

**Date:** October 23, 2019

**Case:** Certain Unmanned Aerial Vehicles and Components Thereof



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UNITED STATES OF AMERICA  
BEFORE THE  
INTERNATIONAL TRADE COMMISSION

- - - - -X

IN THE MATTER OF: : Investigation Number  
CERTAIN UNMANNED AERIAL VEHICLES : 337-TA-1133  
AND COMPONENTS THEREOF :

- - - - -X

HEARING

Wednesday, October 23, 2019  
Courtroom C  
U.S. International Trade  
Commission  
500 E Street, S.W.  
Washington, D.C.

The Hearing commenced, pursuant to notice of the Judge, at  
9:08 a.m., before the Honorable Charles E. Bullock, Chief  
Administrative Law Judge for the United States  
International Trade Commission.

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1 A I presume --</p> <p>2 Q You agree with that, right?</p> <p>3 A Well, I don't know that there is a disclosure</p> <p>4 that there can't also be a neural network within the speed</p> <p>5 planner.</p> <p>6 Q Andersson doesn't say that.</p> <p>7 A I don't -- I don't know that he says it isn't in</p> <p>8 the speed planner. We'd have to review the patent to see</p> <p>9 if the speed planner actually has, embedded in it, a neural</p> <p>10 network.</p> <p>11 Q Andersson actually explicitly teaches that the</p> <p>12 speed plan is calculated, right?</p> <p>13 A No.</p> <p>14 Q Let's look at column 6, lines 26 through 30.</p> <p>15 This is talking about an extension of the primary</p> <p>16 embodiment. It says, "furthermore, it may be possible to</p> <p>17 connect a system as stated above," which we discussed in</p> <p>18 connection with figure 2, "with a route planner." And then</p> <p>19 it goes on to say that "a speed plan may be calculated."</p> <p>20 Do you see that word, "calculated"?</p> <p>21 A I do see it, but this is talking about an</p> <p>22 extension to what's disclosed that is a route planning,</p> <p>23 which would then map points along the way. So it's really</p> <p>24 -- it's a different disclosure than what we were just</p> <p>25 talking about.</p> | <p>1 to question 44, which appears in your witness statement at</p> <p>2 CDX-0016C.0015. And we've put it on the screen.</p> <p>3 A Okay, I'm with you.</p> <p>4 Q And in this question -- the question is, what</p> <p>5 does that page show. And if you need any reference, that's</p> <p>6 the page of the five pictures in the Microdrones manual</p> <p>7 that is essentially the basis for all the arguments shown</p> <p>8 on the right there. And specifically, you mentioned the</p> <p>9 top image.</p> <p>10 A Yes.</p> <p>11 Q And in your testimony, you say, in the top image</p> <p>12 on CDX-0016.0003, you can see that the blades have two</p> <p>13 knobs on the bottom of the center bar. And we are talking</p> <p>14 about those two little knobs on the interior part of the</p> <p>15 blade, right?</p> <p>16 A That's correct.</p> <p>17 Q And then you further described -- it says, "the</p> <p>18 two knobs align with two indentations," and the</p> <p>19 indentations are on the mounting plate, right?</p> <p>20 A That's right.</p> <p>21 Q And as you point out, the indentations are</p> <p>22 referred to as holds in the document, right?</p> <p>23 A They are. There is some debate about -- I heard</p> <p>24 yesterday people said that might be a typo, but anyway,</p> <p>25 holes or holds.</p>                                                                                       |
| Page 430                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Page 432                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>1 Q Andersson does teach a speed plan is calculated,</p> <p>2 right?</p> <p>3 A For a route, an entire route, a speed plan for</p> <p>4 an entire route may be calculated. It does teach that as a</p> <p>5 possible extension that is in addition to the system we</p> <p>6 were just talking about.</p> <p>7 MR. YIN: Thank you. I have no further</p> <p>8 questions.</p> <p>9 MR. BRITTINGHAM: I think our system is we'll</p> <p>10 switch to the '184 patent. Give me a moment.</p> <p>11 JUDGE BULLOCK: Okay.</p> <p>12 CROSS-EXAMINATION</p> <p>13 BY MR. BRITTINGHAM:</p> <p>14 Q Good morning, Dr. Reinholtz.</p> <p>15 A Good morning.</p> <p>16 Q I will be asking you questions at this stage on</p> <p>17 the '184 patent. And if you need to look in the binders</p> <p>18 for any of the materials that we are discussing, I think</p> <p>19 for this portion, most of what we will be talking about is</p> <p>20 in binder 2. I think the patent itself may be in binder 1.</p> <p>21 It's JX-2, if you need it.</p> <p>22 A Okay. Thank you.</p> <p>23 Q So I want to start with the Microdrones manual,</p> <p>24 which is RX-0036. And we already had a lot of discussion</p> <p>25 about this reference, so I want to focus in on your answer</p>                                                              | <p>1 Q And then in the last sentence of that answer,</p> <p>2 you said, "the knobs are designed to rest in the</p> <p>3 indentations [holds] on the mounting plate," right?</p> <p>4 A That's right.</p> <p>5 Q So these knobs, do you agree that they are lugs?</p> <p>6 A I think the knobs could be called lugs.</p> <p>7 Q You've used the term "lugs" in your infringement</p> <p>8 analysis, and identified a number of structures in the</p> <p>9 accused products. So using the plain and ordinary meaning</p> <p>10 of "lugs," as you used it in your infringement analysis,</p> <p>11 wouldn't you agree that those knobs are lugs?</p> <p>12 A They are not in the context of the claims of the</p> <p>13 '184 patent, but I think, generally, they are lugs, yes.</p> <p>14 Q The '184 patent uses the word "lugs" in its</p> <p>15 plain and ordinary meaning. That's what the judge held,</p> <p>16 right?</p> <p>17 A Right. But there are, of course, additional</p> <p>18 requirements on what those lugs have to do. So just as</p> <p>19 long as it's in the context. But these certainly could be</p> <p>20 considered lugs, yes.</p> <p>21 Q Okay. And these indentations, would you agree</p> <p>22 that using the plain and ordinary meaning of notches, those</p> <p>23 indentations are notches?</p> <p>24 A I think that's fair, yes.</p> <p>25 Q And the fact that the knobs are designed to rest</p> |

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| Page 433                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Page 435                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <p>1 in the indentations, and that the knobs align with the two</p> <p>2 indentations, would you agree that those two structures are</p> <p>3 engaging?</p> <p>4 A I think they could be said to engage.</p> <p>5 Q Now, the knobs are here on the blades, right?</p> <p>6 A That's right.</p> <p>7 Q And the distance between the knobs on the</p> <p>8 clockwise blade is different than the distance between the</p> <p>9 knobs in the counterclockwise blade, right?</p> <p>10 A That's what the manual teaches, right.</p> <p>11 MR. BRITTINGHAM: So let's blow up the section</p> <p>12 there of the manual.</p> <p>13 BY MR. BRITTINGHAM:</p> <p>14 Q That's what the manual is saying here. To avoid</p> <p>15 accidental misplacement, both directions of turning use --</p> <p>16 "both directions of turning use individual distances</p> <p>17 between those knobs," right?</p> <p>18 A That's right.</p> <p>19 Q So that means that the configuration -- the lugs</p> <p>20 on the counterclockwise blade have a different</p> <p>21 configuration than the lugs on the clockwise blade, right?</p> <p>22 A That's true.</p> <p>23 Q And the -- that differing configuration is what</p> <p>24 the manual says will avoid accidental misplacement, right?</p> <p>25 A Right. Obviously, they can be misplaced.</p>                                     | <p>1 to help people understand not to do it this way.</p> <p>2 Q And you would agree that in the picture that's</p> <p>3 shown with the big red X, the knobs are not fully inserted</p> <p>4 into the holes, right?</p> <p>5 A They don't appear to be fully inserted, I agree.</p> <p>6 Q And therefore, those structures are not engaged</p> <p>7 in this situation, right?</p> <p>8 A I would say, just looking at the knobs and</p> <p>9 holes, I would say they are not fully engaged. I don't</p> <p>10 know. They may be partially.</p> <p>11 Q Engagement in the context of the '184 patent</p> <p>12 means two components are mated -- are mating, right?</p> <p>13 A In the sense of the lugs, engagement means, that</p> <p>14 the two components can mate together, right.</p> <p>15 Q And in the picture here with the big red X, the</p> <p>16 knobs are not mating with the holes, because if they were,</p> <p>17 that blade would be flush with the mounting plate, right?</p> <p>18 A They are clearly not fully mated, and they are</p> <p>19 not fully down -- the knobs are not fully down in the</p> <p>20 holds. There was a discussion with Dr. Alonso yesterday</p> <p>21 about, could there be some overlap. And we just don't know</p> <p>22 that. But they are clearly not fully inserted in the</p> <p>23 holes.</p> <p>24 Q But as I understand it, you're saying that this</p> <p>25 picture shows that the blade is attached to the wrong</p>                          |
| Page 434                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Page 436                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>1 They -- the manual shows that as well, but it helps to</p> <p>2 avoid misplacement.</p> <p>3 Q Well, you say it can be misplaced. That's</p> <p>4 not -- you're not supposed to do that, right?</p> <p>5 A Well, a novice flying a drone certainly commonly</p> <p>6 misplaces blades. I don't think it's usual. It wouldn't</p> <p>7 be the intent, but it's an easy thing to do by accident.</p> <p>8 Q So the manual is worried about that. And so</p> <p>9 they explain -- they show what happens if you do that in</p> <p>10 the fourth figure, right?</p> <p>11 MR. BRITTINGHAM: Let's blow the fourth figure</p> <p>12 up.</p> <p>13 THE WITNESS: They don't show the consequence of</p> <p>14 it, of course. They show that the -- there is some gap</p> <p>15 that can be seen that might be a visual indicator. It's a</p> <p>16 little hard to see, but they show that as the blade is</p> <p>17 installed on the incorrect rotor in this case.</p> <p>18 BY MR. BRITTINGHAM:</p> <p>19 Q And there is a big red X over the picture,</p> <p>20 right?</p> <p>21 A That's correct.</p> <p>22 Q So it's reasonable to assume that the manual</p> <p>23 thinks this is not the way you're supposed to do it, right?</p> <p>24 A Right. And it's obvious that some people would</p> <p>25 do it this way, and that's why the instructions are here,</p> | <p>1 motor, right?</p> <p>2 A It is. And a person could install it like this,</p> <p>3 attempt to fly, and this rotor would produce a downward</p> <p>4 force. And there would be a catastrophic result from that.</p> <p>5 Q The person who did this, so they can take this</p> <p>6 picture, had to hold the blade in place, and put those</p> <p>7 O-rings on, right?</p> <p>8 A I'm sure that's true. The shaft holds it</p> <p>9 partially, but a person, I'm sure, would be holding on to</p> <p>10 the blade while installing those rubber O-rings, yes.</p> <p>11 Q What if they couldn't find their O-rings, and so</p> <p>12 instead, they held it in place, and they just put a little</p> <p>13 piece of duct tape over the top, secured it at both ends.</p> <p>14 In your view, would that also show that the blade was</p> <p>15 attached?</p> <p>16 A I'd have to see that situation. I haven't</p> <p>17 investigated that. It could be, if the duct tape were --</p> <p>18 were secure enough and provided enough strength.</p> <p>19 Q Well, enough strength to do what?</p> <p>20 A I think a good test is if you -- if you spin</p> <p>21 the -- if you spin the motor, will that cause the blade to</p> <p>22 rotate to generate thrust. That would be -- that would be</p> <p>23 attached in that case. And that would be what you're</p> <p>24 trying to prevent, this catastrophic accident, where you</p> <p>25 get three rotors lifting up and the fourth rotor pushing</p> |

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1 down, and probably tumbling the vehicle over and causing a  
2 lot of damage.

3 Q But you don't know if that would happen, based  
4 on what's shown in this manual in this situation, where the  
5 O-ring was being used, do you?

6 A I'm pretty confident of that. That's what they  
7 are trying to warn against, that you would get -- clearly,  
8 you would get downward thrust on this rotor of equal  
9 magnitude to the thrust on the other three rotors as you  
10 tried to lift the drone up. And it would cause -- it would  
11 cause it to tumble over. It would certainly not be a good  
12 situation.

13 Q Okay. So if instead of using the O-ring, I used  
14 the duct tape, I would get the same downward thrust until  
15 the thing fell off, right?

16 A In your hypothetical situation, if the duct tape  
17 were not strong enough, then it would be like if the  
18 O-rings weren't there. The blade would just spin and fly  
19 off. It wouldn't stay attached.

20 Q But if the duct tape held on for a while, for  
21 those moments, you would say that's attached, just like the  
22 O-rings, right?

23 A I think it's possible that duct tape could be  
24 used to make a similar kind of an attachment. I haven't  
25 seen that situation.

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1 Q Well, let's take a look at one of the accused  
2 products, just for comparison's sake, CDX-001C.0045. So  
3 now, this is one of your slides that you were using in  
4 accusing the Mavic Pro of infringement. And I just want to  
5 confirm. If I took the wrong blade, I could turn it over  
6 and the lugs would fit into those notches, right?

7 A No, the lugs can't be engaged with the notches  
8 if you have the wrong blade.

9 Q Well, they can't be engaged because there is a  
10 bump, right, that prevents it from being pressed all the  
11 way in and turned?

12 A Right, they can't be engaged.

13 Q But it can go in the holes, right?

14 A I'd have to investigate that. I know it can't  
15 be -- they can't be locked together when you have the wrong  
16 blade.

17 Q But you can take the blade, put it in the holes,  
18 and then stop and rest, because you're tired. You're not  
19 ready to turn yet, right?

20 A I haven't done that experiment. I'd have to see  
21 it.

22 Q And if I had the wrong blade on, I would try and  
23 turn it and it wouldn't turn the way you want to turn it in  
24 order to lock it, right?

25 A You would not be able to lock it. That's for

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1 certain, yes.

2 Q I would push down on the spring, and I would try  
3 and turn, and it wouldn't -- nothing good would happen,  
4 right?

5 A Well, you wouldn't push directly on the spring.  
6 Of course, you'd push down on the hub of the rotor, and try  
7 to spin it into place, and you would be unable to. That's  
8 right.

9 Q Right. So at that point, I push down on the  
10 blade, it's compressed the spring. I've tried to turn and  
11 lock it. It's not working. I get frustrated and I go get  
12 my duct tape and I strap it right on. Is that attached?

13 A I think if it can generate enough thrust to spin  
14 the blade and provide thrust that would -- in the correct  
15 case, cause it to lift, or in the incorrect case, push it  
16 down. I think you could say it's attached. It's certainly  
17 not locked.

18 Q Under your definition, because you're calling  
19 the Microdrones improperly situated blade attached -- if I  
20 can attach the blade wrong, no matter how wrong-headed an  
21 idea it is to do it, the '184 patent doesn't cover my  
22 product, right?

23 A No, I think the '184 patent says that there is a  
24 shaft lock portion and a blade lock portion. And those two  
25 components have to lock the blade onto the rotor.

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1 Q But you're saying the fact that somebody  
2 jury-rigged the Microdrones blade to fit, even though all  
3 the components are designed to keep that from happening,  
4 that that means there is no anticipation. The '184 patent  
5 doesn't cover that product at all, right?

6 A I haven't done the analysis of applying the '184  
7 patent to the Microdrones product. I haven't seen the  
8 Microdrones product in person.

9 Q I'm sorry. I meant the manual. I wasn't  
10 speaking specifically of the product, but I'm talking about  
11 the disclosures in the manual. The fact that the manual  
12 shows a discouraged, incorrect effort to put the blade on  
13 the wrong rotor, you're saying that means the '184 patent  
14 doesn't cover that disclosure, right?

15 A I haven't done that analysis. I'd have to think  
16 more about it.

17 Q I thought that was your analysis, but we'll move  
18 on?

19 JUDGE BULLOCK: Let's take our mid-morning  
20 break. We'll come back at 11.

21 (Recess.)

22 JUDGE BULLOCK: Back on the record. Please  
23 proceed.

24 MR. BRITTINGHAM: You can take that down.  
25 BY MR. BRITTINGHAM:

17 (Pages 437 to 440)

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1 Q Dr. Reinholz, were you in the courtroom  
2 yesterday during Dr. Alonso's testimony?  
3 A Yes, I was.  
4 Q Do you recall the questioning from Autel's  
5 counsel when he used the actual Phantom 3 physical device?  
6 A Generally, yes.  
7 Q And what happened there was Autel's counsel took  
8 a blade and showed how he could put it on the wrong motor,  
9 and turn it the wrong way and still sort of secure it  
10 somehow on to the product, right?  
11 A That's correct.  
12 Q Now, you actually personally own a Phantom 3,  
13 right?  
14 A I did, yes.  
15 Q Did you ever do that?  
16 A I asked my wife to do it as a test. I thought  
17 it would be a better test. She is more of a novice. So I  
18 haven't done it myself.  
19 Q But I mean, in your use of the drone, did you  
20 ever start turning it, realize it was maybe not going in  
21 right, and just keep going as hard as you could?  
22 A I don't think I have ever misinstalled a blade.  
23 I know it's not that hard to do it, though.  
24 Q Would you have let Autel's counsel do that to  
25 your drone?

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1 A Well, as a demonstration, I think I would have.  
2 But my wife commented that it was surprisingly easy to do  
3 that. She was surprised.  
4 Q Let's look at your answer to question and answer  
5 62 in your witness statement. Here you're disagreeing with  
6 Dr. Alonso's assertion that Microdrones has a shaft lock  
7 portion and a blade lock portion. And I want to focus on a  
8 portion of your rationale, which is highlighted. And it  
9 says, "the knobs are designed to rest in the holds, so the  
10 blade is flush with the mounting plate. For this reason,  
11 the blades, knobs, mounting plate, and holds on the  
12 Microdrones device perform no locking function whatsoever."  
13 Do you see that testimony?  
14 A I do.  
15 Q So as I understand what you're saying, the fact  
16 that even though the knobs are resting in these holds, or  
17 holes, or whatever we are calling them, that that does not  
18 perform any locking function.  
19 A Right, because if you spin the rotor, the blade  
20 is just going to fly off.  
21 Q Would you agree that if a structure is resting  
22 in a hole that's the same shape or the opposite shape of  
23 the structure, that it's less able to move?  
24 A It depends on the shape of the structures. Here  
25 we have hemispherical shaped knobs, so they are less

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1 constraining.  
2 Q But it does constrain them, right?  
3 A It -- I have not seen the product, the  
4 Microdrones product. All we have to go by is some grainy  
5 figures. It doesn't look like it would prevent the blade  
6 from rotating relative to the motor to me. It certainly  
7 would be pretty easy to rotate it.  
8 Q Have you ever seen the game Chinese Checkers?  
9 A I have.  
10 Q Full disclosure. It turns out it's not Chinese,  
11 it's German. But marketing people got a hold of it. So in  
12 that game, the players use marbles as pieces, right?  
13 A That's right.  
14 Q And they are placed on a board with a six-sided  
15 star, right?  
16 A That's true.  
17 Q And then the players try and move their marbles  
18 from one side of the board to the other, right?  
19 A That's my recollection, yes.  
20 Q I don't think I've played it in 40 years, but I  
21 did look it up on Wikipedia to make sure. Now, if that  
22 board were just flat, totally flat piece of wood and we all  
23 put our marbles down on it, they would roll all over the  
24 place, right?  
25 A If it were totally flat and the marbles were

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1 perfectly round, no.  
2 Q Yes, they would roll?  
3 A Not if the -- not if it was perfectly flat and  
4 the marbles were perfectly round, they wouldn't roll at  
5 all.  
6 Q Well, when we picked one up and moved it, it  
7 would be hard to stay in its place, right?  
8 A Well, if there is any angle to the table, then  
9 it would be hard, but if it were flat, they should stay in  
10 the same place. There is no force to move it. It's a  
11 technical point, really.  
12 Q What if I bumped the table a little bit?  
13 A Yes, they certainly would move around.  
14 Q But in the real game, the board has little  
15 hemispherical indentations all over it, right?  
16 A That's true.  
17 Q And then the players put their marbles in those  
18 indentations, right?  
19 A Right.  
20 Q And the marbles stay in place, generally, so  
21 that you can move them from one position to another?  
22 A If you bump the table, they would probably move  
23 around. It depends on the depth of the holes and the  
24 precise situation. If the table were a little angled, they  
25 may not stay in the holes.

| Page 445                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Page 447                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1 Q Right. So if I had the board, and I tilted it</p> <p>2 just a little bit, they could stay in their hole. But if I</p> <p>3 tilted it a lot, they probably would fall out, right?</p> <p>4 A It depends on the depth of the holes, and the</p> <p>5 angles, and so forth, of course.</p> <p>6 Q But the fact that they are in the holes does</p> <p>7 mean that some movement is going to be restrained that</p> <p>8 might otherwise happen if it were just a flat table, right?</p> <p>9 A Right, that's true. So just to be clear. If</p> <p>10 it's a flat table, they can't move in the downward</p> <p>11 direction. If there is a hole, that may be restrained</p> <p>12 against some tipping of the table or some angle, that's</p> <p>13 true.</p> <p>14 Q So now let's pretend you and I are playing</p> <p>15 Chinese Checkers, and we get interrupted. And we want to</p> <p>16 save the game where it is, so we can come back later and</p> <p>17 finish it. So what I do is I take a piece of plastic wrap,</p> <p>18 and I wrap it over the board. And I get it tight on the</p> <p>19 edges. Now the marbles are being held in position by the</p> <p>20 combination of the holes and the wrap, right?</p> <p>21 A They certainly could be.</p> <p>22 Q And the wrap will keep the marbles from jumping</p> <p>23 out or being jostled out of the holes, and the holes will</p> <p>24 keep them in the positions that they were on the board,</p> <p>25 right?</p> | <p>1 restraints, the holes and the wrap?</p> <p>2 A It might.</p> <p>3 Q Let's take a look at Sasaki. It's RX-0037. And</p> <p>4 you'll recall that Sasaki is a Japanese patent reference</p> <p>5 application. It should be in binder 2, right behind the</p> <p>6 Microdrones reference.</p> <p>7 A Could you give me the number again?</p> <p>8 Q RX-37.</p> <p>9 A Okay. Thank you. I have it.</p> <p>10 Q As I said, as you'll recall, the Sasaki</p> <p>11 reference is a Japanese patent application. It's actually</p> <p>12 in Japanese, but there is a translation that's been</p> <p>13 provided behind the original Japanese -- just for</p> <p>14 orientation.</p> <p>15 A Correct, yes.</p> <p>16 Q So what I want to do is turn to your witness</p> <p>17 statement at question 85. And here you're responding to</p> <p>18 Dr. Alonso's testimony regarding Sasaki?</p> <p>19 A That's correct.</p> <p>20 Q And I want to focus, again, on what's been</p> <p>21 highlighted, which is -- which is where you say,</p> <p>22 "Dr. Alonso relies on the prior art device shown in figure</p> <p>23 8 of Sasaki," or one of the limitations -- here it says,</p> <p>24 "this limitation," but you could see which one we are</p> <p>25 talking about if you want to go back.</p>                                                                                               |
| Page 446                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Page 448                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>1 A It depends on a lot of factors. I'd have to</p> <p>2 see. It's hypothetical.</p> <p>3 Q Well, in my hypothetical, would you agree that</p> <p>4 neither the wrap nor the holes by themselves is capable of</p> <p>5 fully constraining the movement of those marbles, right?</p> <p>6 A I'm just -- I'd have to see the exact situation.</p> <p>7 The wrap might be capable on its own. The least</p> <p>8 restraining motion against some amount of force.</p> <p>9 Q Well, would you agree that each one of those</p> <p>10 components is performing part of the locking function that</p> <p>11 I'm ultimately achieving with the combination of the holes</p> <p>12 and the wrap?</p> <p>13 A Right. So in the context of the '184 patent,</p> <p>14 it's not achieving a locking function in that context, but</p> <p>15 it may help to restrain them better if you have multiple --</p> <p>16 if you have wrap and holes or indentations, sure.</p> <p>17 Q Let me just go back and ask that again. Isn't</p> <p>18 it true that the combination of the two aspects, the holes</p> <p>19 and the wrap together, constrain the marbles from moving in</p> <p>20 any direction?</p> <p>21 A They might, depending on how you wrapped it, the</p> <p>22 depth of the holes, other factors, forces that would be</p> <p>23 applied.</p> <p>24 Q And if, in fact, that's what happens, they would</p> <p>25 achieve that by the combination of those two different</p>           | <p>1 But -- and your answer goes on, "but as</p> <p>2 previously explained, the prior art design is not the</p> <p>3 embodiment disclosed in Sasaki. Then Dr. Alonso relies on</p> <p>4 the embodiment disclosed in Sasaki for certain limitations</p> <p>5 in claim 1. For example, for limitations 1A to 1D, at</p> <p>6 question 137 and 140, Dr. Alonso relies on figure 7 in</p> <p>7 Sasaki." Do you recall that testimony that you gave?</p> <p>8 A I do.</p> <p>9 Q And your criticism is that Dr. Alonso is</p> <p>10 supposedly combining the prior art device that's shown in</p> <p>11 figure 8 with features from figure 7, which you're saying</p> <p>12 is the embodiment of Sasaki's actual invention, right?</p> <p>13 A That's part of my disagreement with Dr. Alonso.</p> <p>14 I understand it's improper to do that.</p> <p>15 Q So let's look at Sasaki figure 8. So this shows</p> <p>16 a propeller and a shaft, right?</p> <p>17 A That's correct.</p> <p>18 Q And the shaft has threads at the end that can be</p> <p>19 screwed into the recessed space shown as number 8?</p> <p>20 A That's correct.</p> <p>21 Q And there are complementary threads in the</p> <p>22 recess?</p> <p>23 A If it's the correct blade, yes.</p> <p>24 Q Right. And this was Sasaki's prior art device.</p> <p>25 This is what he really wanted -- he didn't like because of</p> |

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1 the overtightening of the spring, right?

2 A Right. He taught away from this. And taught  
3 away from direct --

4 Q Well, he tried to solve the problem that was  
5 generated by this portion of the design, right?

6 A Well, he clearly taught away from blades that  
7 depend on the -- installation depends on the direction of  
8 rotation. And what he discloses is a device for attaching  
9 blades that doesn't depend on the direction of rotation.

10 Q Well, maybe we'll get to that later. All I'm  
11 trying to ask you is, this was what -- the way Sasaki's  
12 prior art device attached the propeller to the blade -- or  
13 I mean propeller to the shaft, right?

14 A This is the prior art device, right.

15 Q Now, your testimony claims that figure 7 is the  
16 embodiment in the invention. It shouldn't be combined with  
17 this figure 8, right?

18 A Right. I think I'm citing to the specification,  
19 where it talks about figure 7 being the current invention.

20 Q All right. So let's see what Sasaki says about  
21 figure 7. And this is in the section that you cite in your  
22 answer, column 345 to column 426. Do you have that?

23 A I'm with you.

24 Q So the text starts there, "as an example of a  
25 case in which a propeller for a flying toy, and a fixture

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1 BY MR. BRITTINGHAM:

2 Q So this is a series of descriptions of each  
3 figure, right? It appears in many patents?

4 A Yes.

5 Q So if you look at the description of figure 7,  
6 it says, "figure 7 is a slope view of the flying toy  
7 previously proposed by the applicant." Figure 7 is the  
8 prior art.

9 A It does seem so from that passage.

10 Q So Dr. Alonso is not -- is not inappropriately  
11 combining prior art embodiments with the patented  
12 embodiment in Sasaki, right?

13 A In reading the passages you've just pointed me  
14 to, you may be right. I'd have to review the patent  
15 further, but clearly, he is talking about the art that  
16 Sasaki teaches away from.

17 MR. BRITTINGHAM: Your Honor, that's all I have  
18 on the '184 patent, subject to any redirect.

19 REDIRECT EXAMINATION

20 BY MR. ABRAMIC:

21 Q Good morning, Dr. Reinholtz.

22 A Good morning.

23 MR. ABRAMIC: Can we pull up RX-0037.008. And I  
24 want to pull up the exact one of the clips that counsel  
25 just had up.

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1 thereof in the present invention" -- the translation is a  
2 little rough -- "are provided for the flying toy, Japanese  
3 patent application number S63-26355, previously proposed by  
4 the applicant and as shown in figure 7 will be described."

5 A Correct.

6 Q Do you see that?

7 A Yes.

8 Q So figure 7 is actually the previously proposed  
9 flying toy that appears in that earlier Japanese patent  
10 application, right?

11 A That's what I understand, yes.

12 Q So that's not an embodiment of the invention.  
13 That's the prior art.

14 A Oh -- I read that to say, figure 7 is what was  
15 previously proposed by the applicant.

16 Q I'm sorry, was that -- are you finished with  
17 your answer? I don't want to interrupt you.

18 A Yes, it's not clear to me. I thought this was  
19 referring -- figure 7 was referring to the present  
20 invention.

21 Q Let's look at a different section of Sasaki,  
22 column 10, which appears on RX-37.0011.

23 MR. BRITTINGHAM: And maybe can you pull back on  
24 that, so maybe you can see a little bit more for context.  
25 Maybe that whole column on the right.

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1 BY MR. ABRAMIC:

2 Q And he was asking you questions about whether  
3 Sasaki was the prior art or not. And in your testimony,  
4 you said, oh, it was my understanding that Sasaki was the  
5 present invention. Now, if you can look at these clips  
6 here, and this is at Sasaki on RX-0036.008, at that page --  
7 do you see that?

8 A I do.

9 Q Do you see where it says, "an example of the  
10 case in which a propeller or a flying toy, and a fixture  
11 thereof in the present invention." Do you see that?

12 A I do, yes.

13 Q Was that the language you were thinking of?

14 A That's what I was referring to, yes.

15 Q Thank you. I want to ask a question about  
16 Microdrones. Actually, not Microdrones specifically, but  
17 for this question, I want you to imagine two different  
18 drones, okay? We have one drone where using the blade  
19 attachment mechanism that comes with the drone makes it  
20 impossible to attach the wrong blade. That's drone number  
21 1.

22 A Okay.

23 Q Okay. Drone number 2, the attachment mechanism  
24 that comes with the drone, you can attach the wrong blade,  
25 but the manufacturer warns users not to do that. Have you

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| Page 453                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Page 455                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <p>1 got those two drones in your head?</p> <p>2 A I do.</p> <p>3 Q Can you explain to me what are the real world</p> <p>4 and practical differences between those two types of</p> <p>5 drones?</p> <p>6 A It's a world of difference, because</p> <p>7 inexperienced fliers buy these drones. They don't</p> <p>8 understand how to install the blades. The markings -- they</p> <p>9 are marked with -- you saw the features yesterday with</p> <p>10 black hubs and dots that are supposed to match. And my</p> <p>11 experience working with students is they just don't always</p> <p>12 observe that. They don't read the manual carefully. And</p> <p>13 it's easy to misinstall a blade. So a warning in a manual</p> <p>14 is good, but a device that you cannot incorrectly install</p> <p>15 and lock a blade is a much better option.</p> <p>16 MR. ABRAMIC: Thank you. I pass the witness.</p> <p>17 MR. BRITTINGHAM: I don't have anything further</p> <p>18 in response to that line of questions.</p> <p>19 JUDGE BULLOCK: Okay. Go to our last patent.</p> <p>20 CROSS-EXAMINATION</p> <p>21 BY MR. BRITTINGHAM:</p> <p>22 Q Dr. Reinholtz, now we'll cover the '013 patent.</p> <p>23 A Okay.</p> <p>24 Q I want to consider the combination that's been</p> <p>25 proposed of the Phantom 2 manual with the Kondo patent.</p> | <p>1 portion of the manual that tells you how to install the</p> <p>2 battery, right?</p> <p>3 A It's definitely part of that, yes.</p> <p>4 Q Part of the -- a section of the manual on the</p> <p>5 battery.</p> <p>6 A That's right, yes.</p> <p>7 Q And the manual instructs the user to push the</p> <p>8 battery into the battery compartment according to the below</p> <p>9 diagram. So looking at the diagram, you see the battery is</p> <p>10 kind of hanging out, and there is an arrow pointing in,</p> <p>11 right?</p> <p>12 A That's right.</p> <p>13 Q So the user is being told to push the battery</p> <p>14 into the body of the drone in some way, right?</p> <p>15 A That's right.</p> <p>16 Q And then it goes on and says, "when you hear a</p> <p>17 click, the battery has been properly installed," right?</p> <p>18 A Yes, that's right.</p> <p>19 Q So you can conclude several things from the</p> <p>20 series of images. One of them is the battery is removable,</p> <p>21 right?</p> <p>22 A It doesn't say that. I think you could infer</p> <p>23 that.</p> <p>24 Q Well, a picture of a battery sticking way out of</p> <p>25 a drone, and then users being told to push it into the</p>                                                                               |
| Page 454                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Page 456                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>1 A Okay.</p> <p>2 Q Let's -- the Phantom 2 manual is at RX-23, which</p> <p>3 I think is actually in binder 1, if I have it right.</p> <p>4 A Tell me the number again?</p> <p>5 Q 0023.</p> <p>6 A Great. I have it. Thanks for your patience.</p> <p>7 Q And I want to take a look, first, at the figure</p> <p>8 2.1, or section 2.1, which appears at RX-0023.007 that we</p> <p>9 put up on the screen. Do you see that?</p> <p>10 A I do.</p> <p>11 Q And figure 3 on the left, that shows the Phantom</p> <p>12 2 battery, right?</p> <p>13 A It's a two-dimensional image that depicts the</p> <p>14 battery, right.</p> <p>15 Q And that's a depiction of the battery when it's</p> <p>16 not installed inside the drone, correct?</p> <p>17 A Right.</p> <p>18 Q I mean, you wouldn't be able to see most of</p> <p>19 that?</p> <p>20 A Right. Yes, agreed.</p> <p>21 Q And then let's just look at the next page,</p> <p>22 RX-0023.0008 and figure 5. That's another depiction of the</p> <p>23 Phantom 2 battery, right?</p> <p>24 A Right.</p> <p>25 Q And then moving on to the next page, this is the</p>                                                                                                                                                                                                                    | <p>1 compartment, doesn't that imply that the battery can come</p> <p>2 out and go in?</p> <p>3 A I think it implies, but it doesn't tell us that</p> <p>4 once you insert it, it can be removed. It's a logical</p> <p>5 inference, to be sure.</p> <p>6 Q A user would also understand from seeing this</p> <p>7 that some sort of mechanism is securing the battery once</p> <p>8 it's installed, right?</p> <p>9 A Again, I think you could infer it. There was</p> <p>10 information on the lower right about incorrectly installed</p> <p>11 batteries, and what might happen.</p> <p>12 Q Well, I mean, it would be natural to -- for --</p> <p>13 this is a drone. It's going to fly around. So one can</p> <p>14 assume that the battery is somehow being held in, so it</p> <p>15 stays attached, right?</p> <p>16 A Well, it's a manual for a drone, so we learn</p> <p>17 what we can learn from the manual. That's the evidence we</p> <p>18 have here.</p> <p>19 Q Well, there are other portions of the manual</p> <p>20 that tell you how to fly the drone, right?</p> <p>21 A That's true.</p> <p>22 Q And a user would equate installation with this</p> <p>23 click, right?</p> <p>24 A I think that's a fair statement, yes.</p> <p>25 Q Now, some of the same figures that we just</p> |