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

SRAM, LLC,)
Petitioner,)
vs.)
FOX FACTORY, INC.,)
Patent Owner.)

Case IPR2024-00216
Patent No. 8,550,223 B2

Remote Videotaped Deposition of
ERIC WANG, Ph.D.
August 13, 2024
11:13 a.m.

Reported by: Bonnie L. Russo
Job No. 6857245

PAGES 1 - 141

1 Remote Videotaped Deposition of Eric Wang,
2 Ph.D. held through:

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6 Veritext Legal Solutions
7 1250 I Street, N.W.
8 Washington, D.C.
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18 Pursuant to Notice, when were present on behalf
19 of the respective parties:
20
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22

Page 2

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2	EXAMINATION OF ERIC WANG, Ph.D.	PAGE
3	BY MR. BHATTACHARYYA	6
4	BY MR. HICKEY	135
5		
6	PREVIOUSLY MARKED EXHIBITS:	
7	Exhibit 1001	United States
		Patent 8,550,223 B2
8	Exhibit 1002	Declaration of
9		Eric Wang, Ph.D.
10	Exhibit 1005	United States
		Patent 6,558,430 B1
11	Exhibit 1006	United States
12		Patent 5,405,407
13	Exhibit 1007	UK Patent Application
		2 377 254 A
14	Exhibit 1008	United States
15		Patent Application
		Publication US 2006/0283676 A1
16	Exhibit 1009	United States
17		Patent 6,604,751 B2
18	Exhibit 1010	United States
		Patent 8,162,112 B2
19	Exhibit 2024	Decision Granting
20		Institution of
		Inter Partes Review
21		
22	(Exhibits bound separately.)	

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P R O C E E D I N G S
(11:13 a.m.)

THE COURT REPORTER: I have a stipulation to put on the record.

The attorneys participating in this deposition acknowledge that I am not physically present in the deposition room and that I will be reporting this deposition remotely.

They further acknowledge that, in lieu of an oath administered in person, I will administer the oath remotely.

The parties further agree that if the witness is testifying from a state where I am not a notary, that the witness may be sworn in by an out-of-state notary.

If any party has an objection to this manner of reporting, please state it now.

(Pause.)

THE COURT REPORTER: Hearing none, we can proceed and I will swear in the witness.

1 ERIC WANG, PH.D.,
2 being first duly sworn, to tell the truth, the
3 whole truth and nothing but the truth,
4 testified as follows:

5 MS. BHATTACHARYYA: Good morning,
6 everyone. This is Arpita Bhattacharrya from
7 the Finnegan law firm on behalf of Fox Factory,
8 Inc.

9 MR. HICKEY: Michael Hickey, counsel
10 for SRAM, LLC, and I am joined by my counsel
11 Rick Walsh.

12 EXAMINATION BY COUNSEL ON BEHALF OF
13 PATENT OWNER

14 BY MS. BHATTACHARYYA:

15 Q. Good morning, Dr. Wang.

16 A. Morning.

17 Q. Dr. Wang, since you have been
18 deposed previously in the litigation that is
19 running parallel with this IPR, I will spare
20 you all the long instructions before starting a
21 deposition, but do you have any questions
22 before we get started about how things will

1 proceed today?

2 A. No. I just want you to know I have
3 some clean copies I printed of my IPR which is
4 Exhibit 1002.

5 Q. Okay.

6 A. And the '223 patent and the Nakaya
7 patent which is Exhibit 1005. I have clean
8 copies of those printed.

9 Q. Okay. That's fine with me. If you
10 want to refer to those, that's fine. If you
11 want to look at the PDF copies that are in the
12 exhibit folder, you can do that. Whatever you
13 wish.

14 A. Okay.

15 Q. Dr. Wang, before we get started, I
16 do have to ask: Do you understand that you are
17 under oath today to answer my questions
18 truthfully and completely?

19 A. Yes.

20 Q. And I'm sure the answer to this is
21 no, but I have to ask: Is there -- are you
22 under the influence of any medication or

1 alcohol that would prevent you from answering
2 my questions truthfully and completely?

3 A. No.

4 Q. Okay. Let's get started.

5 Where are you appearing for this
6 deposition today? Where are you located?

7 A. In my office in Reno, Nevada.

8 Q. Is counsel present with you?

9 A. No. Well, over video obviously, but
10 not physically.

11 Q. What have you done to prepare for
12 the deposition today?

13 A. Pardon?

14 Q. What have you done to prepare for
15 the deposition today?

16 A. I reviewed obviously my IPR
17 deposition, reviewed the invalidity report I
18 did, reviewed my noninfringement report,
19 reviewed lots of patents related to the case,
20 all these exhibits I think you have listed
21 here.

22 I had a brief discussion with Lewis

1 Rice, SRAM's attorneys yesterday. That was
2 about a little over an hour, maybe an hour and
3 a half. But that's about it.

4 Q. So you said you reviewed your IPR
5 deposition.

6 Do you mean your declaration?

7 A. Declaration. I'm sorry, IPR
8 declaration, yes.

9 Q. And you said you reviewed your
10 noninfringement report.

11 Is that from the parallel litigation
12 that is going on in the District of Colorado?

13 A. I'm not familiar what districts are
14 going on, but, yes, I prepared a
15 noninfringement report, I prepared a non-- an
16 invalidity report, I have also been deposed
17 twice. I reviewed those transcripts, so I
18 guess that's the parallel litigation. I'm not
19 familiar with all the different streams of
20 litigation going on, but yeah.

21 Q. Who did you meet with at Lewis Rice?

22 A. Yesterday, a Zoom call, it was

1 Michael Hickey, Michael Durbin and Rick Walsh.

2 Q. And you said that meeting was about
3 an hour?

4 A. A little over an hour, maybe an hour
5 and a half, I think, somewhere between an hour
6 and an hour and a half.

7 Q. Have you reviewed the declaration
8 that has been submitted by Mr. Kevin Wesling in
9 this IPR?

10 A. I have not reviewed that.

11 Q. Who prepared a draft of --

12 A. Sorry to interrupt. I did also
13 review the board's, whatever that is called,
14 the ruling. I can't remember what it is
15 called.

16 Q. Institution decision?

17 A. Yes, that's the one, yes.

18 Q. So going back to my question that I
19 was about to ask, who prepared the draft of
20 your declaration?

21 A. Who prepared the draft of my
22 declaration? I prepared the -- I wrote the

1 entire report. I mean, I went back and forth
2 with Lewis Rice but I put in many, many hours
3 to prepare that report.

4 Q. And how many hours would you
5 anticipate having put in to preparing your
6 declaration?

7 A. I went back and looked at my
8 invoices, because I thought that might be a
9 question you would ask, so direct billed hours,
10 to this report, were about 30 hours over
11 several months, but, of course, there were
12 many, many other hours spent to -- you know,
13 reading patents and things like that to
14 prepare, but I billed about 30 hours directly
15 to the -- writing this report.

16 Q. And when you were preparing your
17 declaration, who did you go back and forth with
18 at Lewis Rice?

19 A. Several of the attorneys, primarily
20 -- I believe it was Michael Durbin, but I
21 believe Michael Hickey and Rick Walsh were
22 obviously involved. I just don't know. I

1 think my primary point of contact was Michael
2 Durbin. Once I sent a draft to him, I don't
3 know how many other people at Lewis Rice looked
4 at it, but then it comes back and then Michael
5 Durbin and I would talk over the phone or Zoom
6 and discuss the various comments and feedback.

7 Q. Did you talk to anyone at SRAM
8 during the preparation of your declaration?

9 A. I don't believe so. I only had one
10 meeting with SRAM but it was a Zoom meeting
11 with SRAM and Lewis Rice was all involved, but
12 I don't believe that was related to the IPR.
13 That was a long time ago. I have only had one
14 meeting with SRAM though.

15 Q. Have you talked with Mr. Kevin
16 Wesling during the preparation of your
17 declaration?

18 A. The only conversation I had with
19 Kevin Wesling was in the courtroom in Denver.
20 We sat next to each other in the courtroom.

21 Q. So you are obviously familiar with
22 the subject matter of the '223 patent, correct?

1 A. Yes.

2 Q. And you are okay with me referring
3 to it as the '223 patent, right?

4 A. Yes.

5 Q. No confusion there?

6 A. No.

7 Q. You know what patent I am referring
8 to?

9 A. That's fine.

10 Q. The '223 patent is directed to
11 technology for protection against bottoming
12 out, correct?

13 A. I would say the '223 patent is
14 claiming a device that can mitigate the
15 bottoming out of a shock absorber through
16 user-adjustable dampening. That's the way I
17 would characterize it.

18 Q. And what do you mean by "shock
19 absorber"?

20 A. Well, shock absorbers in general can
21 be defined a couple different ways. Some
22 people, including myself, will define it as a

1 damper and a spring device. Some people will
2 call the spring the spring, and some people
3 will call the damper the shock absorber, but
4 the overlap there, of course, is the shock
5 absorber will include a damper, which is
6 primarily in the '223 patent, they are talking
7 about the damper aspect of shock absorber but I
8 use it interchangeably. Shock absorber, I will
9 call spring and a damper combination, shock
10 absorber.

11 Q. Would you agree then that the bottom
12 out protection technology that is described in
13 the '223 patent, provides dampening at the end
14 portion of a compression shock? Sorry, I will
15 -- let me rephrase that.

16 Would you agree that the bottom out
17 protection technology that is described in the
18 '223 patent provides dampening at the end
19 portion of compression stroke?

20 A. It provides -- the shock absorber,
21 the damper is providing dampening to the entire
22 portion of stroke, even dampening of the

1 rebound stroke, but what the '223 claim is
2 claiming is this damping at the end of the
3 stroke, which is increased damping to help
4 mitigate the effects of bottoming out, so at
5 the end of the stroke, compression stroke.

6 Q. So at -- the '223 patent is
7 describing the increased damping at the -- near
8 the end of the compression stroke, using a
9 bottom out cup technology, correct?

10 A. Using a bottom out cup with
11 user-adjustable damping.

12 Q. So just to rephrase. The '223
13 patent is describing damping near the end of a
14 compression stroke using a bottom out cup with
15 user-adjustable damping characteristics,
16 correct?

17 A. I think that's what I said, right?
18 Yeah.

19 The '223 patent, like I said
20 earlier, '223 patent is describing a device
21 that helps mitigate bottoming out using its
22 bottom out cup with a usable adjustable

1 damping. I think we are in agreement with what
2 we are saying.

3 Q. I think so. I just wanted to
4 clarify that the increased dampening that is
5 provided by the bottom out cut, is provided
6 near the end portion of a compression stroke.

7 Would you agree with that?

8 A. The bottom out cups in general are
9 activated towards the end of a -- the
10 compression stroke, so that's the damping is at
11 the end of the -- near the bottom out event.

12 You know, what that means, is a 10
13 percent, a 50 percent. That's a variable, but
14 toward the end of the stroke -- of the
15 compression stroke, that bottom out cup becomes
16 active and they have included adjustable
17 damping into that bottom out cup, which is
18 active at the end of the compression stroke,
19 near the bottom out event.

20 Q. The bottom out cup technology that
21 is described in the '223 patent includes a
22 bottom out cup and a bottom out piston that

1 slides in and out of it, correct?

2 A. My recollection is only some of the
3 claims actually discuss a bottom out piston.

4 Q. Would the bottom out cup technology
5 that is described in the '223 patent work
6 without a bottom out piston?

7 A. I'm not sure -- so we are talking
8 about bottom out pistons. We have had this
9 discussion, you and I have had this discussion
10 before, so I am just trying to refresh my
11 memory.

12 You know, what we call a piston
13 sometimes might be, for example, the end of a
14 shaft. So you could have a shaft or plug
15 shaped element for example, which -- which --
16 previously, you have not described as a piston
17 but I would describe as a piston. You have to
18 have some type of element, I think, that
19 interacts with the bottom out cup, but as
20 again, the claims don't -- some of the claim,
21 many of the claims don't talk about a piston,
22 so there may be -- I can't think of them off

1 the top of my head, but there may be other ways
2 which would read on the claims that would
3 involve a piston.

4 Again, I can't think of any right
5 off the top of my head but certainly those
6 claims leave that open.

7 Q. Sure. But having read the
8 specification of the '223 patent, and I'm not
9 asking you to think beyond the '223 patent,
10 would the bottom out cup technology that is
11 described in the '223 patent function without
12 some form of an element like a piston
13 interacting with the bottom out cup?

14 A. I think something would have to
15 interact with the bottom out cup to provide the
16 fluid flow. Whether that is, you know, the
17 main piston that is already doing the damping,
18 there might be some arrangement they can figure
19 out, where that enters the bottom out cup,
20 whether it's the shaft or some other piston.
21 Something must be interacting with the bottom
22 out cup in order to force the fluid into that

1 cup and out of whatever flow channels happen to
2 be to exit it, so there must be something there
3 that interacts with it.

4 Q. And in the bottom out cup that is
5 described in the '223 patent, there is some
6 amount of compression that happens in that cup
7 near the end of a compression stroke, correct?

8 A. I'm not sure of your question, I
9 guess. I mean, compression has to happen
10 during the compression stroke, that is by
11 definition. So the bottom out cup is active
12 during the compression stroke, so there is
13 compression going on in the bottom out cup
14 during the compression stroke.

15 Q. And would you agree that the
16 compression that happens in the bottom out cup
17 during a compression stroke is separate from
18 the compression that happens in the primary
19 compression chamber of the damper?

20 A. I'm not sure what you mean by
21 "separate." I mean, there is damping occurring
22 in -- the damping occurs because flow is being

1 forced through, typically, damping is occurring
2 because fluid is being forced through some type
3 of orifice or shim stack or some other
4 restriction.

5 While there is compression occurring
6 in the bottom out cup, there is still, in most
7 cases, will be compression occurring in the
8 main compression chamber also. So when you're
9 saying "separate," there is lots of fluid
10 moving around and so there is damping occurring
11 because -- rephrase that.

12 There is -- it's hard to separate
13 those, I guess, is what the point is.

14 Q. What I am -- let me ask the -- same
15 question but maybe use different terminology.

16 Let's -- the damper there is a
17 primary compression chamber, correct?

18 A. The '223 patent calls out a primary
19 compression, a primary rebound chamber, I
20 believe, yes.

21 Q. And then there is a bottom out cup
22 in which there is also some compression

1 happening near the end of the compression
2 stroke, correct?

3 A. The '223 patent describes the bottom
4 out cup and as we discussed, compression occurs
5 somehow in that bottom out cup.

6 Q. Would you agree that the bottom out
7 cup is a secondary compression volume that is
8 positioned towards the end of the compression
9 portion?

10 A. I would agree that -- as I said
11 before, that that -- that the bottom out cup,
12 there is compression and there is damping going
13 on in combination with the primary compression
14 -- the primary piston, which does the
15 compression and rebound damping typically, but
16 again, it's hard to separate those because --
17 in the case of '223, they are talking about
18 fluid flowing to and from the primary and the
19 bottom out cup, you know, between these two,
20 you know, elements and so, where is the damping
21 occurring?

22 Is it occurring in the bottom out

1 cup or is it occurring in the primary? When
2 it's kind of occurring between the two, and
3 also, you know, between the bottom out cup and
4 the reservoir, between the bottom out --
5 between the primary compression and the
6 reservoir, you know, it's kind of hard to
7 distinguish where is the damping occurring.
8 You can't say it's occurring in the bottom out
9 cup.

10 Q. Would you agree with referring to
11 the bottom out cup as described in the '223
12 patent as a secondary compression volume?

13 A. I don't think the claims use the
14 word "secondary" anyplace, so I don't think I
15 would agree with that.

16 Q. Just to distinguish it from the
17 primary compression chamber, which is referred
18 to in many of the claims, would you agree to
19 referring to the bottom out cup as a secondary
20 compression volume to distinguish from the
21 primary compression chamber?

22 A. I would call the bottom out cup the

1 bottom out cup. I wouldn't call it a secondary
2 -- because the claims don't say -- you know, I
3 have been using language that's not in the
4 claim, I look at the bottom out cup as the
5 bottom out cup.

6 Q. Would you agree that the bottom out
7 cup is a compression volume?

8 A. I agree that -- that compression
9 takes place in the bottom out cup. Compression
10 also takes place in the main compression
11 chamber. Compression takes place in the
12 rebound chamber during rebound stroke, so
13 there's lots of compression volumes.
14 Compression takes place in the reservoir.

15 Q. But the bottom out cup is at least
16 one of the compression volumes of the shock
17 absorber, correct?

18 A. Compression takes place, yes, in the
19 bottom out cup.

20 Q. Go to the Gartner reference which is
21 marked as Exhibit 1010.

22 A. Gartner. Okay. Sorry.

1 All right. Yes, I have got the
2 Gartner exhibit open.

3 Q. Okay.

4 A. Yes.

5 Q. You have studied the Gartner
6 reference, correct?

7 A. Yes.

8 Q. Did you review it yesterday in
9 preparation for your deposition today?

10 A. Yes, briefly.

11 Q. You are referring to the embodiment
12 that is shown in Figures 12A, 12B and 12C of
13 Gartner in your declaration vis-à-vis the '223
14 patent claims, correct?

15 A. Yes, that's correct.

16 Q. Figures 12A, B and C, are referring
17 to a shock absorber 420, correct?

18 A. Shock absorber -- I can't remember
19 what the number is, yes -- yes, 420, yes,
20 that's correct.

21 Q. And the shock absorber 420 includes
22 within it, another internal shock absorber 400,

1 correct?

2 A. I can't remember what exact wording
3 is for, but there is a -- what I would call a
4 bottom out cup 400.

5 Q. But the Gartner reference refers to
6 the component 400 as a second internal shock
7 absorber, correct?

8 A. I'm just going to open this and word
9 search I think. Let me see.

10 Q. I can refer you to Column 9 starting
11 at Line 25.

12 A. Sure. Column 9, line -- I will zoom
13 in here. Line 25.

14 Yes, so there, they call this
15 element 400 a second internal shock absorber.

16 Q. And you are referring to the volume
17 within the second internal shock absorber 400
18 as a bottom out cup, correct?

19 A. I would -- say it one more time.
20 Say it one more time. I'm sorry.

21 Q. You are referring to the volume or
22 space within the second internal shock absorber

1 400 as a bottom out cup, correct?

2 A. The volume inside -- let me look at
3 the Figure 12 again.

4 Yeah, I would say that the volume
5 inside, I think if you look at my declarations,
6 easier to discuss, because I laid out in the
7 picture, I think, color-coded picture. If I
8 can find it here.

9 I think we are in agreement, but let
10 me just make sure that we are in agreement,
11 because there is a color-coded -- I think on
12 page -- -- on Page 147 of my declaration,
13 Figure 12A is colorized, which is Exhibit 1002,
14 its color is pink. So I am saying that is the
15 bottom out cup which I think is what you are
16 calling internal volume of 400.

17 Q. So you agree with me that you are
18 referring to the internal volume of the second
19 shock absorber 400 as the bottom out cup
20 recited in the '223 patent claims, correct?

21 A. The internal volume -- yes and no.
22 The reason I am hesitating is because there are

1 other structures inside that volume, but yeah,
2 there is a volume that -- outside of that thing
3 is the bottom out cup.

4 There is stuff inside there
5 obviously, also other elements inside, which
6 might -- was the cause for my hesitation, but,
7 yeah, that -- if you call the volume that --
8 the shell of that 400.

9 Q. So just to rephrase. What you call
10 the chamber that forms the second internal
11 shock absorber 400 -- strike that.

12 Are you referring to the chamber
13 that forms the second internal shock absorber
14 400 as the bottom out cup?

15 A. The chamber -- that element 400 has,
16 which is the -- he calls this, what did we just
17 call it, the --

18 Q. Second internal shock absorber.

19 A. Thank you. The second internal
20 shock absorber, so that shell or that casing,
21 as I said, I have labeled it, that color as
22 pink in my declaration, that is the bottom out

1 cup.

2 Q. And the second shock absorber 400
3 includes, inside it, a piston and other
4 elements, correct?

5 A. It includes a piston and spring
6 elements, yes.

7 Q. And does the piston that is inside
8 the second shock absorber 400 ever leave that
9 shock absorber 400, or does this just stroke
10 inside the volume of the shock absorber 400?

11 A. That piston is -- remains inside
12 that element 400, the -- what did you call it,
13 the second shock absorber? I can't remember
14 what you called it.

15 Q. We can just call it shock absorber
16 400 or I don't want to put words in your mouth.
17 Use whatever terminology you want to use.

18 I am just referring to the
19 terminology that's in the Gartner reference
20 which you can double-check, is second internal
21 shock absorber 400.

22 A. Okay. So I would say that that

1 piston stays within the second internal shock
2 absorber 400.

3 Q. The second internal shock absorber
4 400 is attached -- strike that.

5 Does the second internal shock
6 absorber 400, does it -- in unison with the
7 main piston rod of the external shock absorber
8 420?

9 A. Say it one more time. Sorry.

10 Q. Does the second internal shock
11 absorber 400 move or stroke in unison with the
12 piston rod of the main shock absorber 420?

13 A. So first of all, there are elements,
14 there are a couple different elements of that
15 second shock absorber 400. As we discussed,
16 the bottom out cup does not move with the main
17 shaft of the shock absorber 420, the main shock
18 absorber.

19 The piston does move in unison with
20 420, while they are in contact so at certain
21 sections there are. Of course, there will be
22 times when the main shaft is not in contact

1 with that piston. So I would say yes, in some
2 circumstances, they are moving in unison. No,
3 in some circumstances, they are not.

4 Q. Is the second internal shock
5 absorber 400 connected in some way to the body
6 of the shock absorber 420?

7 A. Is -- I guess, what do you mean by
8 "connected." We have had this discussion
9 related to other patent. What does "connected"
10 mean?

11 Q. Is the second internal shock
12 absorber 400 floating within the compression
13 chamber of shock absorber 420, or is it
14 attached or connected in some way to the
15 interior wall of shock absorber 420?

16 A. My understanding is that shock
17 absorber -- the second shock absorber 400 is
18 the shell, you know, the outside, but the
19 piston moves inside the outside shell or
20 remains in a fixed position relative to shock
21 absorber 420.

22 Q. And the piston rod of the shock

1 absorber 420 at some point during a compression
2 stroke, will enter the second internal shock
3 absorber 400 and contact the piston that is
4 inside the second internal shock absorber 400,
5 correct?

6 A. The main shaft of shock absorber 420
7 does indeed contact the piston of the secondary
8 shock -- second shock absorber 400, and in
9 doing so, it enters the -- it enters that
10 second shock absorber 400. I think that's what
11 you said.

12 Q. I think we are in agreement so far.
13 And once the rod or shaft of shock
14 absorber 420 enters and makes contact with the
15 piston that is inside the shell of second
16 internal shock absorber 400, then that piston
17 within shock absorber 400 provides some
18 compression in that second shock absorber 400,
19 correct?

20 A. I think we are in agreement that
21 that -- again, just to restate, what I think
22 what you said, so I will restate it in my own

1 words. The shaft from 420, the main shock
2 absorber interacts, you know, pushes on the
3 piston inside the second shock absorber 400,
4 and that piston is causing damping at the end
5 of a compression stroke. So that's why it is a
6 bottom out cup and a bottom out piston that is
7 giving damping at the end of the bottom out
8 stroke.

9 Q. The second shock absorber 400 has a
10 compression volume as well as a rebound volume
11 on opposite sides of the piston that is located
12 inside the shock absorber 400, correct?

13 A. I mean, there is -- it doesn't have
14 a compression volume. I think it is labeled
15 460.4 in Figure 12A. I don't know if it ever
16 labels a rebound volume. I'm not sure it ever
17 calls it that. That's kind of a weird
18 nomenclature to use, because as you can see in
19 the figure, you know, 26.4 is the main
20 compression volume and it's got, you know,
21 basically a wide open opening, you know, to
22 what -- I think what you would call the -- that

1 rebound portion, so I'm not sure that is really
2 -- I would call that a rebound volume. That's
3 kind of a debate.

4 Q. What would you call as the portion
5 of the volume within the second internal shock
6 absorber 400, that is on the other side of the
7 piston from the volume that is marked as 460.4?

8 A. That's what I am saying. That's
9 kind of hard to label because I'm not sure, in
10 the traditional sense -- in a traditional
11 damper, you would have a compression or rebound
12 sides, but in this case, that -- what would
13 traditionally be called the rebound section of
14 that second shock absorber 400, that is in
15 direct contact or communication with the
16 compression chamber, the primary compression
17 chamber 26.4, and from this figure, it looks
18 like there is, you know, very large, you know,
19 orifice, there's angular orifice there, which
20 would cause very little damping.

21 So the pressures inside those two
22 volumes would probably be, you know, very

1 similar, if not identical, so again, I'm not
2 sure what I would call that. Because I think
3 labeling it as a rebound chamber would be a
4 little bit misleading.

5 I have to think of what I would call
6 it, but I don't think I would label it rebound
7 because that would be misleading.

8 Q. In a traditional shock absorber
9 though, the damper has a compression portion
10 and a rebound portion on the two sides of the
11 dampening piston, correct?

12 A. On a traditional shock absorber,
13 yes.

14 Q. Going to your declaration, do you
15 have that up in front of you?

16 A. Yes, Exhibit 1002, yes.

17 Q. Let's go to Page 144, and I am
18 referring to the page numbers that are on the
19 bottom of the exhibit.

20 A. Yep.

21 Q. At the top of Page 144, you state:
22 "Claims 1 to 5, 9 and 19 are anticipated by

1 Gartner are rendered obvious that Gartner in
2 view of Nakaya."

3 Do you see that?

4 A. Yes, I think that is a typo though,
5 because I think this section only refers to
6 Gartner. I don't think it has Gartner in view
7 of Nakaya. I think that is a typo.

8 Q. So your Ground 4 for -- is only
9 providing -- strike that.

10 Your Ground 5 is only an
11 anticipation ground based on Gartner; is that
12 correct?

13 A. I believe that's correct. I think I
14 realized this was a typo yesterday in my
15 reviewing.

16 So I don't think Nakaya -- in my
17 reviewing, I didn't see Nakaya appearing in
18 this section so I think that is a typo. I am
19 just flipping through again, but I am very --
20 I'm certain that Nakaya doesn't appear in this
21 section at all. I think that is a typo on my
22 part.

1 Q. So basically --

2 A. I apologize for not catching it.

3 Q. So just so that the record is clear,
4 is it your opinion now that Ground 5 is only an
5 anticipation ground based on -- sorry.

6 Is it your opinion now that Ground 5
7 is only an anticipation ground based on Gartner
8 against Claims 1 to 5, 9 and 19 of the '223
9 patent?

10 A. Yes.

11 Q. Let's go to Claim 1 of the '223
12 patent if you wouldn't mind pulling up the
13 patent.

14 It was previously marked as Exhibit
15 1001.

16 A. Yes, I have got my clean copy here.

17 Q. Let's go to Claim 1.

18 A. Yes.

19 Q. In or around Line 44 in Column 7,
20 Claim 1 recites: "A fluid flow path formed in
21 the bottom out cup for providing fluid
22 communication from the cup to the compression

1 portion of the chamber during a compression
2 stroke of the damper."

3 Do you see that?

4 A. Yes.

5 Q. So you have taken a position in your
6 declaration that this limitation does not
7 require any directionality of fluid flow,
8 correct?

9 A. Yes.

10 Q. Claim 1, however, recites that:
11 "There is fluid communication from the cup to
12 the compression portion of the chamber."

13 Do you see that?

14 A. I see that.

15 Q. What is your understanding of the
16 phrase "fluid communication from the cup to the
17 compression portion of the chamber"?

18 A. I think I stated it pretty clear in
19 my declaration. You know, this idea of fluid
20 communication between two points, you know, I
21 think the example I used, the analogy I used
22 was, if I have a wire that goes from Building A

1 to Building B, that implies two-way
2 communication over that wire.

3 Things can flow both directions.
4 But you have to say -- you say from Building A
5 to Building B. It's synonymous of saying
6 between Building A and Building B, it's
7 communication.

8 Q. So if there is only flow of
9 communication from Building B to Building A, is
10 it, in your opinion, there is communication
11 from Building A to Building B?

12 A. Say it one more time. Sorry.

13 Q. If there is a communication pathway
14 between Building A and Building B, but there is
15 only flow of communication from Building B to
16 Building A, is it, in your opinion, there is
17 communication happening between Building A and
18 Building B?

19 A. So what I would say is, in this
20 particular phrasing for example, it says:
21 "Fluid communication from the cup to the
22 compression portion," so it is saying between

1 these two things. It is obvious to me that the
2 people who wrote the patent is aware of
3 directionality, because they will say
4 specifically, like, in Claim 19, the fluid
5 flows from the bottom out cup to the
6 compression chamber, so they know how to
7 declare directionality.

8 That is possible to do. Here, they
9 are saying communication between these two
10 entities. So I think they are just trying to
11 be overly broad by, you know, by the -- Claim
12 1, they want to be broad and so they are saying
13 this communication.

14 Q. Claim 1 is not using the word
15 between the cup and the compression portion of
16 the chamber, correct?

17 A. Claim 1 used the word "from."

18 Q. And Claim 1 specifically uses the
19 phrase "fluid communication from the cup to the
20 compression portion of the chamber," correct?

21 A. That's what it uses.

22 Q. Yes. So if there is only fluid

1 communication or fluid flow happening from the
2 compression chamber to the cup, is it your
3 opinion that that means there is fluid
4 communication from the cup to the compression
5 chamber?

6 A. If they had said, which they didn't,
7 fluid flow from the cup to the compression
8 chamber, that would imply directionality, but
9 they said "fluid communication" that does imply
10 directionality.

11 Q. What does "fluid communication" mean
12 to you?

13 A. These two things. It's a common
14 term, my understanding it's a common term that
15 talks about how there is some type of
16 connection, you know, implied. Some type of
17 connection but in this case, two-way in either
18 direction.

19 Q. So the term -- if two chambers are
20 connected in some way, is it your opinion that
21 they are in communication with each other?

22 A. There would have to be an orifice or

1 something that allows. So if you had two
2 chambers with an orifice between them, there
3 would be fluid communication, meaning fluid
4 could go in either direction.

5 If you had two chambers with a
6 one-way valve, then you could say the flow
7 could only go one direction.

8 Q. If the flow -- so if there was a
9 one-way valve between the cup and the
10 compression portion of the chamber such that
11 fluid can only go from the chamber to the cup
12 and not the other way around, would you then
13 say that there is fluid communication from the
14 cup to the compression portion of the chamber?

15 A. Well, we have to -- we have to -- I
16 have to look at what the claims would say. So
17 what the claim -- the claim says fluid
18 communication, which implies two-directional
19 flow. It's not saying flow from one to the
20 other. It's saying communication.

21 So if you had a one-way valve that
22 said flow from one chamber to another to a

1 one-way valve, that would imply that there is
2 flow in one direction. If you said
3 communication to this one-way valve, I think
4 that would be a little bit of an oxymoron in
5 some ways.

6 I don't know if it actually uses
7 that terminology -- well, I can review it, I
8 guess. I can see if the communication is ever
9 used in a two-way manner here -- or a one-way
10 manner, because I don't think it is.

11 Actually, I can just word search
12 this patent, right, for "communication."

13 Q. I'm not sure you have followed my
14 question. Maybe I can ask it again, and then
15 you can see if you need to do a word search or
16 anything.

17 A. Sure.

18 Q. My question is: If there was -- in
19 an embodiment or a prior art device if there
20 was fluid flow only from the compression
21 portion of the chamber to the cup and not the
22 other way around, it's your opinion then that

1 the limitation fluid communication from the cup
2 to the compression chamber is still satisfied?

3 A. We are talking about hypotheticals
4 here, right?

5 Q. Sure. Hypothetically, you can
6 answer that.

7 A. Well, I mean, I guess is there an
8 example of this? You're just saying
9 hypothetically I find a claim some place in the
10 patent that says this.

11 Q. No. I am just asking about an
12 embodiment.

13 A. Embodiment would be different
14 because I think -- you know, I could look at --
15 the claim languages are very specific. You get
16 -- my understanding is the embodiments -- you
17 know, you're not being -- your feet aren't
18 being held to the fire with embodiments.
19 You're just describing something, but the claim
20 language is very important.

21 Q. Dr. Wang, I am not asking you about
22 the claim language. I am asking you about a

1 hypothetical device having a compression
2 chamber and a cup, a bottom out cup, and there
3 is fluid flow only in one direction from the
4 compression portion of the chamber to the cup.
5 In that situation would you say that there is
6 fluid communication from the cup to the
7 compression portion of the chamber?

8 A. Well, I would say you have to be --
9 it depends on what I read. If it said, you
10 know, there is one-way communication, fluid --
11 you know, there is one-way communication, that
12 would be one direction.

13 If you said a communication -- hold
14 on. I am trying to rephrase this.

15 Communication in general implies
16 there is two-directional flow, flow of
17 electricity, flow of fluid, whatever it happens
18 to be. You and I are communicating. It's two
19 directional.

20 That could be qualified by saying
21 it's one-direction communication. If it is not
22 qualified, that would say -- the communication

1 would imply two-directional flow.

2 Q. So if I'm understanding correctly,
3 it's your opinion that the claim phrase "fluid
4 communication from the cup to the compression
5 portion of the chamber" requires bidirectional
6 flow between the bottom out cup and the
7 compression portion of the chamber?

8 A. It doesn't require bidirectional
9 flow. It allows for the possibility of flow in
10 either direction. Those are slightly different
11 terms -- slightly different meanings. So I am
12 not saying flow has to go both directions.
13 Flow can go in either direction.

14 Q. If I -- if there was flow only from
15 the compression portion of the chamber to the
16 cup, would the claim limitation fluid
17 communication from the cup to the compression
18 portion of the chamber be satisfied?

19 A. Again, it's a hypothetical question.

20 Q. I can ask my question any way I
21 want. You can give your answer.

22 A. Okay. So ask it again. Sorry. Ask

1 one more time.

2 Q. In a device having a bottom out cup
3 and a compression portion of the chamber if
4 there is flow only in one direction from the
5 compression portion of the chamber to the cup
6 and not the other way around, would the
7 limitation fluid communication from the cup to
8 the compression portion of the chamber
9 satisfied?

10 A. I think since you're qualifying it
11 with a one-way value, you're basically
12 saying -- you're still communicating but only
13 one direction, right, because you've qualified
14 it with a one-way valve. It's like saying, I
15 communicate only one direction. It's still
16 communication, but you've qualified it now by
17 saying a one-way valve.

18 Q. I did not qualify it with a one-way
19 valve. Those are your words.

20 I am saying there is fluid flow only
21 in one direction from the compression portion
22 of the chamber to the cup, and in that

1 situation, would you still say that there is
2 fluid communication from the cup to the
3 compression portion of the chamber?

4 A. I would say that if you have no
5 qualification of directionality saying, you
6 know, through a one-way valve or something,
7 you're just saying, like you said in your
8 words, flow can only go in one direction,
9 that's what would be stated in the claim,
10 right. We have flow only going in one
11 direction.

12 Here is not what it is saying,
13 though. It's saying -- fluid communication is
14 implying a bidirectionality.

15 Q. Dr. Wang, I know you are trying to
16 put words in here. I am only asking you a
17 hypothetical question about a device in which
18 there is a bottom out cup and a compression
19 portion of the chamber and there is fluid flow
20 happening only from the compression portion of
21 the chamber to the cup.

22 In that situation would you say

1 there is fluid communication from the cup to
2 the compression portion of the chamber?

3 A. I would say there is fluid flow from
4 the cup to the compression chamber.

5 Q. Is there fluid communication from
6 the cup to the compression portion of the
7 chamber if there is no flow happening at all
8 from the cup to the compression portion of the
9 chamber?

10 A. I would say you have to qualify it
11 as one-way communication.

12 Q. If there is only one-way
13 communication from the compression portion of
14 the chamber to the cup and not the other way
15 around, is there fluid communication from the
16 cup to the compression portion of the chamber?

17 A. Say it one more time. I'm trying --
18 trying to make sure I don't misinterpret what
19 you said.

20 Q. In a device having an alleged bottom
21 out cup and a compression portion of the
22 chamber, if there is only fluid flow in one

1 direction from the compression portion of the
2 chamber to the cup and not the other way
3 around --

4 A. The compression chamber to the cup.
5 Okay.

6 Q. Yes.

7 -- would you say that the limitation
8 fluid communication from the cup to the
9 compression portion of the chamber, as recited
10 in Claim 1 of the '223 patent, is satisfied?

11 A. So you are saying there is only flow
12 from the compression chamber to the rebound
13 cup, and now you're saying -- compression to
14 the bottom out cup. You're saying is there
15 communication from the bottom out cup to the
16 rebound chamber. That's what you're saying?
17 Is there communication in the direction
18 opposite the flow?

19 Q. Yes.

20 A. I would say there is one-way
21 communication between these two. The flow
22 goes -- my understanding the flow goes from the

1 compression chamber to the bottom out cup.
2 That's the directionality of the flow. So
3 there is -- there is fluid one-way
4 communication in that direction. There is no
5 communication in the opposite direction.

6 Q. So there is no fluid communication
7 from the cup to the compression portion of the
8 chamber, correct, if there is no flow ever
9 happening from the cup to the compression
10 portion of the chamber, correct?

11 A. I would say -- you have to be
12 careful because I would qualify that as a
13 one-way communication.

14 Q. But the claim uses the word "fluid
15 communication from the cup to the compression
16 portion of the chamber," correct?

17 A. Fluid communication from the cup to
18 the compression portion.

19 Q. So that requires some flow that
20 needs to happen from the cup to the compression
21 portion of the chamber, correct?

22 A. It is saying that is one of the two

1 directions it can go.

2 Q. But at least some flow must be able
3 to happen from the cup to the compression
4 portion of the chamber in order to meet that
5 limitation, correct?

6 A. I would say that the fluid
7 communication says that flow can go either
8 direction. It doesn't require it to go one
9 direction or the other. It is just saying it
10 can go either direction between the bottom out
11 cup and the compression portion.

12 Q. And if there is no communication
13 that can happen or -- strike that.

14 If there is no fluid flow that can
15 happen from the cup to the compression portion
16 of the chamber, is there fluid communication
17 from the cup to the compression portion of the
18 chamber?

19 A. Again, I think we are saying -- I
20 will keep saying the same thing. I think there
21 you would call it a one-way communication. You
22 keep wanting to use this word "communication"

1 for one way. You know, these are
2 hypotheticals.

3 I would -- if I write -- I wouldn't
4 write a claim that way. I'm not a patent
5 lawyer, so I wouldn't write a claim at all. I
6 would not interpret one-way communication as
7 what you are talking about. It's -- it's not
8 communications. It's one-way communication.

9 Q. Dr. Wang, we will be here all day if
10 you are going to do this, but let me just keep
11 asking you this question.

12 Does fluid communication from the
13 cup to the chamber require two-way
14 communication from the cup to the compression
15 portion of the chamber?

16 MR. HICKEY: At this point I'm going
17 to object as this question has been asked and
18 answered many times.

19 MS. BHATTACHARYYA: Michael Hickey,
20 that is not a proper objection in an IPR
21 deposition. I can spend all my seven hours
22 asking this question.

1 MR. HICKEY: Okay.

2 BY MS. BHATTACHARYYA:

3 Q. Go ahead, Dr. Wang.

4 A. Yeah. As Claim 1 is written here,
5 communication from the cup and the compression
6 portion of the chamber, that's implying that
7 you have -- you have a fluid -- in this case
8 it's actually fluid communication. We're not,
9 you know, talking in hypotheticals. Fluid
10 communication between these two things, so it
11 doesn't have to go both directions, but it can
12 go both directions.

13 I am sticking with what I have
14 written and what I have said. So I am
15 perfectly happy spending seven hours -- you
16 know, I get paid no matter how long we sit here
17 and talk this question, so I am perfectly happy
18 being paid to spend -- I guess Mike's not
19 happy, but I'll be happy to spend seven hours
20 talking about this same thing over and over.

21 This particular claim we are talking
22 about, fluid communication implies -- or says

1 that you can go both directions. You don't
2 have to go both directions. You may go both
3 directions, but it's just simply between these
4 two things.

5 Q. Okay. But if there is -- in a
6 device there is no communication, no fluid flow
7 from the cup to the compression portion of the
8 chamber, there is only fluid flow from the
9 compression portion of the chamber to the cup.

10 A. We are talking hypotheticals, and I
11 would have to look at the claim language, you
12 know, in the particular claims of this
13 hypothetical situation.

14 Q. Dr. Wang, I am asking you about a
15 hypothetical device, and I am asking you to
16 apply the claim language as it is to the
17 hypothetical device.

18 A. Okay.

19 Q. I am not asking you to come up with
20 a hypothetical claim. The claim language is as
21 it is. It just cites fluid communication from
22 the cup to the compression portion of the

1 chamber, correct?

2 A. Yes.

3 Q. Do you get that?

4 A. Yes.

5 Q. Now imagine a device that has a
6 bottom out cup and a compression portion of the
7 chamber allegedly and there is flow only in one
8 direction from the compression portion of the
9 chamber to the cup. In that situation is the
10 claim limitation fluid communication from the
11 cup to the compression portion of the chamber
12 met?

13 A. So what I would say -- I think I
14 understand what you are asking. So this claim
15 is saying -- you know, correct me if I am
16 incorrect.

17 We have this claim saying fluid
18 communication from the cup to the compression
19 portion. So this claim says flow can go in
20 either direction, and so if you have a
21 device -- you're asking does this -- does this
22 claim read on a device which flow can only go

1 one direction. The answer is yes because flow
2 is going one of the two directions.

3 Q. When you say if flow can go in one
4 direction, if that direction is only from the
5 compression portion of the chamber to the cup
6 and not the other way around, is there still
7 fluid communication from the cup to the
8 compression portion of the chamber?

9 A. If I had a device, such as some of
10 the prior arts, and flow is going -- this one
11 says, you know, from the cup to compression
12 portion. So the flow can go in either
13 direction. So if the flow is going from the
14 compression chamber to the bottom out cup, it
15 still is in fluid communication.

16 Q. So is it your opinion that in a
17 device if there is fluid flow only from the
18 compression portion of the chamber to the cup,
19 then there is still fluid communication from
20 the cup to the compression portion of the
21 chamber?

22 A. If you have a device which only has

1 flow going in one direction -- I can't remember
2 which direction you said, but only one
3 direction -- I think the direction is
4 immaterial. If you have flow going in only one
5 direction, this patent would still read on it
6 because this one is saying is there -- this
7 patent says if flow is going either direction,
8 I'm going to cover it. We don't care. That's
9 what this is -- that's what this is saying.
10 This is saying flow goes from A to B or B to A,
11 my patent is going to cover it. Since you have
12 -- whether the -- whether the device has to go
13 from A to B or B to A, it's still going to read
14 on it.

15 Q. So the terms "from the cup to the
16 compression chamber" does not have any meaning
17 to you; is that right?

18 A. It has meaning in the sense that
19 it's from Point A to Point B. It is like
20 saying between Point A and Point B. I think
21 those are synonymous terms. When you say --
22 you know, you and I are communicating, that

1 means it's two-way. The communication is from
2 me to you. When a wire goes from Building A to
3 Building B, as I said in my report -- my
4 declaration, that means that communication can
5 happen in both directions. So --

6 Q. The claim doesn't use the term
7 "between," and in your answer, you used the
8 word "between." So I just want to clarify that
9 on the record. The claim only says: "Fluid
10 communication from the cup to the compression
11 portion of the chamber."

12 Do you see that?

13 A. Yes. As I said in my report,
14 that's -- the analogy I used was a wire going
15 from Building A to Building B.

16 Q. Okay.

17 A. A wire that goes from Building A to
18 Building B is between two buildings.

19 Q. Okay. Now, if there was flow of
20 signals only from Building B to Building A and
21 not the other way around would you still say
22 that there is fluid communication from

1 Building A to Building B?

2 A. Well, fluid and signals. Okay. So
3 I understand what you are asking about.

4 Again, the claim is saying it's
5 immaterial which direction it goes. So that
6 one-way communication, that one-way -- only
7 from whatever, whatever direction you want to
8 have, A to B or B to A, it's only one
9 directional. It still gets read on by this
10 patent because this patent is saying I don't
11 care which way's it is going. If you have
12 communication going between these two things,
13 I'm going to -- it's going to read on it
14 because this is not implying any
15 directionality. It's saying if there is flow
16 in either direction, you know, I'm going to --
17 I'm going to cover this -- this patent covers
18 it. This claim covers it.

19 Q. Suppose you were sending me lots of
20 e-mails and I never responded to any one of
21 that, so there is, like, no communication from
22 me to you. In your opinion, you and I are

1 still in communication because you have sent me
2 e-mails even though I never responded?

3 A. It's a very one-way relationship. I
4 would say one-way communication, but again, you
5 know, if I have a patent that covers e-mail and
6 the e-mail says, hey, if -- if Eric sends
7 Arpita an e-mail or Arpita sends to Eric -- I
8 don't care which way it is, the patent covers
9 e-mail between the two of us. And I send you
10 an e-mail and you never respond, I think that
11 patent still covers it.

12 Q. So if you send me a communication
13 and I never respond to it, in your opinion,
14 there is still communication between me and
15 you. Is that what you are saying?

16 A. I think the patent would read on it
17 because the patent is not saying -- I would say
18 one-way communication between us, but that's
19 the device. That is different than the claim
20 language.

21 The claim language is trying to be
22 broad, so either direction you go, I'm going to

1 cover it. It doesn't matter. The fact I am
2 only going one direction still means I cover
3 it, right.

4 If I -- if I, you know, say, hey,
5 this is my street, and I am only -- I'm going
6 to say anybody that drives on my street in any
7 direction, I'm going to, you know, get you for
8 trespassing, and you decide that you're only
9 going to drive in one direction. You're still
10 trespassing.

11 Q. But the claim doesn't say
12 trespassing. The claim uses the word
13 "communication from the cup to the compression
14 portion of the chamber." It specifically used
15 the word "from" and "to," correct?

16 A. Specifically uses the word "from"
17 and "to."

18 Q. So in your opinion, the terms "from"
19 and "to" have no meaning because liquid can go
20 in either direction and still meet this claim
21 limitation, correct?

22 A. They don't have no meaning because

1 you're talking about the two ends, you know,
2 End A and End B, from A to B.

3 Q. And if there is flow from B to A and
4 not the other way around, you're giving the
5 opinion that there is still communication
6 between -- from A to B; is that right?

7 A. Look, look, so when you have a
8 device, you know, we don't -- the device
9 doesn't know communication. I mean, that --
10 that doesn't know. It just does what it does.

11 The claim is different. The claim
12 is saying, you know, if you -- if the flow goes
13 in either direction or both directions, I
14 guess. I think this claim is going to read on
15 it. So, again, I think we've -- I have said it
16 over and over a bunch of times here.

17 Q. Let's clarify it one more time.

18 In your opinion if there is
19 bidirectional flow between the cup and the
20 compression portion of the chamber, fluid
21 communication from the cup to the compression
22 portion of the chamber is met, correct?

1 A. What -- fluid communication means
2 that if fluid is flowing in either direction or
3 even both directions, this claim reads on it.
4 Whatever -- whatever device I produce, it can
5 be going from A to B or B to A or back and
6 forth between A and B. This claim is going to
7 read on it because it says fluid communication.

8 Q. I am not just talking about the word
9 "fluid communication." I am talking about
10 fluid communication from the cup to the
11 compression portion of the chamber.

12 So let's focus on the full sentence:
13 Fluid communication from the cup to the
14 compression portion of the chamber.

15 A. Okay. So -- so my answer is, again,
16 fluid communication from the cup to the
17 compression portion means that if you have
18 fluid flowing from the cup to the completion
19 portion, the device has fluid flowing from the
20 cup to the compression portion or from the
21 compression to the cup or both ways. This
22 claim will read on it.

1 Q. So in your opinion, if there is only
2 fluid flow from the compression portion of the
3 chamber to the cup, then the limitation fluid
4 communication from the cup to the compression
5 portion of the chamber is satisfied; is that
6 right?

7 A. I think we're saying the same thing.

8 MR. HICKEY: Arpita, is there a good
9 time for a break? We have been going for about
10 an hour and 15.

11 MS. BHATTACHARYYA: Let's just
12 finish up this line of questions.

13 MR. HICKEY: Well, I just didn't
14 know if you were going to ask that line of
15 questions for seven hours, so I was just going
16 to ask for a break.

17 MS. BHATTACHARYYA: We'll -- we'll
18 come to a head at some point.

19 THE WITNESS: Well, so like I
20 said -- I'll say it one more time -- fluid
21 communication from the cup to the compression
22 portion of the chamber, that's covering

1 bidirectional between these two. It's covering
2 from the compression to the cup, the
3 compression chamber to the cup, and it's
4 covering from the cup to the compression
5 chamber.

6 It's saying there is -- the
7 directionality is not implied, and so a device
8 that has flow in one direction or the other or
9 both will still be covered by this claim.

10 MS. BHATTACHARYYA: Okay. Michael,
11 we can take a break now.

12 MR. HICKEY: Thanks.

13 (A short recess was taken.)

14 Q. Dr. Wang, let's go to the Kodama
15 reference, which is marked as Exhibit 1006.

16 A. All right.

17 Q. Let me know when you're there.

18 A. Okay. I have Kodama open.

19 Q. Does Kodama have a bottom out cup or
20 any kind of bottom out protection technology?

21 A. Let me review this one. This one --
22 I don't believe it does. I believe I am only

1 referencing the adjustable needle valve on the
2 flow path. I am using it for combinations.

3 Q. So you -- just so I am understanding
4 you correctly, you are only using Kodama in
5 combination with other references for Kodama's
6 teaching of needle valve under flow path; is
7 that correct?

8 A. I believe I only use -- my
9 recollection -- I have to look at my report,
10 but my recollection, I only use Kodama in
11 combination with other ones, other patents,
12 prior art because this has this adjustable
13 needle valve inside the shaft, which is an
14 element which -- it could combine with other
15 patents, other prior art.

16 Q. But, generally, Kodama is an
17 air-based prosthetic energy storage device,
18 correct?

19 A. I believe it's gas, I believe, yeah.
20 I am not sure it's air but some type of gas, I
21 believe.

22 Q. And it is a prosthetic device that

1 Kodama teaches?

2 A. I don't remember what the claims
3 limit to -- to prosthetics. Obviously, the
4 embodiments do. I have to look at the claims,
5 if you want me to look at them, but I think the
6 embodiments all lead to prosthetics, and it's a
7 combination -- you know, I'll call a shock
8 absorber, a combination of spring and damper.

9 Q. You are not relying on Kodama's
10 teaching of a damper and other elements'
11 combination with other prior art references,
12 correct?

13 A. I'm not sure I understand your
14 question.

15 Q. Let me rephrase it.

16 I think you answered this, but you
17 are only relying on Kodama's teaching of a
18 adjustable needle valve in the shaft of a
19 damper in combination with other prior art
20 references in your declaration, correct?

21 A. I used Kodama -- I believe I only
22 used Kodama in combination with other patents

1 because it has adjustable needle valve element,
2 which you could incorporate into other patents
3 that didn't have that element. This was,
4 again, a combination of obvious, you know,
5 prior art. I think we're in agreement.

6 Q. Let's go to the Deferme reference,
7 D-E-F-E-R-M-E, and that's previously marked as
8 Exhibit 1008.

9 A. Let me open that up. 1008. Yes.
10 Deferme, I pronounce it Deferme
11 also. I don't know how you pronounce it.
12 That's what I would use.

13 Q. Sorry. How do you pronounce --

14 A. I would pronounce -- I would
15 pronounce it Deferme. I have no idea, but
16 let's agree to call it Deferme.

17 Q. Yes. That's how we said it in other
18 depositions, I believe.

19 You have your declaration in front
20 of you, so feel free to refer to it, but I'm
21 just going to ask you: Off the top of your
22 head, do you recall why you have used Deferme

1 in your declaration?

2 A. Yeah. Deferme -- again, best of my
3 recollection, Deferme I use in combination with
4 several other prior arts because it has this,
5 which is now ubiquitous, shim stack damper.
6 Apparently, it's used in lots of dampers now
7 for -- at least for bicycles and motorcycles.
8 That allows for flow -- two-way flow across
9 this -- in this case what I was referring to as
10 a primary piston so you can get flow from the
11 compression chamber to the rebound or the
12 rebound to the compression through this piston.

13 Q. But in relation to the '223 patent
14 claims, why have you used Deferme?

15 A. Deferme would allow somebody who is,
16 you know, a person of ordinary skill in the art
17 to combine Deferme with other patents that
18 didn't have -- other prior art that didn't have
19 this two-way -- two-way valve technology -- I'm
20 not sure exactly what you call it. Let's just
21 call it a Deferme piston -- that allows flow
22 across the piston in both directions. And it's

1 adjustable, which is what we like about.

2 So there would be a lot of
3 motivation to use this to increase the
4 performance, adjustability of some of the other
5 prior arts we've identified. So you could take
6 the prior art, combine it with Deferme, and
7 increase the performance.

8 Q. Is it -- is it your position that a
9 person skilled in the art would modify some of
10 the other prior art references like Chen by
11 replacing Chen's main piston with Deferme's
12 piston?

13 A. A person of ordinary skill in the
14 art, I think if you -- if you took Chen and
15 combined it with Deferme, you would basically
16 get the '223 patent. Very similar.

17 I mean, there was obviously
18 motivation to do it. People did it. So there
19 is lots of motivation to use -- Deferme --
20 Deferme's piston is used -- it's ubiquitous
21 now. I don't know how much money he has made
22 off this, but this is a ubiquitous design in

1 general of having -- the shim stacks allows,
2 you know, flow in both directions across the
3 piston. There is lots of motivation to use
4 this piston to increase the performance.

5 Q. I understand that your position is
6 that if you use Deferme's piston in Chen's
7 device, you would improve the performance of
8 Chen.

9 My question is: Is it your opinion
10 that a person skilled in the art would replace
11 Chen's main piston with Deferme's piston?

12 A. The way you would -- the way you
13 would combine Deferme and Chen, for example, is
14 you would replace Chen's primary piston with
15 Deferme's piston as shown. And that would
16 allow you all kinds of adjustments and
17 improvements in performance.

18 Q. Okay. And in relation to, let's
19 say, Claim 1 of the '223 patent, what -- and in
20 a combination -- in a combination of Chen and
21 Deferme, is there a particular limitation that
22 is met by Deferme's piston?

1 A. I've got to check, but my
2 recollection -- before I commit here, my
3 recollection is that we don't need a
4 combination for Claim 1.

5 Q. Okay.

6 A. Let me make sure.

7 Q. And just so -- I can tell you, like,
8 let us talk specifically about the Chen and
9 Deferme combination so that -- and then I
10 can -- I can point you to your portion of the
11 declaration where you discuss that.

12 A. Sure.

13 Q. So if you go to Page 90 of your
14 declaration, there you start discussing Ground
15 2, and you state: "Claims 1 to 5, 9, 11 to 15
16 and 19 are anticipated by Chen, rendered
17 obvious by Chen, or rendered obvious by Chen in
18 view of Deferme."

19 A. Yes.

20 Q. Do you see that?

21 A. Yes.

22 Q. And I just want to understand better

1 where Deferme comes in in this Ground 2.

2 Are you saying that Deferme is not
3 needed for -- for Claim 1 and that Chen meets
4 all the limitations of Claim 1?

5 A. As I wrote, you know, in Paragraph
6 124, you know -- I'll read it here. You can
7 read it also.

8 Alternatively, it would have been
9 obvious for a POSITA, a person skilled in the
10 art, to substitute Chen's simple piston 81 with
11 Deferme's adjustable piston in order to provide
12 additional means of adjustment to the dampening
13 characteristics of Chen's damper. The
14 resulting combination would also allow for
15 fluid -- also allow for fluid to travel in any
16 direction through the fluid flow path 86 during
17 compression stroke.

18 So the key word is, you know,
19 "alternatively."

20 Q. Yeah. So okay. Let's focus on
21 Paragraph 124.

22 A. Okay.

1 Q. If, say, Chen's piston 81 is
2 replaced by Deferme's adjustable piston, how is
3 it providing additional means of adjustment to
4 the dampening characteristics of Chen's damper?

5 A. Well, the current system, you know,
6 before you have any interaction between the --
7 the post 821 and the bottom out cup -- so I
8 show in the figure there before there is any
9 interaction between those two elements, you
10 know, the -- the damping is primarily occurring
11 by, you know, fluid -- fluid passing through
12 this orifice 85.

13 There is some other pathways there,
14 but the main dampening is occurring through the
15 fluid flowing through 85. That's the main
16 restriction. So that, in its current form,
17 doesn't have much adjustment. There is fluid
18 flowing through 86. Not much because it's a
19 much smaller passage, as shown. You know, size
20 can change. You can change that ratio, but
21 that would be the only adjustment.

22 So if you have Deferme's --

1 Deferme's piston there, you get all kinds of
2 additional adjustments on the compression
3 damping, and you'd also get a bunch of
4 adjustability on the rebound damping.

5 And so you would definitely improve
6 Chen's design and be motivated -- a POSITA
7 would be motivated to combine those two. In
8 fact, people did obviously, you know, to use
9 Deferme's piston to increase the compression of
10 rebound damping characteristics and
11 adjustability of this damper.

12 Q. And the -- any flow that would
13 happen between -- in or through Deferme's
14 piston would be between the compression portion
15 of Chen's damper and the rebound portion of
16 Chen's -- Chen's damper, correct?

17 A. I think I understand your question.

18 Deferme's piston allows you to have
19 flow across the piston, through the piston. So
20 that goes from the compression chamber, the
21 primary compression to the primary rebound or
22 the other way around during a rebound stroke.

1 Q. Okay. And in Paragraph 124 of your
2 declaration, you say: "The resulting
3 combination would also allow for fluid to
4 travel in any direction through the fluid flow
5 path 86 during a compression stroke."

6 What do you mean by that?

7 A. That means if you have -- you know,
8 Deferme's piston essentially gives you another
9 flow path out of the compression chamber. So
10 depending on the combinations of all the flow
11 paths, the resistances, and shim stacks, and
12 everything else, you could get flow going from
13 the chamber -- you know, this was during --
14 when post 821 is in the -- is in the -- is in
15 the -- is in the bottom out cup, you can get
16 flow going from the compression chamber to the
17 bottom out cup or the reverse, depending on the
18 combination of valve and shim stacks and
19 everything else, but it could possibly get flow
20 in either direction.

21 Q. If you look at Claim 1 of the '223
22 patent, it recites a fluid flow path formed in

1 the bottom out cup for providing fluid
2 communication from the cup to the compression
3 portion of the chamber.

4 Do you see that?

5 A. Hold on. Let me just bring it up.
6 Let me get this one again. Claim 1.

7 Sorry. Say it -- ask one more time.

8 Q. The Claim 1 recites a fluid flow
9 path formed in the bottom out cup for providing
10 fluid communication from the cup to the
11 compression portion of the chamber during a
12 compression stroke of the damper, correct?

13 A. Yes.

14 Q. And you are referring to the flow
15 path 86 of Chen as meeting that limitation of
16 Claim 1, correct?

17 A. In my -- in my declaration I refer
18 to that flow path 86, but of course as I think
19 we discussed before, 87 is also a flow path.
20 But in my declaration, I specifically point out
21 path 86.

22 Q. And you are not referring to a flow

1 path through Deferme's piston as -- as the flow
2 path formed in the bottom out cup for providing
3 fluid communication from the cup to the
4 compression portion of the chamber, correct?

5 A. Deferme's piston is not associated
6 with -- it affects the fluid through 86, but it
7 is not -- it is not the flow path I am
8 referring to.

9 Q. Chen discloses fluid flow from the
10 compression portion of the chamber to the cup,
11 correct?

12 A. I thought Chen --

13 Q. Chen has been marked as Exhibit
14 1007.

15 A. Yes. I am bringing that up.

16 Sorry. Can you ask that question
17 again now that I've got it open.

18 Q. Chen discloses fluid flow from the
19 compression portion of the damper chamber to
20 the chamber 84, which you are referring to as
21 the bottom out cup, correct?

22 A. I think it does both directions, if

1 I remember. Let me pull up -- sorry. I am
2 just jogging my memory here.

3 I think it discusses flow in both
4 directions.

5 Q. What portion of Chen are you
6 referring to when you say that Chen -- Chen
7 discusses flow in both direction?

8 A. Well, I think that Chen 86 -- well,
9 I am looking at 87. This is line -- Page 5,
10 Line 13 -- 13: The check ball valve is
11 disposed, and one-way flow 871, which I think
12 is 87 -- typo -- whereby only flow one way
13 there through during the forward stroke.

14 So that is talking about -- that is
15 talking about flow from the bottom out cup to
16 the compression chamber. That's the one
17 direction.

18 And then 86, I think he talks about
19 -- let's see here. Then later in Line 23, he
20 says: "At this time, oil in the hydraulic
21 cylinder 8 can only flow through the small
22 diameter flow way at 86, into the common cavity

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1 84, and then flow out from the oil out of 85."

2 So he is talking about flow in the
3 other direction, so he talks about flow in both
4 directions to the two different -- well, one
5 way flow through each channel.

6 Q. You said that fluid goes from the
7 bottom out -- alleged bottom out cup 85 to the
8 compression portion of the chamber to flow path
9 87, right?

10 A. 84 to 87. 85 is the oil outlet.
11 Cavity 84 is the bottom out cup.

12 Q. Okay. So let's go to Chen and look
13 at the second paragraph starting at Line 10.

14 A. Yes.

15 Q. Chen recites: "Cap 83 is further
16 formed with two small diameter flow ways 86,
17 87, which also communicates with the oil outlet
18 85."

19 A. Yes.

20 Q. If the flow path 87 were allowing
21 fluid flow from the alleged bottom out cup 84
22 into the compression portion of the damper, how

1 would there be communication between 87 and the
2 oil outlet 85?

3 A. I'm not sure I understand your
4 question.

5 Q. When I read Chen, it seems to me
6 that Chen is saying that there is fluid flow
7 from the compression portion of the damper
8 chamber to the accommodating cavity 84 through
9 the flow way 87.

10 Would you agree with me?

11 A. Okay. So is this when -- we have to
12 qualify -- is it as shown here in this figure
13 we are talking about or, you know, is it when
14 the piston, you know, the 821 is already
15 engaged with the accommodating cavity or just
16 anytime during the stroke?

17 Q. At any time during a compression
18 stroke, Chen says: "There is fluid flow
19 through flow 87 from the compression portion of
20 the damper to accommodating cavity 84,"
21 correct?

22 A. Where does he say that? I am trying

1 to figure out --

2 Q. Chen, on Page 1, starting at Line
3 10, says: "Cap 83 is further formed between
4 small diameter flow 86, 87, which also
5 communicates with the oil outlet 85. A check
6 ball valve 88 is disposed in one flow way, 87,
7 whereby the oil can only flow one way there
8 through during the forward stroke of the piston
9 81."

10 A. Okay. I see that. So what was your
11 question again?

12 Q. So Chen is saying that: "During a
13 compression stroke of the piston 81, fluid will
14 flow from the compression portion of the damper
15 chamber to accommodating cavity 84, through
16 flow way 87, and then flow out to the oil
17 outlet 85," correct?

18 A. He's saying that during a
19 compression stroke, he calls it a forward
20 stroke. During the forward stroke of piston
21 81, which is the main piston, oil can only flow
22 one way through this channel 87, which is from

1 the bottom out cup 84 to the main compression
2 chamber.

3 Q. Where does Chen say that?

4 A. That last sentence of that paragraph
5 you just read, a check ball valve 88 is
6 disposed in the one way -- one flow way -- he
7 calls it 871. I think it's a typo, 870, or
8 887. Whereby oil can only flow one way there
9 through during the forward stroke of the
10 piston. Forward meaning, I'm assuming,
11 compression, because he calls -- I think he
12 calls a cap 83 the forward end. So during
13 compression, stroke flow is flowing one way
14 from 84, because the check ball valve can't go
15 the other way. It's going from 84 to the
16 compression chamber.

17 Q. I just want to ask you, how would
18 the flow way 87 communicate with oil outlet 85,
19 if flow was going from the accommodating cavity
20 84 to the compression chamber?

21 A. We are going to get in the same
22 argument here. This is -- this is a

1 description, it is not claim language. He is
2 saying this is the direction of flow. The
3 Claim 1 says I am covering flow in either
4 direction.

5 Q. Dr. Wang, I am not talking about
6 Claim 1 at all right now. I just want to
7 understand the directional flu through the flow
8 way 87.

9 You are saying that you think the
10 flow is from accommodating cavity to the
11 compression portion of the chamber, which I am
12 saying does not make sense, given Chen's
13 description, so I just want to hone in on the
14 language of Chen and --

15 A. Why doesn't it make sense?

16 Q. Because Chen is saying that there is
17 flow -- flow through the flow way 87
18 communicates with the oil outlet 85.

19 A. Okay. When a valve is open, there
20 is a -- you know, when that ball valve is open,
21 obviously, there is a direct connection between
22 these two, right? I mean --

1 Q. How is there a connection between
2 outlet 85 and flow way 87, if there is flow
3 happening from the bottom out cup to the -- I
4 would say alleged bottom out cup to the
5 compression portion of the chamber. It does
6 not involve outlet 85 at all.

7 A. Why can't oil enter 85 and exit
8 through 87 through the main compression
9 chamber?

10 Q. Because 85 is an outlet. There is
11 no oil entering 85. It's an outlet.

12 A. During a rebound stroke?

13 Q. We are not talking about rebound
14 stroke. We're talking about a forward stroke.

15 A. It doesn't say that.

16 Q. It says oil can only flow in one
17 direction during the forward stroke of the
18 piston.

19 A. But that's not the same sentence as
20 the one before it.

21 Q. Let me ask you this: Is a check
22 valve bidirectional?

1 A. It's one directional.

2 Q. Okay.

3 A. Primarily.

4 Q. Yes. So it can either go from the
5 bottom out -- alleged bottom out cup to the
6 compression portion of the chamber or the other
7 way around, correct? The check valve?

8 A. Primarily, that's the purpose, yes.

9 Q. Yes. Now during a forward stroke,
10 fluid will go from the compression portion of
11 the chamber to the accommodating cavity 84
12 through the flow 87, if that check valve is
13 open, correct?

14 A. What -- you are looking at two
15 different sentences. Let's read it. "Cap 83
16 is further formed with two small diameter flow
17 86, 87, which also communicate with oil outlet
18 85."

19 Nothing about direction of flow.

20 Q. Okay.

21 A. Next sentence: "A check ball valve
22 88 is disposed, one way flow 87, whereby" the

1 only flow -- "one way there through during the
2 forward stroke."

3 Now, they are talking about which
4 way the forward -- the oil flow during the
5 forward stroke. Nothing about the rebound
6 stroke. During rebound stroke, flow definitely
7 communicates from the oil outlet 85 through 87.
8 Those are two different sentences.

9 Q. Say that again. During rebound
10 stroke --

11 A. During rebound stroke, oil is
12 flowing out of 85 into 87.

13 Q. But if there is a check valve in
14 there, how can fluid go from 85 to 87 because
15 as we established, a check valve is
16 unidirectional?

17 A. The check valve is in that
18 direction. The check valve is preventing --
19 the check valve is trying to prevent flow in
20 the opposite direction.

21 Q. What is that opposite direction?

22 A. From the compression chamber to 84,

1 and therefore, 85 also.

2 Q. Okay. So let's get that straight.

3 The check valve is unidirectional
4 and it is preventing flow from the compression
5 portion of the chamber to accommodating cavity
6 84, correct?

7 A. It is preventing flow from the
8 compression chamber to 84.

9 Q. Correct. If there is no
10 communication from the compression portion of
11 the chamber to accommodating cavity 84, how
12 does flow way 87 communicate with outlet 85?

13 A. I think I just said that. During a
14 rebound stroke, flow can easily go from --
15 let's say the bottom out -- the piston is still
16 in the bottom out cup, the -- that is not
17 necessary. Let's take the easiest example.

18 The piston is inside -- the
19 bottom-up piston is inside the bottom-up cup,
20 and you start the rebound stroke, flow will
21 come out of 85 through the check valve in the
22 direction implied, out 87 into the compression

1 portion.

2 Q. But the check valve is
3 unidirectional. How can then flow go --

4 A. It is going from the compression
5 chamber. I'm sorry, from 84 to the compression
6 chamber. That's the direction it's supposed to
7 go during a rebound stroke.

8 Q. How is then 87 communicating with
9 the outlet 85? There is only -- if you are
10 saying fluid goes from 84 to 87, and enters the
11 compression portion of the chamber, but Chen
12 says that 87 communicates with 85, which is
13 only possible if there is actually flow from
14 the compression portion of the chamber to
15 accommodating cavity 84 and not the other way
16 around.

17 A. That's not true. No.

18 Q. Explain to me again, how there is
19 communication from outlet 85 through 87 during
20 a forward stroke or a rebound stroke?

21 A. You are saying during a forward
22 stroke. Two different sentences. So what's --

1 Q. Check valve is unidirectional --

2 A. Let's look at rebound stroke. So
3 I'll look at each stroke separately. Let's do
4 rebound stroke first.

5 Q. Let me ask you a question first. Is
6 the check valve --

7 MR. HICKEY: Counsel, hold on. Let
8 Dr. Wang finish his answer first.

9 MS. BHATTACHARYYA: He was answering
10 something where there was no question pending.
11 Let me ask the question and then we will go.

12 MR. HICKEY: There was a question
13 pending. He was answering it.

14 MS. BHATTACHARYYA: I don't think
15 so.

16 BY MS. BHATTACHARYYA:

17 Q. Dr. Wang, are you done answering my
18 last question?

19 A. I don't think I was done answering.

20 Q. Okay. I will strike my previous
21 question. Let's get the question straight.
22 Okay?

1 Does a check valve change its
2 directionality based on whether it's a rebound
3 stroke or a compression stroke?

4 A. No.

5 Q. Okay. So that's why -- does it make
6 sense to talk about both rebound stroke and
7 compression stroke in the context of Chen and a
8 check valve?

9 A. That's false.

10 Q. Okay. Explain to me the flow path
11 through flow way 87 to outlet 85 during a
12 compression stroke.

13 A. So during a compression stroke, as
14 he says, he is saying during compression stroke
15 in approach.

16 If the pressure inside the bottom
17 out cup is higher than the pressure in the
18 compression chamber, there's no sizes of these
19 orifices given, so you may have the cavity, the
20 orifice 85 is very small or very large, but you
21 can have a situation -- he's teaching this, he
22 is saying this, that if you have a situation

1 where the pressure in cup 84 is higher than the
2 compression chamber and this is already when
3 the piston is inside the cup, if the pressure
4 inside 84 exceeds the compression chamber, flow
5 will happen through the one-way valve from the
6 cup to the compression chamber during a rebound
7 stroke. That's what he says.

8 Q. You said during a rebound stroke --

9 A. Sorry, during a compression stroke,
10 that's what he says. During the rebound
11 stroke, the exact same thing will be true. If
12 the pressure inside the bottom out cup is
13 higher than the pressure in the compression
14 chamber, fluid will flow one way through that
15 valve, from the cup to the compression portion.

16 It just -- the direction of the
17 stroke doesn't matter. It's the ratios, it's
18 the relative pressures inside these volumes.
19 Higher pressure will drive it to a lower
20 pressure, and depending on the ratio of all
21 these valves, the state of the valve at 86,
22 whether that's fully open, fully closed, the

1 size of the orifice 85, the diameter of the
2 piston, the diameter of the bottom out cups,
3 all these geometries will influence which
4 cavity has the higher pressure during a rebound
5 and during a compression stroke.

6 Q. But Chen says that there is
7 communication between the flow way 87 and the
8 oil outlet 85.

9 Do you see that?

10 A. Yes, I see it, but in that sentence,
11 he doesn't say if it is a compression or
12 rebound stroke.

13 Q. But if check valve 87 is one
14 directional, how can there be any communication
15 in either strokes between the flow way 87 and
16 outlet 85, if fluid is flowing from
17 accommodating cavity 84 to the compression
18 portion of the chamber?

19 A. I'm not sure I understand, because
20 85 is ultimately where the oil goes or comes
21 from during a rebound or compression stroke.

22 Q. Where does Chen say that oil is

1 coming in through outlet 85?

2 A. Well, 85 is the outlet to the
3 reservoir, so during compression stroke, oil
4 flows out to the reservoir, during a rebound
5 stroke, oil flows in from the reservoir.

6 Q. Where does Chen say that?

7 A. He called oil outlet 85. Any POSITA
8 would know that -- has to go to reservoir.

9 Q. But Chen does not say that there is
10 a reservoir connected to outlet 85, correct?

11 A. He doesn't say there is a reservoir,
12 but there has to be. A POSITA would know that.
13 Flow during a rebound stroke has to come in
14 from somewhere, so 85 has got to be to some
15 type of reservoir.

16 Q. But Chen refers to 85 as just an
17 outlet, correct?

18 A. He called it an oil outlet.

19 Q. So assuming oil is only leaving
20 outlet 85 and not coming in through there.

21 A. During a compression stroke. During
22 a rebound stroke, he talks about rebound

1 strokes. He talks about the flow of the oil in
2 various ways. The only way to get oil to flow
3 is if oil comes back in through 85.

4 Q. Okay. I'm asking you to assume that
5 85 is only working as an outlet and there is no
6 oil coming in through 85. Okay?

7 A. Okay.

8 Q. In that scenario, there is -- the
9 only way flow way 87 would communicate with oil
10 outlet 85, is if fluid flows from the
11 compression portion into accommodating chamber
12 84, and then exits through oil outlet 85 during
13 a compression stroke.

14 A. Say it one more time, because you
15 are implying the wrong direction I think. Say
16 it one more time.

17 Q. I am asking you to assume that oil
18 outlet 85 only functions as an outlet. There
19 is no oil coming in through there. Okay?

20 A. Okay.

21 Q. With that assumption, when Chen says
22 that flow way 87 communicates with oil outlet

1 85, that is possible only if fluid flows from
2 87 into accommodating cavity 84 and then out
3 through outlet 85 during a compression stroke,
4 correct?

5 A. No, that's false. That would be
6 going against the direction of the check valve.

7 Q. I want to -- why are you saying that
8 check valve 84 goes from the compression
9 portion of the chamber to the accommodating
10 cavity 84 and not the other way around?

11 A. You said it goes from 87 -- let's
12 look at this one. The check valve exit is for
13 flow exiting. It allows flow to exit cavity
14 84, the bottom out cup and prevents -- largely
15 prevents flow from entering through that
16 channel.

17 So you said, correct me if I am
18 wrong, you said from 87 into 84. That's the
19 wrong direction.

20 Q. What is your basis for saying that
21 the flow is in the direction from the
22 accommodating cavity 84 through the compression

1 portion of the chamber through the check valve
2 and not the other way around?

3 A. That's the -- what the check valve,
4 just looking at the schematic, that's what the
5 ball is -- the spring is biasing the ball
6 against this lower opening so flow -- it's
7 meant to prevent flow from, you know, I would
8 say, you know, it prevent a clockwise flow in
9 this picture. It allows a counterclockwise
10 flow.

11 Q. When the ball moves out, the flow
12 can go from the compression portion of the
13 chamber into accommodating cavity 84, correct?
14 If the pressure is high in the compression
15 portion of the chamber?

16 A. That would be difficult to do. You
17 know, there is a check valve, so if you are
18 trying to force flow from the compression
19 portion through 87 into the bottom out cup,
20 that's going to be very difficult. You are
21 going against the check valve -- check ball
22 valve.

1 Q. Explain to me why you are saying
2 that the check valve 84 in the schematic, says
3 that there is flow from the compression portion
4 of the chamber into accommodating cavity 84?

5 A. Let's -- just hold a second. It
6 will be easier to show you. Okay. Can we
7 enable my sharing of the screen?

8 Q. I don't know if that is possible.

9 A. Okay. So here is Chen. Can you see
10 my mouse? Is my mouse visible or not?

11 Q. Yes, I see that.

12 A. So this check ball valve, the spring
13 is biasing this and the ball is down. So the
14 way this works is, flow pushes the ball up and
15 then out, again, I would call it a
16 counterclockwise fashion. If you try and push
17 -- try to go into 87, hit this ball, the
18 pressure on top of the ball will be higher than
19 the pressure on the bottom of the ball, the
20 ball will stay closed. That's what a check
21 valve does.

22 So it is preventing flow, let's say

1 it prevents the left to right flow and it
2 permits the right to left flow through channel
3 87. That's the way a check valve works.

4 Does that answer your question?

5 Q. If the pressure is higher in the
6 compression portion of the chamber than the
7 accommodating cavity 88, then the check valve
8 is not functional, correct?

9 A. The check valve is closed. You're
10 biasing -- the spring biases -- the pressure is
11 higher in the compression chamber and
12 therefore, this channel 87, that pressure is
13 pushing the ball down covering the hole because
14 the pressure is low here.

15 Flow is -- you are primarily trying
16 to block the flow from left to right in this
17 channel 87. Flow is permitted right to left.
18 You think about the flow pushing the ball up
19 and then going across. That's what the spring
20 is doing. The spring is biasing that ball to
21 close the valve.

22 Q. If the check valve -- does the check

1 valve provides adjustable flow through the flow
2 87?

3 A. I think we talked about this -- I
4 will share my screen again. I think we talked
5 about this last time. I would say yes. I
6 don't think he discloses it in the description,
7 but when I look at this, the spring is biasing
8 above the ball valve and it appears to be,
9 although it is not described, it appears to be
10 some type of Hex Allen Key Set Screw that I can
11 move this in or out, therefore changing the
12 biasing of the check ball valve, the spring, so
13 I would be able to adjust the resistance to
14 flow, from very light -- still resisting flow
15 in one direction, but I can do it from a very
16 light pressure, you know, this is called a
17 break -- this is called a blow-off valve, so,
18 you know, certain amount of pressure is needed.

19 A certain pressure differential is
20 needed to make the ball move. So I can make
21 this spring, back it all the way out, and so if
22 this ball is very loose, it might actually

1 permit two-directional flow, just because the
2 ball has got no biasing on it, or if I make
3 that spring tension very high, that would make
4 it that the pressure differential has to be
5 very high.

6 Q. But it's either there is flow or
7 there is no flow through the check valve,
8 correct?

9 A. Well, if you back the spring all the
10 way out, the ball is floating so there is no
11 biasing element on the ball. In that case, all
12 bets are off, because it depends on the
13 gravity, which orientation is the shock. If
14 it's as shown, gravity will push the ball down,
15 it will tend to close it.

16 If it is flipped over, gravity will
17 tend to open the valve so it depends on how
18 much biasing force there is with this spring.
19 But the purpose of a check valve is to permit
20 only flow in one direction. In this case, like
21 I said, right to left through channel 87 as
22 shown, but you could adjust that threshold by

1 changing the bias on the spring.

2 Again, I am just interpreting this
3 in the drawings, but that's what it looks like
4 to me.

5 Q. Looking at -- starting at Chen's
6 Page 1, Line 20, Chen recites: "When the
7 piston 81 moves to the front end of the
8 hydraulic cylinder 8, the projecting post 821
9 fits into the accommodating cavity 84 to block
10 the same."

11 Do you see that?

12 A. Yes.

13 Q. Chen further says: "At this time,
14 oil in the hydraulic cylinder 8 can only flow
15 through the small diameter flow way 86 into the
16 accommodating cavity 84" and then out, "and
17 then flow out from the oil outlet 85."

18 Do you see that?

19 A. Yes.

20 Q. So Chen says that: "When the piston
21 81 engages with the accommodating cavity 84 and
22 blocks it, at that time, oil can only flow

1 through the flow way 86 into the accommodating
2 cavity 84 and then flow out through outlet 85,"
3 correct?

4 A. That's what he says. It is not
5 quite hundred percent true, but that's what he
6 says, yes.

7 Q. Chen doesn't say that there is flow
8 from the hydraulic cylinder 8 into the
9 accommodating cavity 84 through a flow way 87,
10 correct?

11 A. He doesn't say that it flows from
12 the compression chamber to the bottom out cup
13 through 87. That would violate the one-way
14 valve, that's true.

15 Q. No, I am talking --

16 A. I agree with you. He doesn't say
17 that because that would violate the one-way
18 valve.

19 Q. And so for the flow way 86, there is
20 flow only from the hydraulic cylinder 8 to the
21 accommodating cavity 84, correct?

22 A. I don't think he says "only."

1 Q. It says at this time, by which he
2 means when the piston engages with the
3 accommodating cavity 84, oil in the hydraulic
4 cylinder can only flow through the small
5 diameter flow way 86 into the accommodating
6 cavity 84, correct?

7 A. Yes. But he is saying that only
8 flow, doesn't mean only flows in one direction.
9 Only flows through.

10 Q. Only flows through small diameter
11 flow way 86 into the accommodating cavity 84.

12 Do you see that?

13 A. If that's during a compression
14 stroke, agree, yes.

15 Q. Yes. So during a compression
16 stroke, oil from the compression portion of the
17 hydraulic cylinder 8 flow through flow way 86
18 into the accommodating cavity 84, correct?

19 A. During a compression stroke, that's
20 true. During a compression stroke, while the
21 bottom out piston is engaged with the bottom
22 out cup, that's true.

1 Q. So what does the term "capacity of
2 fluid flow" mean to you?

3 A. I think -- so my previous reports or
4 even in this declaration, I think that's an
5 indefinite term. It can be many things.

6 Q. What meaning are you applying for
7 the phrase "capacity of the fluid flow" in your
8 declaration?

9 A. I'd have to look at my declaration
10 where it appears, but my recollection is, I
11 point out the fact that it's an indefinite term
12 and I probably adopted Fox's interpretation of
13 capacity. I would probably say, so knowing me,
14 I would have said some language like this is an
15 indefinite term, but for the sake of this
16 argument, I am adopting Fox's interpretation of
17 what capacity means.

18 Q. You have your declaration in front
19 of you. You can look it up and tell me where
20 you have said that.

21 A. Yeah, I can look it up. Word search
22 for capacity.

1 So my declaration, I guess I am
2 ashamed to admit that I didn't put my little
3 disclaimer which I normally would have put.
4 I'm word searching for capacity here. But
5 that's an oversight on my part.

6 But normally, in all my other
7 documents, I think I put the capacity is
8 indefinite and it can be many things, but Fox's
9 interpretation of capacity, I have understood
10 it to be the flow rate essentially, so when I
11 say capacity of fluid flow, that's an
12 adjustable, means the flow rate is adjustable.

13 Q. And does the check valve allow
14 adjustment of flow rate through flow path?

15 A. Sure. Because the check valve has
16 -- when the valve is open -- of course, you can
17 consider binary, one way it's closed, the other
18 way it's open. That's adjustable, but if you
19 bias that spring as we talked about, the check
20 valve could be partially open, fully open, you
21 know, the amount that ball moves will depend on
22 the pressure differential, so the amount of

1 flow that goes through there would be
2 controllable.

3 Wouldn't be a great way to control
4 it, not like a needle valve, but it definitely
5 is controllable.

6 Q. I am not asking whether flow can be
7 controlled. I am asking in particular flow
8 rate. Does the check valve allow adjustment of
9 flow rate through a flow path?

10 A. Doesn't do it well, but it does it,
11 yes.

12 Q. How does a check valve allow
13 adjustment of flow rate to a flow path in which
14 the check valve is placed?

15 A. So flow rates will depend on lots of
16 factors. Let's assume all the factors are
17 constant. Pressure differential, size of the
18 channel, number of bins in the channel. Let's
19 assume all those things are constant, and the
20 only thing we have in there is a check ball
21 valve with a biasing spring, which you can
22 adjust.

1 So as I change that biasing spring,
2 given any pressure differential, the amount
3 that ball moves will depend on how much spring
4 bias there is. The more spring bias there is,
5 the less that check ball will move so that
6 check ball is a restriction, and so if it moves
7 a little bit, means barely cracks open, you get
8 a little bit of flow given a certain pressure
9 differential.

10 If it moves a lot because the spring
11 bias is very small, you will get a lot of flow
12 given a certain pressure differential. It's
13 not the way engineering is meant to do it, but
14 it does do it.

15 Q. If you adjust the pressure that is
16 needed to open and close a check valve with --
17 let me ask you this way.

18 Can you adjust a check valve between
19 a closed position and a plurality of open
20 positions?

21 A. That's not the way a check ball
22 functions. It does work that way. It's closed

1 when the ball is against the seal, but then as
2 it opens, again, depending on the pressure
3 differential, it's biased by a spring, so the
4 amount the ball moves, as the ball moves in
5 this case upwards, as the ball moves, there is
6 a spring behind it, so the force required to
7 move the ball incrementally upwards keeps
8 increasing, so to move the ball a little bit
9 requires a little bit of force. To move the
10 ball a lot, requires a lot of force.

11 But the pressure differential,
12 depending on how much that changes, it will go
13 from a closed position, you can have a --
14 various positions, open or closed. Again, it's
15 not the way the check valve is meant to
16 operate. It's the way it works, but we usually
17 -- an engineer wouldn't -- a POSITA wouldn't
18 design flow control using a check ball valve,
19 but that's what it does.

20 It has a plurality of positions and
21 you can change how much it moves up and down
22 based on how much spring tension you put on

1 there. The spring constant and then how much
2 preload you put on that spring.

3 Q. If the spring constant is set, and
4 when a certain pressure is reached and the
5 check valve opens and now there is flow, does
6 the flow rate keep increasing or decreasing or
7 once it's open and there is just flow
8 happening?

9 A. Depends on a lot of geometry, but
10 generally speaking, the rate this happens will
11 depend on the geometries, but as a check valve
12 -- the check valve opens because of the
13 pressure differential. There's more pressure
14 on, in this case, below the ball than the side
15 of the ball, so the ball goes up because
16 there's a lot of pressure below to push that
17 up.

18 Once that ball opens, flow is going
19 to happen. That, of course, that flow affects
20 the pressure differential. So how fast that
21 ball comes down depends on how fast that
22 pressure differential goes to zero. Not only

1 zero, because there is a bias.

2 So at some point, you're going to
3 need a zero. You're going to need a certain
4 pressure differential to get the ball to move
5 at all, but once it gets below that threshold,
6 the ball will close and it will seal again,
7 effectively seal.

8 But how fast that ball moves back
9 down or how fast it moves up, depends on how
10 fast that pressure differential drops. That
11 would depend on lots of things, lots of
12 geometries, size of the compression chamber,
13 size of the bottom out cup, the viscosity of
14 oil, lots of things can change that.

15 But so the pressure differential
16 causes the ball to move down slowly as the
17 pressure differential drops, but again, that
18 spring, even for a constant -- spring constant,
19 you can change the preload on that.

20 Q. Let's switch gears to the Nakaya
21 reference.

22 A. All right.

1 Q. That's Exhibit 1005.

2 A. I actually printed that one. I
3 thought that might be an important one. All
4 right. I got it.

5 (Technical Interruption.)

6 (A short recess was taken.)

7 BY MS. BHATTACHARYYA:

8 Q. And do you also have your
9 declaration open where you discuss Nakaya?

10 A. Yes. I've got Nakaya and my
11 declaration. Printed copies, but I have them
12 both, yes.

13 Q. Ground 1 of your declaration says:
14 "Claim 1 through 9, 11 through 15, and 19 are
15 anticipated by Nakaya," are rendered obvious by
16 Nakaya -- "or rendered obvious by Nakaya in
17 view of Kodama," correct?

18 A. Yes.

19 Q. So going to Paragraph 92 of your
20 declaration.

21 A. Okay.

22 Q. You are referring to the portion

1 marked as 1125 and 1127, the embodiment in
2 figures 7 and 8 as the bottom out cup, correct?

3 A. That's correct.

4 Q. And it's your opinion that fluid
5 flows from the bottom out cup to the -- to the
6 Compression Portion 82 of the Nakaya device,
7 through the flow path 823 during a compression
8 stroke; is that right?

9 A. I think I talk about it flowing
10 either direction, but it is possible to go --
11 it is possible to go that direction.

12 Q. What does Nakaya say about the
13 directionality of flow through the flow path
14 823?

15 A. I believe -- I believe I quote it
16 there. I am trying to find the exact place he
17 talks about it. It is Column 9.

18 My -- my recollection is it goes
19 from the bottom out cup to the compression
20 chamber. He talks about that. I am trying to
21 find the exact quote. I remember it was in
22 Column 9 some place.

1 Yes. So on Page 88, 89 of my --
2 Paragraph 117, basically, I talk about the
3 directional flow being from the bottom out cup
4 to the compression chamber, which Nakaya in
5 Column 9, lines 22 to 30, explain that.

6 Q. Let's go to Column 9 of Nakaya.

7 A. Yes.

8 Q. Starting at Line 12 in Column 9 of
9 Nakaya, Nakaya says: "At the bottom Part 112B,
10 there is provided a throttle passage 823 as an
11 auxiliary passage for communicating with the
12 two chambers 821 and 822."

13 Do you see that?

14 A. Yes.

15 Q. Then Nakaya goes on to say: "The
16 throttle passage 823 is open to the chamber 821
17 at a location more radially outside than the
18 seal member 155."

19 Do you see that?

20 A. Yes.

21 Q. What does a throttle passage open to
22 the chamber 821 mean?

1 A. That means there is fluid
2 communication between that passage and the
3 chamber.

4 Q. It doesn't ascribe any
5 directionality of flow to the Passage 823,
6 correct?

7 A. No. In fact, I think I talk about
8 flow can be either direction depending on the
9 pressures.

10 Q. Now, let's go to Line 22, you said,
11 right, of Column 9. Nakaya says: "At a stage
12 where the bending degree of the knee is small
13 and the second chamber 82 is not divided into
14 two, a constant throttle valve 140 generates
15 the torque necessary for increasing the
16 pressure in the second chamber 82."

17 A. Yes.

18 Q. That throttle valve is -- the
19 throttle valve 140 is different than the
20 throttle valve 824 that is disposed in the
21 throttle passage 823, correct?

22 A. Yes.

1 Q. Nakaya starting at Line 24, Column 9
2 says: "On the other hand, at the stage where
3 the bending degree of the knee is increased and
4 the second chamber 82 is divided into two, the
5 constant throttle valve 140 increases the
6 pressure in the chamber 822 and the throttle
7 valve 824 increases the pressure in the chamber
8 821."

9 Do you see that?

10 A. Yes.

11 Q. Okay. What does that sentence mean
12 to you?

13 A. That sentence is saying you have
14 these two pressures, and you can easily have
15 the pressure in the bottom out cup be higher
16 than or different -- let's just say
17 different -- than pressure in the main
18 compression chamber. So depending on which
19 pressure is higher that will dictate the ratio
20 of the flows.

21 He is saying the pressures are
22 controlled by two different devices. 140 is

1 controlling the pressure in the bottom out cup,
2 and 824 is controlling the pressure in the
3 primary compression chamber.

4 So depending on -- on the setting of
5 these two valves, you can have pressure
6 differentials positive or pressure
7 differentials negative, and they will dictate
8 the direction of flow.

9 Q. Okay. So the throttle valve 824 and
10 the throttle passage 823 increases the pressure
11 in the Compression chamber 821, correct?

12 A. 821. I think that's right. Let me
13 make sure. Find the right figure here. I
14 think that's right. 821. There is too many
15 figures in this patent.

16 821, yes.

17 Q. If pressure is increasing in the
18 chamber 821 because of the action of the
19 throttle valve 824 and throttle passage 823,
20 does that mean fluid is flowing from the
21 alleged bottom out cup into the Compression
22 chamber 821?

1 A. Again, it depends on the ratios of
2 these pressures, what the pressure differential
3 is. The throttle valve is allowing there to be
4 a pressure differential. There is a
5 restriction. This is allowing a pressure
6 differential. You're getting a pressure drop
7 across this throttle valve.

8 Whether -- again, well, pressure
9 drop, one way or the other. I've got to be
10 careful about the word "drop," but you're
11 getting a pressure differential across this
12 valve, and whether 821 is higher or lower than
13 822 depends on many factors.

14 Q. But Nakaya says that the throttle
15 valve 824 increases the pressure in the
16 chamber 821.

17 What does that mean with respect to
18 flow through the throttle valve 824?

19 A. Again, he is saying that -- that you
20 have these two different throttle valves
21 controlling the pressures in each of these
22 chambers.

1 There is also compression going on.
2 We have to remember that the pistons -- the
3 main piston and the bottom out piston are both
4 moving also. But he is contemplating or, you
5 know, he sees -- he's describing the case where
6 you have two different methods of regulating
7 pressure in these two different chambers. So
8 you can have, you know, positive pressure
9 differential or a negative pressure
10 differential, so you can have flow going in
11 either direction.

12 Q. What does the sentence "throttle
13 valve 824 increases the pressure in the
14 chamber 821" mean to you?

15 A. That means that throttle valve is
16 restricting flow, and so if you restrict flow
17 and that primary compression piston is moving,
18 the pressure will increase.

19 Q. Pressure will increase in the --

20 A. In 821.

21 Q. -- 821, right?

22 A. It doesn't -- it doesn't mean that

1 pressure is higher than 822. It just means
2 that pressure is increase.

3 Q. Okay. So if pressure is increasing
4 in 821 and is higher than pressure in 822,
5 fluid will flow from 821 to 822, correct?

6 A. If you have a pressure differential
7 such that 821 is higher than 822, you will get
8 flow in that direction.

9 The reverse is also true. If 822 is
10 higher than 821, you get flow in the other
11 direction.

12 Q. Okay. Does Nakaya say anywhere
13 where the higher pressure is?

14 A. He does not, but he is saying, as I
15 interpret it, that you have these two, you
16 know, valves, 824 and 140 that allow you to
17 independently, you know, you know, adjust
18 these -- the pressure differentials. So he is
19 contemplating the fact that -- the case where
20 you may have 822 higher than 821.

21 Q. Now, if the -- the throttle valve
22 140 increases the pressure in chamber 822,

1 correct?

2 A. That is one of the reasons it
3 increases, again, because -- pressure is
4 increasing also because the piston is moving,
5 but that -- that is controlling the amount of
6 that pressure increase, yes.

7 (Reporter clarification.)

8 THE WITNESS: So what I was saying
9 was if the piston is -- if the compression
10 shaft, the pistons are stationary, the valves
11 don't do much.

12 We are really talking about when the
13 shaft is moving and you are getting compression
14 in these two chambers. The valves are
15 controlling how much fluid is flowing, you
16 know, between the various chambers. And so
17 those things allow you to increase the pressure
18 during -- how fast a pressure is increasing
19 during the compression stroke.

20 BY MS. BHATTACHARYYA:

21 Q. If the throttle valve 824 increases
22 the pressure in the chamber 821 and assuming

1 that pressure in chamber 821 is higher than the
2 pressure in chamber 822, then fluid will flow
3 from 821 into 822, correct?

4 A. I think that's the same question you
5 just asked.

6 Yes. If the pressure in 821 is
7 higher than the pressure in 822 and 824 is
8 open, the fluid will flow between -- from 821
9 to 822, but the reverse is also true. You can
10 get 822 to 821 if the pressure in 822 is
11 higher.

12 MS. BHATTACHARYYA: Let's take a
13 five-minute break.

14 (A short recess was taken.)

15 BY MS. BHATTACHARYYA:

16 Q. Dr. Wang, in your exhibit folder,
17 there is the board's institution decision,
18 which is labeled Paper 11.

19 A. Did you just add that?

20 Q. Yeah.

21 A. Okay.

22 Okay. I've got that open.

1 Q. And you said you read the board's
2 institution decision prior -- prior to the
3 deposition today, correct?

4 A. Yes.

5 Q. Okay. Let's go to Page 27 of the
6 institution decision, in particular the very
7 last paragraph.

8 A. Okay.

9 Q. The board has written that patent
10 owner contends that a POSITA would understand
11 air to flow from chamber 821 to 822 when
12 chamber 82 is divided into two chambers.
13 However, patent owner's reading appears to
14 contradict Nakaya's teaching that the pressure
15 in chamber 821 increases rather than decreases.
16 In other words, it is not clear how the
17 pressure in chamber 821 increases if air flows
18 out from chamber 821 to chamber 822 through
19 flow path 823 per patent owner's reading.

20 Do you see that?

21 A. Yes.

22 Q. Okay. The board appears to be

1 saying that in order for the pressure in
2 chamber 821 to increase, air has to flow from
3 chamber 822 into chamber 821.

4 Do you agree with that?

5 A. I think they've put the cart before
6 the horse in some ways. I mean, the direction
7 of flow depends on the pressure differential.
8 So, you know, flow doesn't increase pressure.
9 Pressure creates the flow.

10 Q. So if the pressure in chamber 821
11 is -- is higher than pressure in chamber 822,
12 as we discussed before, air will flow from
13 chamber 821 into chamber 822, correct?

14 A. If that were the case, again, it's
15 possible to have flow in either direction.
16 It's -- it's possible to have a pressure
17 differential in either direction. It can be a
18 positive differential or negative. So
19 depending on, you know, the ratio of all the
20 geometries, you know, what -- what the working
21 fluid is, what type of gas it is. Lots -- lots
22 of things affect that.

1 Q. Okay. But assuming that the
2 pressure in chamber 822 -- strike that.

3 Assuming that the pressure in
4 chamber 821 is increased to be higher than the
5 pressure in chamber 822, then air will flow
6 from 821 to 822, correct?

7 A. I think you keep asking the same
8 question.

9 It is possible to have flow in
10 either direction depending on the pressure
11 differential. The Nakaya --

12 Q. I am asking you to assume that the
13 pressure in 821 is higher than the pressure in
14 822. In that scenario air will flow from 821
15 to 822, correct?

16 A. We keep saying the same thing.

17 Pressure will flow from higher
18 pressure to lower -- fluid will flow from the
19 region of higher pressure to lower pressure.
20 If 821 is higher than 822, it will flow in that
21 direction. If 822 is higher than 821, it will
22 flow in that direction.

1 Q. Okay. The board goes on to say
2 that, in Page 22 of the institution decision,
3 Nakaya's disclosure is more consistent with
4 petitioner's view that fluid flows from chamber
5 822 into chamber 821 to increase pressure.

6 Do you agree with that sentence?

7 A. Where did -- you said Page 22?

8 Q. No. Page 28 of the institution
9 decision. The board says: "Nakaya's
10 disclosure is more consistent with petitioner's
11 view that fluid flows from chamber 822 into
12 chamber 821 to increase pressure."

13 Do you see that?

14 A. I see that.

15 Q. Do you agree with that sentence?

16 A. Again, I think they put the cart
17 before the horse. The meaning is correct. I
18 mean, Nakaya is teaching that 821 can have --
19 sorry -- 822 can have a higher pressure than
20 821, and the flow will be in that direction.
21 That's what Nakaya is saying.

22 So flow is going -- sorry. You

1 know, 8- -- flow is going from 822 to 821
2 because 822's pressure is lower. It flows to
3 increase the pressure of 821, right. If the
4 pressure in 822 is higher than 821, it flows to
5 increase the pressure of 821. You're trying --
6 it's trying to eliminate the pressure
7 differential. So that statement is, you know,
8 correct in that sentence.

9 Q. But if the pressure is -- if the
10 pressure is higher in 822 than 821, then fluid
11 will go from 822 to 821, correct?

12 A. The sentence says -- or the last
13 part of the sentence says, you know, fluid
14 flows from chamber 822 into chamber 821 to
15 increase pressure. That's a true statement.

16 If the pressure in 822 is higher
17 than pressure in 821, fluid will flow from 822
18 into 821 thereby increasing the pressure in
19 821. It is flowing to eliminate that pressure
20 differential. So that statement is correct.

21 Q. But if the pressure in 821 is higher
22 than the pressure in 822, then the board's

1 statement would be incorrect, right?

2 A. If that was the case, but that's not
3 what they are saying. I'll keep saying you can
4 have flow in either direction depending on the
5 ratio of the pressures. It will flow from 822
6 to 821 to increase the pressure of 821. That
7 statement is correct.

8 Q. But Nakaya says that the pressure in
9 821 is increased by the throttle valve 824?

10 A. Yes. Yes.

11 Q. What is the function of throttle
12 valve 824 if the pressure in 821 is increasing
13 just by virtue of fluid flow from 822 into 821?

14 A. I'm not sure I understand your
15 question.

16 If 822 is higher than 821 -- the
17 throttle valve is regulating how much flow rate
18 there is. So if it's fully closed, that
19 pressure differential will remain there. If
20 you open it a little bit, a little bit of flow
21 will go there and the pressure would regulate
22 slowly, equalize slowly. If you open it a lot,

1 there will be a lot of air that flows through
2 and it will regulate -- it will equalize much
3 faster.

4 Q. How does the pressure in 822
5 increase?

6 A. It's because the -- there's -- the
7 bottom out piston is entering the bottom out
8 cup.

9 Q. Nakaya says that throttle valve 140
10 increases the pressure in the chamber 822.

11 Do you see that?

12 A. Yes.

13 Q. So what is the purpose of the
14 throttle valve 140 with respect to increasing
15 the pressure in 822 if the pressure in 823
16 increases just by action of the bottom out
17 piston entering the bottom out cup?

18 A. Well, again, there is a couple
19 things going on.

20 So the -- if you look at 822, there
21 is an outlet, 140, and so air is trying to flow
22 out through that outlet. It is also trying to

1 flow out that outlet through 823. So if you --
2 if you are closing, you know, these valves, the
3 pressure is going to increase as -- as the
4 compression occurs.

5 Q. Does Nakaya say anywhere which way
6 fluid flows through the -- at 823 other than
7 saying that it is regulated by the throttle
8 valve 824?

9 A. Other than these passages I quoted,
10 the lines 22 to whatever, you know, it doesn't
11 explicitly say. But when I read it and I
12 understand what it -- what it's disclosing,
13 it's pretty obvious that -- that, you know, the
14 direction of flow will -- is, like -- again, is
15 possible in either direction depending on the
16 various geometries and positions of valves and
17 fluid density, et cetera.

18 Q. Let's go to the embodiments shown in
19 Figure 17, 18, and 19.

20 A. Okay.

21 Q. Those figures have -- show a flow
22 path that has a needle valve 4824B in one of

1 the passages and in the other passage has a
2 needle valve 4824A, correct?

3 A. Yeah. I would think of that as two
4 different passages. Well, they have some
5 commonality, but I think it's two different
6 passages, yes.

7 Q. Okay. So the passage with the
8 needle valve 4824A goes from one part of the
9 alleged bottom out cup to another part of the
10 alleged bottom out cup, correct?

11 A. It has three communication points,
12 right. So it goes from what's labeled 4822A,
13 which is one part of the bottom out cup --
14 maybe we can call it the upper part of the
15 bottom out cup -- to what looks like the 4217A.
16 I'm not quite sure that's the right one, but
17 it's the bottom part of the bottom out cup.

18 But it also obviously communicates
19 to the passages that is controlled by that
20 valve, 42 -- 4824B. It has three outlets.

21 Q. The fluid can go from the alleged
22 bottom out cup via the needle valve 4824A to an

1 upper portion of the bottom out cup or fluid
2 can go via both the valves, 4824A and 4824B to
3 the compression portion of the alleged damper
4 chamber, correct?

5 A. I think I'm agreeing. Just to
6 restate, yeah, so -- so the fluid can go --
7 this fluid passage is -- is communicating with
8 essentially three chambers: The compression
9 chamber labeled 4822B -- that's the primary
10 compression chamber -- the top of the bottom
11 out cup labeled 4822A, and the bottom of the
12 bottom out cup. I'm not sure that's really
13 labeled. There is a 41278 pointed to the edge,
14 but you get the idea, I think.

15 So there are three chambers that
16 this passage communicates with. So, you know,
17 you can have flow going between -- you know,
18 there is a little strange three-way
19 communication going on.

20 Q. As far as communication between the
21 alleged bottom out cup and the alleged
22 compression portion of the damper chamber goes

1 and their embodiments shown in figures 17, 18,
2 and 19 of Nakaya, there is only one flow path
3 that goes through the needle valves 4824A and
4 4824B, correct?

5 A. I think there is two: One through
6 4824A, one through 4824B.

7 Q. But the flow path that goes from
8 4824A is not connecting with the alleged
9 compression portion of the damper chamber,
10 correct?

11 A. They share -- 4824A and 4824B share
12 that one channel.

13 Q. Yes. So you -- let me ask the
14 question again.

15 For communication between the bottom
16 out -- strike that.

17 For communication between the
18 alleged bottom out cup of Nakaya and the
19 alleged compression chamber of Nakaya in
20 figures 17, 18, and 19, the flow goes through
21 both the needle valves 4824A and 4824B,
22 correct?

1 A. Well, from either -- in this case
2 there is two bottom out cups. I'm not sure I
3 labeled these, but the flow from either bottom
4 out cup will always go through both valve 4824B
5 and 4824B.

6 Q. As far as the communication channel
7 goes between the bottom out cup and the
8 compression portion of the chamber, there is --
9 everything will flow through the valve 4824B,
10 correct?

11 A. That's exactly what I just said.
12 Again, no matter which bottom out
13 cup you're looking at -- there is two bottom
14 out cups here -- the flow will go through both
15 valves, so it definitely goes through valve
16 4824B and 4824A, but all the flow will go
17 through both valves.

18 Let me modify that answer a little
19 bit because I think -- I think we're not going
20 to disagree on this, but I said all the flow
21 will flow through both valves. There is
22 circumstances where you can completely close

1 4824B and flow will just flow through 4824A
2 between the two chambers. That's a
3 possibility.

4 And so in that case, the flow would
5 not go back to the compression chamber, which I
6 don't think you are interested in that, but
7 that is a possibility that you can have flow
8 only going through 4824A, and the flow doesn't
9 go to the compression chamber at all. I don't
10 think that's the case you're interested in, but
11 that's a possibility.

12 MS. BHATTACHARYYA: I have no
13 further question for Dr. Wang.

14 EXAMINATION BY COUNSEL FOR PETITIONER

15 BY MR. HICKEY:

16 Q. Okay. Dr. Wang, if you could turn
17 to your declaration, Page 144.

18 A. 144?

19 Q. Yes.

20 A. Okay.

21 Q. Do you recall counsel asking you
22 questions about Ground 5 and whether that was

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1 just anticipation or also obviousness based on
2 Gartner?

3 A. Yeah. I recall saying that
4 Nakaya -- I wasn't referencing Nakaya in this
5 section.

6 Q. Right. And if you could turn to
7 Paragraph 182 under this ground. And please
8 read 182 into the record.

9 A. "To the extent that Gartner does not
10 explicitly disclose a closed position, such
11 feature would have been obvious to a POSITA
12 using the same equipment featured in Gartner.
13 In particular, a POSITA would have been
14 motivated to provide a closed position to allow
15 for a greater range of damping characteristics
16 for the damper. Moreover, Kodama discloses a
17 needle valve, Kodama's throttle valve 130, that
18 includes a closed position."

19 So -- so I guess what you are
20 thinking, it should be Gartner in view of
21 Kodama instead of Nakaya. That's the typo.

22 Q. And does that refresh your

1 recollection --

2 A. Yes.

3 Q. -- as to whether you had an
4 obviousness position with respect to Ground 5.

5 A. Yeah. That makes sense because I
6 was trying to figure out why I had an
7 obviousness position because Gartner by itself
8 is obviously not obvious.

9 So that -- thank you for -- for
10 clarifying.

11 MR. HICKEY: I have no further
12 questions at this time.

13 MS. BHATTACHARYYA: Nothing further
14 from me.

15 MR. HICKEY: Great. We'll read and
16 sign.

17 THE COURT REPORTER: Thank you.
18 Counsel, I understand that your standing order
19 is the rough and two-day delivery.

20 MS. BHATTACHARYYA: Yes.

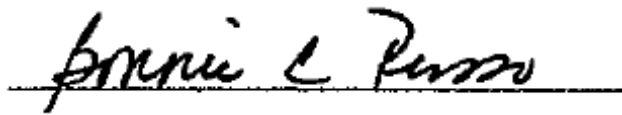
21 THE COURT REPORTER: Okay. That
22 will be coming shortly.

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MS. BHATTACHARYYA: Thank you.
(Whereupon, the proceeding was
concluded at 2:48 p.m.)

CERTIFICATE OF NOTARY PUBLIC

I, Bonnie L. Russo, the officer before whom the foregoing deposition was taken, do hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn by me; that the testimony of said witness was taken by me in shorthand and thereafter reduced to computerized transcription under my direction; that said deposition is a true record of the testimony given by said witness; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of the action.

A handwritten signature in cursive script, reading "Bonnie L. Russo", is written over a horizontal line.

Notary Public in and for
the District of Columbia

My Commission expires: August 14, 2025

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1 I declare under penalty of perjury
2 under the laws that the foregoing is
3 true and correct.

4
5 Executed on _____, 20____,
6 at _____, _____.

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11 _____
12 ERIC WANG, PH.D.
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1 SRAM, LLC v FOX FACTORY, INC.
2 ERIC WANG, PH.D. (#6857245)
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4 E R R A T A S H E E T
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22 (ERIC WANG, PH.D.) Date

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[building - chamber]

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