KENNY: Wasn't there -- didn't Patent Owner
2 put in evidence that there's a specific width you need to be to go
3 on the highway?

4 MR. PFEIFER: Yes. So Patent Owner did propose
5 that 8 foot 6 inches is the DOT limits. That does not take into
6 account the fact that there are options to go into a wide load, get
7 a wide load permit which could also travel across the interstate
8 or the highway. So it captures a very narrow segment of what is
9 acceptable and in addition, these are simple design choices.

10 JUDGE KENNY: Okay. And then did you discuss the
11 wide load permits at all in your reply?

12 MR. PFEIFER: I don't believe we did.

13 JUDGE KENNY: Okay.

14 MR. PFEIFER: Do you have any other questions
15 pertaining to it being flipped up and back?

16 JUDGE KENNY: Not right at the moment, but it
17 doesn't mean I won't get some more --

18 MR. PFEIFER: Fair enough, fair enough.

19 JUDGE KENNY: -- going down the road.

20 MR. PFEIFER: Okay. All right. So let's move on to
21 slide 12. Here we have the combination of Clemons and NLB
22 and again we believe that this combination discloses an
23 articulating link even under Patent Owner's untenably narrow
24 definition.

25 If we look here on the left side of slide 12 we have
26 the Clemons' system and Clemons discloses that arm 42 can be

1 manually pivoted via motorized force or manually pivoted or
2 pivoted via motorized force to raise them over the cleaning head.
3 Clemons goes on to state that the reason for this is to account for
4 the slope of the cleaning surface on which it is operating for
5 obvious reasons and then -- so that allows it to be pivoted up and
6 back to some extent. How far back we don't know because
7 there's nothing in the 116 patent requiring it to go any specific
8 distance, and then if we look here over on the right half of slide
9 12 we have NLB reference and they're highlighting the fact that
10 the blast head can move horizontally across that support
11 structure and this is something that Dr. King confirms, which I'm
12 showing here on slide 13. Dr. King says not only can a blast
13 head be hydraulically lower to raise but it can also move left to
14 right along that support track.

15 So NLB by itself discloses the horizontal and vertical
16 movement and then a person of ordinary skill in the art would
17 understand that the tractor in NLB could be modified to improve
18 its capabilities by including this pivoting nature of the Clemons
19 reference and the reason for doing that is just as Clemons
20 discloses, it's to account for the slope in the surface that's being
21 cleaned and, again, you know, that's just to keep the blast head
22 close to the ground when there's a down slope and then when
23 there's an up slope make sure that they can slope it up and so that
24 you don't have any binding that could damage the blast head.

25 So in combination, you know, we have left to right
26 movement, we have vertical movement, and then it can be

1 flipped up and back to some degree and as I stated, there's
2 nothing in the 116 patent requiring that it go a certain distance
3 up and back. So we believe that this satisfies the definition even
4 under Patent Owner's untenably narrow definition.

5 JUDGE KENNY: Okay. Let me just go through this
6 one also. I mean are you contending either of these to -- can
7 actually be flipped back, in other words taking, you know,
8 obviously I understand the vertical. It can be lifted up and, you
9 know, if we're looking in specifics on slide 12 and we're looking
10 at the structure, say with the numbers 50 and 64, that can go up
11 an down and I assume it also can be let's say pivoting (phonetic).
12 Well what are the degrees of motion you're saying that structure
13 that is connected to 42 can do, and I'm talking about on the left
14 side of 42?

15 MR. PFIEFER: Okay. So I actually want to
16 backtrack for a quick second because just to clarify it. The
17 definition doesn't require that it be flipped up and back, the
18 definition that Patent Owner proposes is that it has two
19 transitional degrees of freedom and that it has one rotational
20 degree of freedom. So if I'm moving horizontally, that's one
21 transitional degree of freedom.

22 JUDGE KENNY: Okay.

23 MR. PFEIFER: If I'm moving vertically, that's
24 another transitional degree of freedom and any sort of pivot is a
25 rotational degree of freedom.

26 JUDGE KENNY: Okay.

1 MR. PFEIFER: Yes. We don't necessarily need to
2 flip up and back because that's not their definition.

3 JUDGE KENNY: All right. But maybe when we're
4 getting to claim 5 and we're talking about size, I think some of
5 your arguments about size involve flipping the blast head up and
6 back. I'm trying to get a sense on whether you're saying either
7 of these two references teach flipping up and back.

8 MR. PFEIFER: So when it comes to size, we could
9 probably all agree that if it's flat, as you can see in Clemons, the
10 blast head being flat it's going to extend out further than if I
11 were to pitch it up.

12 JUDGE KENNY: Correct.

13 MR. PFEIFER: So by pitching it up I'm reducing the
14 size.

15 JUDGE KENNY: I get that and what I'm saying is are
16 you saying that that structure can be flipped up so as to reduce
17 the size?

18 MR. PFEIFER: I think by pivoting it up I am flipping
19 it up and back to some extent, the exact extent we don't know
20 obviously. However it does have the capabilities to reduce the
21 length overall because it has been pitched up to some extent.

22 JUDGE KENNY: But I mean even if we're flipping it
23 up 20 degrees that's not going to be a massive reduction of
24 length.

1 MR PFEIFER: I completely agree, but if the tractor is
2 8 foot 8 inches in length and then you flip it up, pivot it up, you
3 might lose those two inches and now you're under the 8 foot 6.

4 JUDGE KENNY: Okay.

5 MR. PFEIFER: Do you have any more questions for
6 this bit (phonetic)?

7 JUDGE KENNY: Well okay, let's go -- I mean we
8 addressed Clemons which was the one on the left. What about
9 the one on the right? I mean are you contending that that has the
10 ability to be flipped up and back?

11 MR. PFEIFER: NLB by itself no, we're not
12 contending that.

13 JUDGE KENNY: Okay.

14 MR. PFEIFER: However, as I stated we believe that a
15 person of ordinary skill in the art would understand that the
16 teachings of Clemons encourage the pivotability of the blast head
17 and so we believe that person of ordinary skill in the art would
18 modify NLB to also be able to pivot. All right. So --

19 JUDGE WOODS: If I could interrupt to ask a
20 question --

21 MR. PFEIFER: Yes, please.

22 JUDGE WOODS: -- I'd appreciate that. Okay. So
23 I'm just trying to understand the challenges presented in the
24 petition. So I understand that in this slide 12 it looks like you're
25 proposing arguments in the alternative. First, you're arguing that
26 Clemons discloses an articulating link, but you're also arguing

1 that NLB discloses an articulating link and so does the petition
2 provide a reason for modifying Clemons to include NLB's
3 articulating link or I guess I'm a little confused as to why we're
4 even discussing an articulating link in NLB?

5 MR. PFEIFER: Okay. So we believe that the
6 definition of articulating link allows relative movement between
7 the tractor and the blast head. So with that respect, both of these
8 systems disclose an articulating link. However, once we
9 received Patent Owner's response where they said an articulating
10 link actually requires all these degrees of freedom, well now we
11 respond to that in saying that the NLB blast head can move
12 vertical and horizontally. However a person of ordinary skill in
13 the art would have been motivated to also include a pivoting
14 ability as well to account for the pitch of the cleaning surface.
15 So I don't want to modify Clemons to have the vertical and
16 horizontal movement, but we believe a person of ordinary skill in
17 the art would have been motivated to modify the articulating link
18 in NLB to include this pivoting nature so that we can account for
19 the slope of the cleaning surface. Does that answer your
20 question?

21 JUDGE WOODS: Well, if I can follow up, maybe it
22 does. So -- and I apologize if my questions, because I'm not
23 familiar, I'm missing something in the proposed combination --
24 but I understand that you are relying on NLB to satisfy the
25 40,000 PSI limitation and it would have been obvious to modify
26 Clemons to include high pressure water at that pressure. So I

1 guess I'm a little confused as to why we're even discussing the
2 articulating link of NLB unless there's an additional reason to
3 modify Clemons to rely on that disclosure. It appears that
4 Clemons discloses an articulating link which is what you rely on
5 in the petition so is my understanding incorrect?

6 MR. PFEIFER: So I want to modify your
7 understanding just a bit here, and I can show you this on slide
8 21. So we take -- the reason why a person of ordinary skill in
9 the art would modify Clemons is twofold. First, Clemons does
10 not include a tractor assembly. Now NLB specifically discloses
11 that a compact maneuverable utility vehicle such as the StripeJet
12 is particularly useful for accessing areas with limited access,
13 such as parking lots, garages and intersections. So a person of
14 ordinary skill in the art knowing that there is a Clemons
15 cleanings system and the NLB cleaning system would have been
16 motivated to incorporate this compact utility vehicle to access
17 these areas with limited access.

18 So that's the reason for modifying Clemons to include
19 a tractor, and now that a person of ordinary skill in the art has
20 incorporated this tractor they would further be motivated to
21 modify the articulating link of that tractor to also include the
22 pivoting nature disclosed in Clemons to account for the slope
23 and cleaning surface. Does that make sense?

24 JUDGE WOODS: I think so. Thank you for that
25 explanation.

1 MR. PFEIFER: Absolutely. Okay. So unless you
2 guys have any further questions on articulating link, I'm going to
3 move on to the motivation to combine. All right.

4 So first I want to start with the construction of high
5 pressure, and this is slide 14. In their response, Patent Owner
6 repeated its previous argument that high pressure refers to
7 pressures greater than 25,000 PSI. As the Board has already
8 determined in the Institution decision, the description in the 116
9 specification is not an actual definition of high pressure, rather it
10 specifies a particular pump utilized in the specification and we
11 agree with that, and in response to the Board's suggestion that we
12 modify claim construction we look to some third party evidence
13 as to what might constitute high pressure and that's where we
14 came up with the 2,000 and 20,000 and 2,000 and 15,000 PSI.
15 But regardless, we don't believe it's necessary to actually
16 construe this term because as the Board has already noted, the
17 pressure in NLB is up to 40,000 PSI.

18 JUDGE KENNY: Let me ask you briefly on the 2,000
19 PSI. There was a comment during prosecution history where the
20 Patent Owner had distinguished a reference that seemed to have a
21 disclosure going a little above 2,000 PSI as being low pressure.
22 How does your construction take that into account or do you
23 think you need to take that into account?

24 MR. PFEIFER: Well, I don't think it's particularly
25 useful because their definition, or because they don't present a
26 definition. Rather they just argue in response to an examiner's

1 prior art reference that this isn't high pressure. They don't
2 provide a definition of high pressure in that response and
3 probably because they want to extend the scope of the patent.
4 Had they specifically nailed down what is high pressure then that
5 would be compelling, however that's not the case here.

6 JUDGE KENNY: Well, didn't they refer to 1,500 to
7 5,000 PSI as being low pressure?

8 MR. PFEIFER: Sorry, can you repeat the question?

9 JUDGE KENNY: Didn't they refer to 1,500 to 5,000
10 PSI as being low pressure?

11 MR. PFEIFER: They may have. I don't recall if that
12 was exactly what was said.

13 JUDGE KENNY: Yes. We can look it up if you've
14 got the exhibits, I think it's exhibit 2002 at page 110.

15 MR. PFEIFER: Give me one moment, please.

16 JUDGE KENNY: Sure.

17 MR. PFEIFER: While my colleague's looking that up
18 --

19 JUDGE KENNY: Okay.

20 MR. PFEIFER: -- as we stated before we don't
21 believe we don't believe this is actually a necessary definition
22 because NLB clearly discloses 40,000 PSI. I think the true
23 question is whether or not it would have been obvious to modify
24 the Jones and Clemons systems in view of the high pressure
25 system of NLB.

1 So if we're looking to, just for motivation, I think it's
2 particularly useful to consider that the mere substitution of one
3 element for a known element in the field is obvious when it
4 yields predictable results. That's the law and when we look to
5 what is occurring here, the Jones reference has a water pump, it
6 has a vacuum pump, and then it has the nozzles and hoses.
7 What's occurring is a person of ordinary skill in the art seeing
8 that this system could be improved is merely substituting those
9 components for the known components in NLB. It's just a mere
10 substitution of known components and it results in the same
11 principle of operation. Water is being pressurized, it's being
12 discharged and then that water is vacuumed up with the resulting
13 debris.

14 So with that in mind, a person of ordinary skill in the
15 art would have been motivated to expand the capabilities of the
16 cleaning system in Jones to achieve a wide array of application.
17 As the law dictates in DyStar, improving a particular product, for
18 example by making it stronger, faster and more efficient, comes
19 with an implicit motivation because the desire to enhance
20 commercial opportunities by improving a product or process is
21 universal and even commonsensical. We have held that there
22 exists in these situations a motivation to combine prior art
23 references.

24 So, again, a person of ordinary skill in the art seeing
25 Jones knowing that in NLB a high pressure, or a 40,000 PSI
26 system, is capable of removing floor coatings including stripes

1 because it is faster, more thorough and doesn't damage an
2 underlying surface, that person of ordinary skill in the art would
3 have been motivated to simply substitute the water pump and its
4 components in the vacuum pump with the higher or more
5 powerful components from NLB. So, again, we are simply
6 substituting known components for another to achieve a result
7 which was already known and predictable.

8 Now, Patent Owner is going to argue that Mr. Boos'
9 opinion is based on hindsight and no weight should be given to it
10 and for that reason -- sorry, I fell behind on my slides. If we
11 look at slide 17 it is well established that in certain cases expert
12 testimony concerning motivation to combine is unnecessary and
13 again, as DyStar pointed out, there is an implicit motivation to
14 combine when the product is improved to a wider array of
15 commercial opportunities and the product becomes faster,
16 stronger and more efficient.

17 Patent Owner also wants you to believe that they were
18 the first to invent a stripe removal system using high pressure
19 but again, this is already in NLB. They specifically state the
20 StripeJet system is useful for removing floor coatings and on
21 page 2 of the NLB disclosure, specifically states that coatings
22 include stripes from the highway. Again it says a water blasting
23 technique is faster, more thorough and doesn't damage the
24 underlying surface which is something that the Board has cited
25 in the Institution decision.

1 In addition, Patent Owner wants you to believe that if
2 a person of ordinary skill in the art had modified Jones to
3 include a pump which discharged pressures up to 40,000 PSI it
4 would only be capable of discharging pressures up to 40,000 PSI.
5 This is factually inaccurate and that's exposed by both experts
6 independently.

7 So if we look to slide 18, I've Dr. King's statements
8 on the left and I have Mr. Boos' statements on the right. Dr.
9 King says a pump has a pressure release valve which is an
10 extremely common component and if you have a 40,000 PSI
11 pump you would set it for the pressure that you want it to operate
12 that. He says you might adjust it to different settings for
13 different situations.

14 Mr. Boos corroborates this. There on the right you
15 can see a pump's operating pressure can be adjusted by adjusting
16 the flow control bypass valve, or in other words the pressure
17 relief valve and then subsequent ways of reducing output
18 pressure both agree, or state independently I should say, that
19 bigger nozzles will reduce discharge pressures, more nozzles will
20 reduce discharge pressures, and then finally a pump can run at a
21 lower speed or rate or as Mr. Boos calls it, it can be throttled
22 down to adjust the discharge pressure of that pump. So it is
23 factually inaccurate to say that a pump cannot operate at any
24 pressures below its maximum operational threshold (phonetic).
25 So, again, this is simply a mischaracterization of the facts.

1 Now Patent Owner also wants you to believe that
2 Jones somehow teaches away from the combination of NLB,
3 however as the law dictates any reference that does not criticize,
4 discredit or otherwise discourage investigation into the claimed
5 invention does not teach away. Jones does not criticize,
6 discredit or otherwise discourage investigation into exactly what
7 NLB discloses which is a cleaning system using pressurized
8 water to remove floor coatings, the exact same thing that Patent
9 Owner is using their cleaning system for.

10 Patent Owner also wants you to believe that these are
11 physically incombable. However, the law dictates that it is not
12 necessary that the cited references be physically combinable to
13 render obvious the claimed invention. The test for obviousness
14 is not whether the features of a secondary reference may be
15 bodily incorporated into the structure of the primary reference,
16 but rather whether a skilled artisan would have been motivated to
17 combine the teachings of the prior art reference to achieve the
18 claimed invention. So, again, none of these arguments carry any
19 weight.

20 Now -- I'm sorry, I've not been following with my
21 slides. Let's go to slide 19 where --

22 JUDGE KENNY: Counsel, just so you know on time
23 we had an interruption with the disruption so in other words I
24 think there's about two minutes left on your time but because of
25 the disruption and the questions we'll add five minutes to it --

26 MR. PFEIFER: Okay.

1 JUDGE KENNY: -- so you have 11 minutes left.

2 MR. PFEIFER: Yes. I think I can wrap it up in that
3 amount of time unless we address specific questions. So I
4 believe at this point we've addressed grounds 1 through 3, the
5 combination of Jones in view of NLB, so now I want to move on
6 to claim 19 which is the combination of Clemons and NLB.

7 Patent Owner argues that in all of about three
8 sentences that Clemons is not a cleaning machine, a person of
9 ordinary skill would not have been motivated to modify Clemons
10 in view of NLB and that Mr. Boos provided no rationale as to
11 why a person of ordinary skill in the would have modified
12 Clemons in view of NLB.

13 I'm looking at slide 20. As we've already discussed,
14 Clemons is in fact a cleaning machine. It is analogous art, has
15 the same structure, the same function, therefore it is analogous
16 art so I don't believe there's any merit to this argument. So we'll
17 just move on to the motivation to modify Clemons in view of
18 NLB.

19 As was provided in the petition, sorry we're on slide
20 21. The petition on the left side addresses why we would modify
21 Clemons to include the tractor of NLB which we went over a
22 little bit earlier. But to reiterate, NLB discloses a compact
23 vehicle to address areas with limited access and it suggests or it
24 teaches that a smaller, more maneuverable vehicle with a tighter
25 turning radius would better access these areas to clean them. For
26 that reason, a person of ordinary skill in the art would have been

1 motivated to add this tractor of NLB to the system in Clemons,
2 and then on the right side of slide 21 we have a quotation from
3 the petition again with respect to why a person of ordinary skill
4 in the art would modify Clemons to include the more powerful
5 vacuum pump and water pump, and just to make it quick that
6 improvement would extend the capabilities of the cleaning
7 system of Clemons to a wider array of applications including
8 floor coating removal which is specifically listed in NLB as a
9 particular use for a more powerful water blasting system.

10 And then finally I just want to bring up slide 22 here.
11 As I mentioned earlier, Patent Owner argues that Mr. Boos
12 provides no rationale for a combination. This is his declaration
13 on the left side there, paragraph 146, Mr. Boos specifically states
14 that a person of ordinary skill in the art would have been
15 motivated to modify Clemons' device to include a compact
16 vehicle to clean areas having limited access or areas requiring a
17 vehicle to have a tight turn radius and then on the right side,
18 again this is Mr. Boos' declaration, specifically highlighted areas
19 where he provides rationale for again why Clemons would have
20 the stronger components, more powerful components, that are
21 disclosed in NLB. So that statement is a blatant
22 mischaracterization of the facts. I see I'm over. I could run
23 through the dependent claims real fast if you want, or we can just
24 --

25 JUDGE KENNY: Well, I mean we didn't extend the
26 clock, but you have three more minutes.

1 MR. PFEIFER: Oh, okay.

2 JUDGE KENNY: I mean that's what I was saying is
3 we're adding because of the disruption.

4 MR. PFEIFER: I thought they had been added to the
5 clock, sorry.

6 JUDGE KENNY: I'm not in the room so I can't do it.

7 MR. PFEIFER: All right. No worries. So I'll just run
8 through them real fast. Dependent claims 2 through 6 and 10,
9 there's no dispute here from Patent Owner. However, claim 2
10 refers to a high power vacuum pump connected to the sump.
11 This is taught in Jones and Clemons as was provided in the
12 petition. Claim 3 relates to a shroud attached to the blast head,
13 again that's shown in the petition with respect to Jones. A
14 person of ordinary skill in the art wouldn't modify the blast head
15 to include the shroud of Herhold to contain the system as
16 Herhold teaches, and then both Clemons and NLB show shrouds,
17 so that's taught in those references.

18 Claim 4 refers to a wheel chassis attached to the blast
19 head. As you can see from each of the prior art references, all
20 the blast heads have wheel chassis. That's provided in the
21 petition, there's no dispute in that. Claim 5, I believe we talked
22 about this briefly. It is "said wheeled chassis is attached to said
23 tractor", that doesn't appear to be an issue, and "said mobile
24 blast head and tractor of a size for removably docking
25 transversely on said bed portion of a truck." We kind of touched
26 on this earlier. We believe this is a design choice, a simple

1 design choice in Jones, discloses that it can be any suitable size
2 and NLB states that it is a compact utility vehicle, it's not
3 required to be any specific size and a person of ordinary skill in
4 the art based on the teachings of Schrunk would have been
5 motivated to load and unload a vehicle in a transverse direction
6 and because a person of ordinary skill in the art would
7 understand that there should be a certain size of the combination,
8 a person of ordinary skill in the art would choose a tractor in
9 combination with the blast head that is of a size to allow it to be
10 transversely loaded and legally carried over the highway in
11 accordance with either the standard DOT limits or wide load
12 DOT limits. There's nothing particularly advanced about this.

13 Claim 6 discusses the ramp being attached to the bed
14 and being pivotally attached. Schrunk discloses that there's no
15 dispute with respect to that, and then finally we come to claim 10
16 which discloses that the articulating link is constructed and
17 arranged for controlled movement in a horizontal and vertical
18 plane, and as we disclosed in Jones and NLB, they both allow for
19 horizontal and vertical movement in a controlled manner and
20 there's no dispute with that. So it looks like I'm just about out of
21 time. Do you guys have any questions with respect to the
22 dependent claims or anything I've discussed up to this point?

23 No?

24 JUDGE KENNY: No.

25 MR. PFEIFER: Okay. Well thank you very much and
26 we'll reserve the rest of our time.

1 JUDGE KENNY: You can begin whenever you're
2 ready.

3 MR. COHEN: Thank you.

4 JUDGE KENNY: And I can see you've got a display
5 there. Just remember that the two remote judges won't be able to
6 see what you put on the display so be sure to call out what you're
7 referring to.

8 MR. COHEN: Okay. Thank you. I will attempt to
9 just refer to the record for the two remote judges's benefit and
10 clarification of the record. The Petitioners just read through a
11 number of slides including slide 17 where in responding to the
12 Patent Owner's argument that no weight should be given to the
13 Petitioner's expert, Mr. Boos, who also happens to be the
14 principal of the Petitioner, they now appear to have a new
15 argument couched in what would be legal argument that expert
16 testimony concerning the motivation to combine is now
17 unnecessary and I'm going to refer you to some excerpts in the
18 record, and I will point out what makes this problematic and the
19 whole building of what the Petitioner's premise is that all of
20 these references which are merely a parts list that Mr. Boos went
21 with Petitioner's expert in impermissible hindsight to just cobble
22 all these together based on some unreasonably broad definitions
23 that didn't take into account the 116 patent or its file history.
24 For example, in Blasters Exhibit 1023 if, and this is the cross-
25 examination testimony of the Petitioner's expert, Scott Boos, on
26 page 92 for example, line 15. The question on the record:

1 "Did you review the file history for any admissions or
2 disclosures of limits or ranges or discussions that the operation
3 of the disclosed claims in the 116 patent?"

4 Answer: "No."

5 And there's some other testimony in there that's
6 follow-up on that point. As was noted earlier by Judge Kenny,
7 there is file history regarding the ranges where it was disclosed
8 in the prosecution history that the specification refers to high
9 pressure fluid pumped greater than 25 to 40,000 PSI and in a
10 range of two to fifteen gallons and the reference cited against the
11 116 patent in that prosecution history was discussing a range of
12 pressures that were down around the 5,000 range which for this
13 particular application the Patent Owner disclaimed was not high
14 pressure based on what a person of ordinary skill in the art
15 would understand high pressure to mean in this context.

16 Just keep in mind, the StripeJet machine of NLB is
17 mentioned in the 116 patent in the background, so when talking
18 about pressure in this context we're talking about ultra-high
19 pressure. But Mr. Boos has represented that he is someone of
20 ordinary skill in the art, an expert actually in this particular field
21 of water blasting, and yet he maintains that in the initial petition
22 that any pressure above ambient could be high pressure and then
23 throughout his declaration, which would be in Exhibit 1023
24 again, if you go to page 165 --

25 JUDGE KENNY: I'm sorry. In the declaration?

1 MR. COHEN: Blaster's Exhibit 1023 which would be
2 the cross-examination.

3 JUDGE KENNY: Oh, the cross-examination. Okay.

4 MR. COHEN: Cross-examination. On page 165
5 starting at line 3, Mr. Boos states,

6 "Well, I'll tell you, you know, here's another way to
7 look at it. You can cut your finger, cut a hole in your finger
8 with 100 PSI, so yes, 200 PSI is high pressure. It could hurt you
9 So yeah, I would consider 100 PSI to be high pressure because if
10 I took a jet and asked you if I could take a nozzle and shoot your
11 hand with it would you allow me to do it and you probably
12 wouldn't want me to do that because it would penetrate your skin
13 and hurt you. So I would consider 100 PSI to be high pressure
14 but again, what I go back to is this machine in the 116 patent is a
15 cleaning machine, it's not just a stripe removal pavement
16 marking removal machine, it is a cleaning machine and the other
17 machine that I reference in my prior art are cleaning machines as
18 well."

19 So, based on that particular definition in conjunction
20 with the fact that Mr. Boos did not review the file history of the
21 116 patent, to propose a definition of high pressure that is so
22 unreasonably broad it draws in prior art that enables the
23 Petitioner to put together a parts list where now they're working
24 with impermissible hindsight assembling this parts list and
25 saying well, it would be obvious to, now that high pressure is so
26 low, to put forth the Jones reference, and now if you want to

1 remove coatings or runway rubber which is the field of art that
2 the 116 patent is directed to, it would be obvious to just put the
3 pump disclosed in NLB on the Jones reference. So --

4 JUDGE ABRAHAM: Counsel, it seems like they, the
5 Petitioner, went to these other references not because they were
6 high pressure but because they were cleaning systems and they
7 say you can take these cleaning systems and add NLB which is
8 high pressure. I guess I'm confused as to why you say they link
9 these in or they brought these references in because they talk
10 about high pressure.

11 MR. COHEN: Well, okay. If we were to look -- the
12 Patent Owner's expert, Dr. King, in his opinion he reviews the
13 file history as well as the specification in the patent. So, for
14 example, Waterblasting's Exhibit 2018 Dr. King is referring to
15 that the cleaning system here is not directed to low pressures of
16 up to 5,000, but that the instant invention includes a high
17 pressure pump capable of delivering two to fifteen gallons per
18 minute of fluid at 25 to 40,000 PSI. So when Dr. King reviews
19 that in conjunction with that is also disclosed in the 116 patent in
20 the specification, that those are the ranges 25 to 40,000 and two
21 to fifteen gallons per minute, when reading the patent
22 specification in its entirety and looking at this ultra-high
23 pressure water blasting when given some examples of what a
24 suitable nozzle would be in this application and what somebody
25 of ordinary skill in the art would understand, if you look at
26 Waterblasting Exhibit 2015, Dr. King does a calculation there

1 where he notes that in this particular application at these
2 pressures and volumes you're talking about an exit velocity
3 similar to that of a 357 magnum bullet exiting a weapon. This is
4 an ultra-high pressure assembly that is nowhere near or
5 resembles a turf cleaner that's disclosed in Jones, for example. I
6 mean, what's disclosed in the 116 patent would obliterate turf
7 and you wouldn't look to the Jones reference to be able to deliver
8 these sort of discharge volumes.

9 JUDGE ABRAHAM: But the claim 1 covers more
10 than just a high pressure water blaster, right?

11 MR. COHEN: Yes, yes.

12 JUDGE ABRAHAM: It includes a whole bunch of
13 other different components.

14 MR. COHEN: Yes.

15 JUDGE ABRAHAM: A vacuum pump, a waste
16 removal hose, things like that, are you saying that you would
17 only look to art that has a high pressure system in conjunction
18 with these other components as relevant analogous art?

19 MR. COHEN: What I'm saying I think is my limited
20 point to the high pressure is that you wouldn't look to Jones to
21 find a pump that you would put the NLB reference onto Jones
22 and it would be obvious just to modify that in hindsight for that
23 point. But taken in conjunction if I can go back to --

24 JUDGE ABRAHAM: Well, see that's a different
25 argument. Whether you would modify Jones to add a high
26 pressure system to it is one thing. It seems to me that your

1 original argument was they shouldn't even be looking at Jones in
2 the first place because it's not high pressure, it's too low pressure
3 to be considered in the same universe as high pressure.

4 MR. COHEN: Yes. I am making that argument. In a
5 sense --

6 JUDGE ABRAHAM: And my question, original
7 question was it didn't seem like they were looking at Jones
8 because it's high pressure, they're looking at Jones because it's a
9 cleaning system.

10 MR. COHEN: Right.

11 JUDGE ABRAHAM: And why is that wrong?

12 MR. COHEN: Because --

13 JUDGE ABRAHAM: Do you disagree that Jones is a
14 cleaning system?

15 MR. COHEN: In the broadest sense Jones is for
16 cleaning turf. The 116 patent is directed to this ultra-high
17 pressure cleaning system with exit velocities that would not be
18 suitable for anything other than -- or I shouldn't say anything
19 other but would not be suitable for a turf cleaning system and in
20 that sense, the Jones reference wouldn't even come up as
21 analogous art in the water blasting systems that the 116 patent is
22 directed to and that's reflected by what one of ordinary skill in
23 the art, Dr. King, noted in reading the patent, the file history and
24 doing a calculation of what somebody in this industry would
25 expect the capabilities of the high pressure pump and in this
26 particular case it's the NLB reference is that high pressure pump.

1 We're not disputing that the NLB pump is disclosed
2 and used and that's the ultra-high pressure pump. What we're
3 disputing is that we wouldn't even be talking about the Jones
4 reference in terms of it being a cleaning system that could
5 employ high pressure water but for the unreasonably broad
6 definition proposed by the Petitioner's expert. I hope that
7 answered your question.

8 And I mean I can, you know, to further answer a
9 question Judge Kenny asked earlier of well what would an
10 articulating link look like because I believe there is some
11 confusion as to other components of the claim. If you look at the
12 116 patent figures 3, 4 and 5 disclose what an articulating link
13 would look like and again, when looking at the prosecution
14 history in the same Waterblasting 2002 exhibit on page 114, in
15 the prosecution history it goes on to say,

16 "The articulated arm in combination with the tractor
17 facilitates removal of surface markings from places inaccessible
18 by the prior art. The articulated arm is also movable to a storage
19 position wherein the length of the tractor and arm are less than 8
20 foot 6 inches to allow the tractor to be transported on the truck
21 bed in a transverse orientation with respect to the longitudinal
22 axis of the truck." So --

23 JUDGE KENNY: Counsel, where are you citing to in
24 the prosecution history?

25 MR. COHEN: I'm on page 114 of what's been marked
26 as Waterblasting 2002.

1 JUDGE KENNY: Okay.

2 MR. COHEN: So again, there's another example of
3 why the Petitioner's expert's opinion is inherently unreliable.
4 He's wholly ignored some quantitative limits and disclosures in
5 the file history. Because part of the novelty and the reason
6 behind the articulating link is to be able to, as is disclosed in
7 figure 3, be able to maneuver the blast head by an operator on
8 the tractor as well as being able to flip the blast head completely
9 vertical so that the combination of the tractor with the blast head
10 flipped up is less than, or no greater, than 8 foot 6 inches. So
11 there's clear disclosure throughout the 116 patent and the file
12 history as to what the novelty and what the articulating link is
13 disclosed and --

14 JUDGE ABRAHAM: The portion of the 116 patent
15 talks about the articulated link. Is that talking about just an
16 embodiment of the invention or is that the invention?

17 MR. COHEN: I mean it's certainly an embodiment of
18 the invention, however it does have some parameters to stay true
19 to the disclosed objective of that portion of the invention, is that
20 the combination tractor with the blast head with that articulating
21 link would allow maneuverability so that this tractor could be
22 stored on a truck bed and not consume a space of more than 8
23 foot 6 inches.

24 JUDGE ABRAHAM: Right. But so if that's just an
25 embodiment, when we turn to the claim the claim just recites an
26 articulated link, it doesn't talk about the 8 foot 6 inch numerical

1 limitation or any degrees of rotation or anything like that, aren't
2 we then, if we were to go with your construction, wouldn't we be
3 importing limitations from the spec into the claim?

4 MR. COHEN: Well, in the prosecution history to
5 clarify from the prior art, in both terms of certainly it's our
6 position with high pressure and it's similar for articulating link,
7 is these parameters were cited in the record to distinguish
8 exactly how broad the claim coverage was.

9 JUDGE ABRAHAM: So your point is that we then
10 need to include this 8 foot 6 inch limitation in our articulated
11 link construction?

12 MR. COHEN: Well --

13 JUDGE ABRAHAM: Because I didn't see that in your
14 construction but what I understand you're saying now is that part
15 of the disclaimer in the prosecution history was that the claim
16 isn't as broad as to just the articulated link, it goes to all the
17 limitations that we talk about in the prosecution history. Is that
18 fair?

19 MR. COHEN: Well, I think just backing up a step and
20 let me see if I understand your point. In the fact that the burden
21 is not on the Patent Owner to prove anything or have any burden
22 shifted to us, the point where they started was is that the
23 Petitioner's expert never considered any of these limitations or
24 parameters and what one of ordinary skill in the art would
25 understand and would look to.

1 So I mean part of what's disclosed in this patent is
2 that this is looking to solve a problem of how they can have in
3 this industry a tractor with a maneuverable blast head that can be
4 operated by the person on riding the tractor as well as being able
5 to move it with the same piece of equipment so that that it can be
6 stored on the truck.

7 JUDGE WOODS: And Mr. Cohen, if I may interrupt
8 to ask a question, I would appreciate that.

9 MR. COHEN: Sure.

10 JUDGE WOODS: Okay. So I understand, and I
11 would like to first refer to Exhibit 1015.

12 MR. COHEN: Okay. Excuse me. Yes.

13 JUDGE WOODS: If you refer to Exhibit 1015, you
14 will see that the Petitioner submitted a definition of articulation
15 as the connection of two parts in such a way usually by a pin
16 joint as to permit relative movement and so the Petitioner has
17 provided in this case extrinsic evidence, dictionary definition, to
18 support its interpretation or construction of articulated or
19 articulated link. Have you provided, or did the Patent Owner
20 provide, its own definition of articulated link that would support
21 its narrower construction?

22 MR. COHEN: No, Your Honor.

23 JUDGE WOODS: Okay. And so I understand, that
24 you're proposing that articulated link is entitled to a special,
25 narrower definition as provided by column 4 of the 116 patent; is
26 that correct?

1 MR. COHEN: What I'm proposing is that the term
2 articulating link within the context of the patent and the
3 prosecution history, there is enough definition and context there
4 that would support a definition for articulated link and not that
5 we would look to extrinsic evidence outside of the four corners
6 of the patent and the prosecution history to establish that point.

7 JUDGE WOODS: Okay. So, just for clarity, your
8 position is that column 4 of the 116 patent provides a special
9 definition for the claim term articulated link that requires a
10 narrower definition?

11 MR. COHEN: Yes, in the sense of what's disclosed in
12 the 116 patent and the prosecution history, it is certainly not as
13 broad as the definition proposed by the Petitioner.

14 JUDGE WOODS: Okay. Thank you.

15 JUDGE ABRAHAM: You proposed your own
16 construction for articulated link, right?

17 MR. COHEN: Yes.

18 JUDGE ABRAHAM: And the support for that
19 construction comes from where? Does it come from column 4 of
20 the 116 patent and the portions of the file history that you've
21 directed us to?

22 MR. COHEN: I would say that consistent with the
23 patent on claim construction that we should be looking
24 intrinsically to the patent for a definition before we go to
25 extrinsic sources, yes.

1 JUDGE ABRAHAM: Okay. So I just wondered -- I'm
2 trying to follow up on Judge Woods' question, where is the
3 support in the intrinsic record for your proposed construction?

4 MR. COHEN: I mean the support for articulated link
5 would be column 4 of the 116 patent in conjunction with the
6 figures that it refers to.

7 JUDGE KENNY: Where in column -- are you
8 contending that there's actually a definition in column 4 of the
9 patent for articulating link?

10 MR. COHEN: Well, I mean the articulating link when
11 you get to line 27 of column 4, the term articulated link is not
12 disclosed in a vacuum. It refers to the figures and it delineates a
13 number of components and how an articulated link in this
14 particular patent would be constructed and arranged.

15 JUDGE KENNY: All right. But I mean some patents
16 have definitions. They say device means X, via means X,
17 sometimes they're express definitions and sometimes they're just
18 merely a description of a particular embodiment and how this
19 particular embodiment in that particular articulating link in that
20 embodiment operates. We're just trying to get where in this
21 column 4 disclosure do you find that it's actually defining the
22 term articulating link rather than just describing the specific
23 embodiment shown in those figures?

24 MR. COHEN: Okay. Well, I mean if you go back to
25 column 4, line 11, it starts with as shown in figures 3 through 5
26 the blast head 23 is connected to the tractor 20 by an articulated

1 link which is capable of horizontal movement as shown in
2 figures 3 and 4 and vertical movement as shown in figure 5.

3 JUDGE KENNY: All right. You take that as a
4 definition for the term articulating link rather than just
5 describing what that specific articulated link 31 in that
6 embodiment is doing?

7 MR. COHEN: I think it's a lot more reasonable
8 definition than is proposed by the Petitioner.

9 JUDGE WOODS: If I could ask one more question I
10 would appreciate that.

11 MR. COHEN: Sure.

12 JUDGE WOODS: I understand there's a related
13 matter. Was claim construction briefed or ordered in that related
14 proceeding?

15 MR. COHEN: No.

16 JUDGE WOODS: Okay. Thank you.

17 MR. COHEN: You're welcome. Are there any more
18 questions related to the articulating link?

19 JUDGE WOODS: I have no questions.

20 JUDGE KENNY: No.

21 MR. COHEN: Okay. The Patent Owner just retains
22 the position -- maintains the position that based on the
23 unreasonably broad claim proposed definitions of the Petitioner
24 with support from an expert opinion that is not followed through
25 or clearly articulated in the record, the motivation to combine all

1 of these references was not articulated by the Petitioner and they
2 haven't met their burden.

3 In a more thorough review of the patent and the file
4 history as was done by the Patent Owner's expert, Dr. King,
5 reveals that this is a more narrow patent than was proposed by
6 the Petitioner and a lot of these references, actually all of them,
7 would not be drawn in or subject to being combined with
8 impermissible hindsight but for casting such a wide net with
9 definitions and proposals that are just unreasonable like, for
10 example, with high pressure, that an expert in this field of
11 endeavor of water blasting and removing highway stripes and
12 runway rubber coatings from repeated jumbo jets landing on
13 airport runways, somebody who's an expert in this field has
14 opined that one of ordinary skill in the art in this field would
15 consider anything above ambient high pressure which draws in
16 all this art which just merely allows for a parts list for Mr. Boos
17 to go back, the Petitioner's expert, and just use impermissible
18 hindsight to say well, yes, if you combined all of these
19 references one of ordinary skill in the art would say okay, well
20 here's an articulating link by his unreasonable definition and
21 here's high pressure by his unreasonable definition and one of
22 ordinary skill in the art would know to put all these together, and
23 when you look at the Petitioner's expert declaration in
24 conjunction with his cross-examination the record is devoid of
25 explicit rationale as to why somebody of ordinary skill in the art
26 would combine all these references to derive these conclusions,

1 and with the burden being on the Petitioner they just have not
2 met their burden to prove why there's a motivation to combine all
3 of these references.

4 And, you know, my commentary here on what
5 articulating link is and the disclosure of the patents as well as
6 what high pressure is in the disclosure in the patent and the
7 patent prosecution history is -- are things that were omitted by
8 the Petitioner's expert which are relevant to how he derives these
9 concussions which have never been delineated with specificity in
10 the record.

11 JUDGE WOODS: If I could interrupt to ask another
12 question, Mr. Cohen.

13 MR. COHEN: Sure.

14 JUDGE WOODS: So I understand the petition, what
15 Petitioner proposes is that a POSITA would have been motivated
16 to combine Jones with NLB to achieve a cleaning system with
17 improved characteristics and increased capabilities, that is, to
18 make it more versatile, and that's why Petitioner is proposing to
19 combine it with NLB's 40,000 pound pressure. So, why is that
20 not a reason?

21 MR. COHEN: If I could refer you to Waterblasting
22 Exhibit 2012 which is the declaration of Dr. Randall King, and if
23 you go to page 39 starting at paragraph 80 that gets into some
24 explanation from the Patent Owner's expert Dr. King where
25 because, and I'll backtrack as well, Dr. King identifies what this
26 particular cleaning system in the 116 patent is directed is to be

1 removing these polymers and deeply embedded road stripes as
2 well as this runway rubber. But when you take into account that
3 that's the cleaning system and what the operating parameters are,
4 to put NLB onto the Jones reference he says in paragraph 80, for
5 example -- actually backing up to paragraph 79, Dr. King's
6 opinion we talked about how the Jones system would be teaching
7 away from what's disclosed in NLB because the last sentence
8 there, that kind of power and pressure would entirely move or
9 shred the turf that Jones has decided to clean, a
10 counterproductive result at the least. And then Dr. King starting
11 at paragraph 80, he's talking about the differences in the two
12 technologies between a low pressure pump and an ultra-high
13 pressure pump and why one of ordinary skill in the art wouldn't
14 combine them.

15 JUDGE WOODS: If I could interrupt to ask another
16 question, Mr. Cohen. So I think that is premised on the
17 assumption that Petitioner's proposed combination would use
18 40,000 pounds to clean astro turf but I don't see their petition as
19 providing that. Instead, what the petition provides is that it
20 would make the combined device more versatile. Am I
21 misunderstanding that?

22 MR. COHEN: I think if I can analogize to what Dr.
23 King is proposing here in his opinion is he's saying by listing all
24 the parameters of why you wouldn't put the NLB pump on a
25 Jones reference is he's saying look, you wouldn't put a jet engine
26 on to a lawn mower just to increase the efficiencies and when

1 you talk about the modifications to go from an ultra-high
2 pressure pump to scale it down to a low pressure pump that's
3 disclosed in Jones, it's hindsight analysis because what the
4 Petitioner's expert is ultimately doing is he's saying well, if I
5 detuned and scaled down the NLB reference and put it on Jones,
6 then it would be obvious to just scale it all the way back up to
7 the NLB reference and there you go, we have a more efficient
8 improved device which would be impermissible hindsight, and
9 Dr. --

10 JUDGE ABRAHAM: Counsel, isn't that what they're
11 saying? Are they saying you would scale down NLB and then
12 scale it back up?

13 MR. COHEN: Well, there is testimony from Mr. Boos
14 in his declaration that you could throttle a pump down and
15 there's no clarification as to why you would do that. He's
16 pressed in numerous places in his cross-examination as to like
17 well, how would you throttle it down? What do you mean by
18 that? Why? And it doesn't make any sense in terms of giving a
19 clearly articulated opinion as what an expert would understand.
20 I mean throttling a 40,000 PSI pump down to 200 pounds, there's
21 never been an explanation as what the motivation for that would
22 be or why somebody of ordinary skill in the art would attempt
23 that, and I realize there are some deficiencies in the record but I
24 mean it's the Petitioner's burden and their expert has not
25 delineated why, you know, you could throttle down or detune or

1 just put the NLB reference, for example, on Jones to draw that
2 art in.

3 I will note that, you know, the Petitioner's argument
4 has changed. Even the proposed definition of high pressure their
5 expert has maintained that it could be anything above ambient,
6 then in his deposition he says well, 100 and 200 are high
7 pressure. Now there's a new reference saying well, the
8 Petitioner's argument is abandoning their expert saying well,
9 2,000 and up could be high pressure but there's never been an
10 explanation as to why a person of ordinary skill in the art would
11 be motivated to put the NLB pump on to Jones and, for example,
12 in the declaration of Dr. Randall King, the Patent Owner's
13 expert, he clearly delineates why one of ordinary skill in the art
14 would not make those modifications and it wouldn't be obvious
15 to them.

16 JUDGE WOODS: Mr. Cohen, if I could ask one more
17 question.

18 MR. COHEN: Sure.

19 JUDGE WOODS: So I understand throughout the
20 brief you mention teaching away, but I understand teaching away
21 is a special term that requires that the prior art references that
22 Petitioner proposed to modify has to provide some explicit -- has
23 to criticize, discredit or discourage the proposed combination.
24 Can you point me to anything in Jones or Clemons that would
25 discourage a 40,000 pound pump?

1 MR. COHEN: I think what puts the Patent Owner in a
2 posture of making this a semi-difficult question is just the fact
3 that the Jones reference is in play based on the Petitioner's
4 unreasonable proposed constructions because as opined by Dr.
5 King in paragraph 79 of his declaration, if you look to Jones and
6 you see that Jones is directed to a turf cleaning machine that's
7 disclosing very low pressures and what somebody with ordinary
8 skill in the art would recognize as low pressure, you would
9 obliterate turf. I mean the purpose of that machine and that
10 patent disclosure is to clean artificial turf, whereas the 116
11 patent we're talking about blasting roadway markings and rubber
12 coatings that you need exit velocities at the same level as a 357
13 magnum and I mean, Dr. King is certainly one of ordinary skill
14 in the art in this area and by reviewing the record it was readily
15 apparent to him that one of ordinary skill in the art wouldn't start
16 at Jones to solve the problems that are solved by the 116 patent.

17 JUDGE KENNY: But NLB itself talks about those
18 applications, right?

19 MR. COHEN: Yes.

20 JUDGE KENNY: About the applications of removing
21 a coating from pavement. So why wouldn't one of ordinary skill
22 in the art looking at this see okay, this is another application that
23 we can use with the same basic structures, I mean obviously not
24 necessarily physically incorporating one pump into the same
25 system, but why can't they combine the teachings or wouldn't
26 they be motivated to do so?

1 MR. COHEN: Because, again, and this is delineated
2 throughout Dr. King's declaration, the pump and the equipment
3 and all the components in an ultra-high pressure pump in no way
4 shape or form resemble a pump that's pumping at 100 to 200 PSI
5 other than they're pumps and, again, reading from paragraph 80
6 for example on in Dr. King's declaration, he's explaining why
7 one of ordinary skill in the art would delineate that there's a very
8 high level of design manufacturing and quality control expertise
9 when you go from low pressures to ultra-high pressures. And,
10 again, the Petitioner's expert --

11 JUDGE KENNY: Is there anywhere Dr. King claims
12 that one of ordinary skill in the art isn't aware of these things?
13 In other words, I mean there's obviously differences when going
14 from low pressure to high pressure but is Dr. King claiming one
15 of ordinary skill in the art wouldn't know those differences and
16 know how to accommodate those differences?

17 MR. COHEN: His opinion basically tracks the
18 premise of one of ordinary skill in the art would not look to
19 Jones to modify that reference to get to NLB because they would
20 require so much retrofitting and components to accommodate
21 safety hazards and the increased pressures and how the pumps
22 are configured, and the different components, you know, like
23 going from maybe a positive displacement gear pump to, you
24 know, to an ultra-high pressure pump that could be a piston
25 pump and he does delineate a bunch of parameters as to why one
26 of ordinary skill in the art wouldn't start with a Jones reference.

1 You'd have to modify the entire pump which, again, is a
2 hindsight analysis.

3 The Petitioner's expert, Mr. Boos, he proposes a
4 definition that's unreasonably broad. He brings up a turf
5 cleaning system and now all of a sudden it's obvious to put an
6 ultra-high pressure pump on a turf cleaner and there's never been
7 a clearly articulated reason as to why one of ordinary skill in the
8 art would be motivated to go from Jones to NLB in terms of
9 combining all these references, and it is the Petitioner's burden
10 to articulate this. Are there any other questions, or I'd like to --

11 JUDGE KENNY: Yes. You still have some time left.
12 Maybe we could go through a few of the questions that I also
13 directed to Petitioner's counsel, the ones about, you know, we're
14 talking about claim 5 in particular and the sizing and the notion
15 of -- well maybe talk about claim 5 in general and then one of
16 the arguments that was made for claim 5, I think as an alternative
17 argument, is that the references, the blast heads could flip up and
18 so I wanted to get your views on that but also just in general if
19 you could address claim 5 and what you see the strengths or
20 weaknesses of the showing on that one art. And then, for
21 example, I mean Petitioner's counsel just mentioned, you know, I
22 think you had mentioned the 8 foot 6 and a need in highways
23 Petitioner's counsel also mentioned, you know, you can also have
24 wide loads so maybe you can address those arguments.

25 MR. COHEN: Well, I mean in terms of wide loads
26 that's a new argument and it's certainly not something that the

1 116 patent tries to solve in claim 5. The other thing is, you
2 know, part of the novelty of this is to be able to have a tractor
3 which is depicted in, for example, figure 3 in the 116 patent that
4 not only can be maneuvered by the operator while they're on the
5 road cleaning the roadway but also that that same system enables
6 the blast head to also be retracted to a position where it will fit
7 onto the bed portion of a truck. So --

8 JUDGE KENNY: Well I guess, let me perhaps sort of
9 direct it a little more here. So we look -- claim 5 has a
10 limitation about it being, let me pull up the claim as we're
11 speaking, it's got a limitation where the mobile blast head and
12 tractor are of a size for removing docking transversely on said
13 bed portion of the truck.

14 Now, I think in your opposition you had mentioned
15 about the 8 foot 6 limitations for highways and you were arguing
16 that Petitioner really hadn't disclosed making a tractor of the size
17 for transversely putting it on a truck. Now Petitioner I think has
18 argued that some of the things that were disclosed, the blast
19 heads could or one of ordinary skill in the art could pull them
20 out of the way and then even more so it's argued it's simply an
21 obvious design choice to make it the right size once you've put it
22 transversely on the truck. I wanted to hear how you respond to
23 those arguments

24 MR. COHEN: In terms of an obvious design, one of
25 the slides that was -- I forgot which slide it was -- but it showed
26 the NLB reference alongside of what's disclosed in figure 2 in

1 the patent and that's the status of the prior art. So to figure out
2 how to a) configure the tractor in a way that would have the dual
3 function, as I mentioned earlier which is depicted in figure 3, to
4 allow the tractor to move both horizontally and vertically
5 depending on which stage of the operation the operator was
6 engaged in, that's not an obvious design choice. I mean that's
7 part of the innovation here and the novelty of figuring out how to
8 fit all of these elements necessary to have a complete system
9 including, you know, we haven't discussed at all the other
10 components of the claim having a high powered vacuum tank on
11 a truck, having a vacuum system, a tank, a method to be able to
12 dump the tank, I mean all these components were innovated in a
13 combination so that all of these pieces can fit on one flat bed
14 and/or a trailer to make it more compact and --

15 JUDGE KENNY: But I guess the question, suppose
16 that we agree with you that 8 foot 6 is the width that needs to be
17 and it needs to be 8 foot 6 or less and one of ordinary skill in the
18 art would know that, why wouldn't they then know how to just
19 put it, you know, make it 8 foot 6? I mean in other words, like I
20 said, Petitioner's arguing it's an obvious design choice, why do
21 you disagree with that?

22 MR. COHEN: I --

23 JUDGE KENNY: Once you've decided to put it
24 transversely, you know, they don't have a reference for that so
25 then the question is why wouldn't the size, you know, putting it

1 to the appropriate size for transverse transportation be an
2 obvious design choice?

3 MR .COHEN: Because the width of the truck, the 8
4 foot 6 inches or the design would need to be less than that to fit
5 on there, that is the parameter of solving the issue of how do we
6 fit all these components on to one truck. So that's the limitation
7 and then the design is well, what sort of system -- how are the
8 components arranged, how can they be powered, what kind of
9 articulating link would be added to this tractor so that they could
10 fit within those parameters and it's hindsight analysis to look at
11 what's disclosed in the 116 patent and say oh, okay, that would
12 have been obvious because a truck is only 8 foot 6 inches wide,
13 that's the parameter we've given to fit the tractor on there then it
14 would be obvious just to make a machine that would fit on there,
15 where the whole problem to be solved was to be able to fit it on
16 there to begin with and --

17 JUDGE KENNY: So how did the patent solve making
18 it that size?

19 MR. COHEN: The patent solves --

20 JUDGE KENNY: (Indiscernible.)

21 MR. COHEN: -- the patent solves the problem is
22 when you look at the prior art of the StripeJet reference, the
23 operator cannot just hydraulically flip up the articulating arm
24 and have it be less than that size so that it could fit onto the
25 truck.

26 JUDGE KENNY: Okay.

1 MR COHEN: So --

2 JUDGE KENNY: So you're saying it's the flip up of
3 the blast head that essentially allows it to meet the limitation of
4 claim 5?

5 MR. COHEN: Yes.

6 JUDGE KENNY: And let me -- you know, just
7 looking at claim 5 now it does require a size for -- by the way it
8 does look like your time may be slightly up but we're also giving
9 you a few minutes because of the questions we're asking you.

10 MR. COHEN: Thank you.

11 JUDGE KENNY: So, now claim 5 itself doesn't
12 require that this be used on the highway, right? I mean it just
13 requires that it be a size for removably docking transversely on a
14 said bed portion of a truck.

15 MR. COHEN: Right.

16 JUDGE KENNY: To read in the limitation like 8 foot
17 6, I mean why didn't the Appellant just put in that limitation that
18 it must be less than 8 feet 6 inches?

19 MR. COHEN: I mean, and again just handling this
20 argument for the first time, I mean one of ordinary skill in the art
21 in this area would know what the limitations of, you know, truck
22 beds are and what the trucking regulations are and that if the
23 problem to be solved is to create a, you know, a cleaning system
24 for cleaning the airport runway rubbers as well as the line stripes
25 off of the road, the deeply embedded polymer ones, those would
26 be kind of the start parameters as to what the limitations are of

1 how to innovate all of these components to fit them on, you
2 know, an existing truck body and chassis.

3 JUDGE KENNY: But I mean if I built one that
4 happens to be -- my tractor with the mobile blast head happened
5 to be 12 feet long and I happen to have a huge truck that is 13
6 feet wide, can't I satisfy claim 5?

7 MR. COHEN: I'm not sure why the limitation
8 necessarily would have to be read into claim 5. I mean the
9 chassis is attached to the tractor in a way that it can be
10 removably docked transversely but I mean this depends on claim
11 1 which incorporates the articulating link which also
12 incorporates the design parameter that, you know, 8 foot 6 inches
13 would be the standard size that one of ordinary skill in the art
14 would understand would be the parameters to operate around in
15 designing the system and therefore the idea is to fit all these
16 components on to one truck, you know, and to improve the
17 maneuverability both getting it onto and off of the truck as well
18 as being able to maneuver the blast head in operation.

19 And I guess if I may, I think what I'm trying to
20 articulate -- I don't know if I've conveyed this -- is that the
21 requirement that the tractor and the mobile blast head are a size
22 for removably docking transversely on said portion of the truck,
23 I mean that's just talking about whether or not this tractor could
24 be removed and that it would --

25 JUDGE KENNY: Well, I mean they've got a
26 reference that teaches the concept of putting something on a

1 truck transversely and having it be the correct size, I mean that
2 they do rely on that. So, you know, I guess the question, I think
3 the argument had been made that you were making was that they
4 hadn't said enough about the size necessary for highway
5 applications for claim 5.

6 MR. COHEN: I mean claim 5 is relying on the
7 Schrunk reference --

8 JUDGE KENNY: Right.

9 MR. COHEN: -- which I mean that's a reference that
10 discloses ramps for putting it looks like an all-terrain vehicle on
11 the side of a truck which, again, I mean I would concede that that
12 would be obvious or that's a method of loading a truck or a
13 vehicle onto a truck or a flatbed and being able to fit. But the
14 point here is, I mean claim 5 depends from claim 1 but we're
15 talking about being able to fit the tractor onto the trailer or onto
16 the chassis in what the disclosed configuration is and staying
17 true to the patent that all of these components can fit onto one
18 vehicle, and I understand your argument well, okay, well what if
19 I had a 12 foot long trailer or tractor or whatever, I just keep
20 making it bigger. I mean there are practical parameters as to
21 what would be an ideal product and, you know, building a truck
22 that would be able to be driven over the road on a regular basis
23 is what the problem the 116 patent is designed to solve. So I
24 think that's where claim 5 would incorporate that.

25 JUDGE KENNY: I don't think we have any further
26 questions and I don't know if you're finished at this point.

1 MR. COHEN: Yes. I'm (indiscernible.)

2 JUDGE KENNY: You obviously have your rebuttal --
3 you still have your ten minutes of rebuttal.

4 MR. COHEN: Thank you.

5 JUDGE ABRAHAM: You can begin whenever you're
6 ready.

7 MR. PFEIFER: Okay. So I would like to continue
8 discussing claim 5 because I just want to stay with this topic,
9 keep it fresh. Judge Kenny, you basically took the words right
10 out of my mouth. Claim 5 does not require that the tractor be
11 transported while being transversely loaded on the truck. In fact,
12 this entire IPR started because of a lawsuit that was based on a
13 tractor which was loaded transversely, then rotated 90 degrees
14 and stored that way. So the tractor was actually longer than 8
15 foot 6 inches but because it was rotated, it therefore was
16 infringing this patent according to Patent Owner. So specifically
17 claim 5 does not require that we transport a tractor that's 8 foot 6
18 inches in length transversely, rather all it requires is that it be of
19 a size for loading transversely onto a truck.

20 In addition, as you noted there's no actual size for the
21 truck itself so, again, if it is a 13 foot wide truck and I load a 12
22 foot wide tractor and blast head combination onto that truck,
23 we've met the limitation.

24 JUDGE KENNY: But I mean the reference you're
25 relying on, that reference is transporting it in a transverse
26 manner, is it not? Schrunk?

1 MR. PFEIFER: Yes. It would be loaded and also
2 transported transversely and as you can see in figure 1 of
3 Schrunk, it is of a size that is within the outer bounds of the
4 width of the truck. I think you're absolutely correct in that the
5 claim does in itself require that it be of 8 foot 6 inches or less.
6 That's not in there, that's reading a limitation into the claims.

7 JUDGE KENNY: But I guess the question would be
8 like one of ordinary in the skill motivated to do this, wouldn't
9 they be aware of this 8 foot 6 limitation before they decided to
10 take this transverse loading -- I mean they'd either be thinking
11 that they'd need to get into that length, well potentially I mean
12 unless they're going to wide loads, be thinking they have to get it
13 down to 8 foot 6 or alternatively they would need some kind of
14 shifting device like you just mentioned, which I don't think is
15 mentioned in Schrunk, you know, where you can switch it
16 longitudinally.

17 So what would be, okay, so maybe you can go through
18 with me a little more on the motivation because I think that's
19 probably where a lot of the arguments are going. Why would one
20 taking a look at this relatively small vehicle and think that we
21 could do the same thing with, you know, this device that has a
22 blast head on it?

23 MR. PFEIFER: Yes. So when we looked at Jones
24 specifically, Jones says the tractor can be any suitable size.
25 When we looked at NLB, NLB says it is a compact tractor. As
26 you mentioned a person of ordinary skill in the art, if they

1 wanted to transport it along the highway which is not a claim
2 requirement, that person of ordinary skill in the art would be
3 aware of those DOT limits and would likely create either a
4 tractor in combination of a blast head that is within 8 foot 6
5 inches or the blast head would be capable of moving or even be
6 detached. There's nothing in claim 5 requiring that it can be
7 loaded and then detached, it's just that it can be loaded and if
8 we're really getting down to the physics of the claim, anything
9 that can be loaded and is in a center of gravity over the truck can
10 be loaded onto that truck. That's all that's required. There's no
11 requirement that it be transported, there's no requirement that the
12 blast head may remain on the vehicle, there's no requirement that
13 it be under any DOT standards whether that's wide load or
14 standard, it's just not in the claim.

15 JUDGE KENNY: Well what about the term docking?
16 I mean how are you interpreting that? That's in claim 5, it's
17 referring to it as removably docking and not just merely placing.
18 What do you think that means, docking?

19 MR. PFEIFER: Docking? That's a good question.

20 JUDGE KENNY: I mean because in other words
21 docking would seem to imply some kind of permanence to it.

22 MR. PFEIFER: Well, I mean if we look to -- the only
23 thing I can think of with respect to docking is related to the
24 boating industry. We're not permanently docking anything
25 especially when it comes to, you know, ferries or something like
26 that, they dock and then they move. So that's definitely up to

1 interpretation but I mean when we really look to the actual claim
2 language itself, requiring it to be docked does not require that it
3 be transported. So even if we left it permanently there, or if the
4 truck's not moved, the limitation is met.

5 JUDGE KENNY: But why would you put it on the
6 truck if you're not going to move it?

7 MR. PFEIFER: Maybe you want to store it on a truck.
8 Maybe --

9 JUDGE KENNY: But I mean one of ordinary skill in
10 the art has to be motivated to do this. A truck isn't going to be
11 the most convenient form for storage. I mean it would see that
12 there is going to be some implication of some motion, otherwise
13 why would you put it on a truck?

14 MR. PFEIFER: Uh-huh. So maybe you want to store
15 it on a wider truck. You know, again, there's no requirements
16 that the truck be of any certain width. As you identified, it could
17 be 13 feet. Plus I think that a person of ordinary skill in the art
18 would be aware of wide load limits or DOT standards and would
19 adjust the system to accommodate that because Jones only
20 requires that it be any suitable size, the tractor can be any
21 suitable size and then NLB just discloses that it's a compact
22 tractor with a tight turning radius. There's no requirements there
23 in either of those references that they be a certain minimum
24 length which would exceed that 8 foot 6 limit that Patent Owner
25 is trying to read into the limitations. Does that make sense?

1 We can keep talking about this if you have any more
2 questions, otherwise I would like to briefly discuss high pressure
3 because you asked me a question earlier which I didn't get to.

4 JUDGE KENNY: Sure.

5 MR. PFEIFER: Okay. So we were discussing the
6 prosecution history with PSI being 1,500 to 5,000 PSI and in
7 there, specifically the prosecution history, it stated that the
8 proper amount of pressure for high pressure would be that
9 capable of removing these coatings from a surface. Dr. King in
10 cross-examination specifically stated that a handheld pressure
11 washer that he was using which he earlier identified as having
12 roughly 2,000 PSI would actually remove stripes from a
13 highway. So there's one instance where 2,000 PSI constitutes
14 high pressure in accordance with the prosecution history and in
15 addition, the FAA Conference paper specifically states that 2,000
16 to 15,000 PSI is sufficient to remove runway rubber.

17 So, again, these are two -- one is Patent Owner's
18 expert and the other is another independent expert in the field --
19 has identified that 2,000 PSI and greater can remove these
20 coatings that the 116 patent is apparently being used to remove
21 and --

22 JUDGE KENNY: But didn't they characterize -- I
23 mean I'm looking at page 110 of the prosecution history, Exhibit
24 2002 -- didn't they characterize water pressure of, you know, to
25 1,500 PSI and then for 5,000 PSI as low pressure water?

1 MR. PFEIFER: Well I believe what they first did is
2 they said that amount of pressure would not remove these
3 coatings from the highway, and then they said because of that it
4 is therefore low pressure. However, as Dr. King has stated 2,000
5 PSI will remove coating from a highway and, again, that third
6 party expert with the FAA Conference also clarified that 2,000
7 PSI will in fact remove coatings and if we look to the actual
8 definition that Patent Owner and Dr. King present for high
9 pressure, they state that it is a pressure sufficiently high enough
10 to be able to blast a coating off a hard surface by severing the
11 bond between the coating and the hard surface. Again, Dr. King
12 said 2,000 PSI in a handheld pressure washer will do that and
13 again the FAA Conference paper identifies clearly that 2,000 to
14 15,000 PSI will remove coatings from a hard surface.

15 So, you know, while that statement was in the
16 prosecution history it appears to be factually inaccurate and well,
17 I'm not going to go there. But yes, the facts clearly show that
18 2,000 PSI is sufficient to remove these coatings in accordance
19 with Patent Owner's definition of high pressure.

20 I'm just reviewing my notes here to see if I want to
21 address anything else. Are there any particular questions that
22 the Board has?

23 JUDGE ABRAHAM: I have no questions.

24 MR. PFEIFER: Okay. So I guess I'll just wrap it up.
25 Again, the mere substitution of known components for other
26 known components is obvious. The law dictates that. Each of

1 the prior art references and the 116 patent have a blast head,
2 their respective vacuum and water hoses extending back to their
3 respective pumps and tanks. They all operate in the same
4 manner. The pressurize water which is discharged through a
5 blast head, the resulting debris and discharged water is then
6 vacuumed up and deposited into a vacuum tank. They all operate
7 in the same manner, same principle of operation and a person of
8 ordinary skill in the art would have realized that you could
9 simply substitute these pumps and components for the higher
10 pressure pumps and components and achieve a very predictable
11 result, one that is specifically disclosed in NLB.

12 If the Board doesn't have any more questions, we will
13 rest. All right. Thank you very much.

14 MR. COHEN: Okay. Just in conclusion, you know,
15 some of the questions that were posed here today gets to the
16 heart of the issue of what would one of ordinary skill in the art
17 consider in its entirety and, you know, some of the testimony of
18 Dr. King in his deposition, or cross-examination, is taken out of
19 context and is framed in a manner that he was clear in his
20 declaration as to -- with, for example, the calculation we talked
21 about earlier what the exit velocities would be and what sort of
22 pressures would be involved and nozzle sizing, and gallons per
23 minute flow rates to achieve the objective of being able to
24 remove these embedded polymer coatings as well as, you know,
25 rubber that's embedded in a runway.

1 The Petitioner's expert, Mr. Boos, has never fully
2 considered anywhere in the record and articulated why one of
3 ordinary skill in the art would be motivated to combine all of
4 these references. A lot of the position that's been put forth
5 throughout the course of this inter partes review has changed.
6 The Petitioner's expert started out with definitions, for example,
7 of high pressure that's just above ambient, that in his cross-
8 examination it could be anywhere from 100 to 200 PSI is still
9 high pressure and then in the Petitioner's latest response there's a
10 new reference talking about pressures between 2,000 and 15,000.

11 The prosecution histories were never considered by
12 the Petitioner's expert and for these reasons the Petitioner's
13 expert, Mr. Boos, the weight given to his testimony should be
14 afforded little to no weight at all because there is no clear
15 articulation in the record as to why a person of ordinary skill in
16 the art in this field of endeavor that the 116 patent is directed to
17 would be motivated to combine all these references.

18 Today, the Petitioner has even advanced an argument
19 saying well, you don't necessarily even need to look to an expert
20 to figure out, you know, what the motivation to combine would
21 be. Expert testimony concerning motivation to combine is
22 unnecessary was their position. But the case law is clear, you
23 know, in recognizing the role of common knowledge and
24 common sense we have emphasized the importance of a factual
25 foundation to support a party's claim about what one of ordinary
26 skill in the relevant art would have known and that's Mintz v.

1 Dietz and Watson, 670 Fd. 3rd 1372. The mere recitation of the
2 words common sense without any support adds nothing to the
3 obviousness question.

4 It's the Petitioner's burden here to establish why one
5 of ordinary skill in the art would be motivated to combine these
6 references. There has never been an explicit and clear reasoning
7 provided by the Petitioner's expert as to some rational
8 underpinning of why common sense would compel a finding of
9 obviousness. The whole genesis of this proceeding started with
10 some unreasonably broad proposed claim constructions which
11 drew in all kinds of prior art which yielded combinations of
12 references that, you know, the Petitioner's expert has opined are
13 obvious and in a review of the record including Mr. Boos' cross-
14 examination testimony, it's clear that he used hindsight analysis
15 to build the best system. There's concessions in his cross-
16 examination that well, you wouldn't use the Jones reference to
17 clean turf but you would just add NLB reference to it and
18 everybody would know that for removing stripes, excuse me.
19 You wouldn't use Jones to remove stripes is just one of the many
20 concessions or inconsistencies or lack of clarity and specificity as
21 to why one of ordinary skill in the art would combine these
22 references and Patent Owner has never contested the
23 qualifications of Mr. Boos to render an opinion that's consistent
24 with somebody of ordinary in the art in this field. You just say
25 that his opinion is devoid of any of the facts and reasoning that
26 would allow the Petitioner to prevail and meet their burden.

1 Unless there's other questions, I have nothing further.

2 JUDGE ABRAHAM: No questions.

3 JUDGE KENNY: Thank you counsel. Okay. Thank

4 you all. The case is submitted.

5 (Whereupon, at 3:12 p.m., the oral hearing was

6 concluded.)

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Patent 7,255,116 B2

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