

# Exhibit 10

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
OAKLAND DIVISION

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THE APPLE IPOD ITUNES ANTI-TRUST ) No. C-05-0037 YGR  
LITIGATION )  
)  
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VIDEOTAPED DEPOSITION OF ROGER G. NOLL  
San Francisco, California  
Thursday, May 16, 2013  
Volume 1

Reported by:  
JENNIFER L. FURIA, RPR, CSR  
CA License No. 8394  
Job No. 1663538  
PAGES 1 - 262

1 it's specific to the specific generation class products  
2 and I -- if I have those correctly characterized through  
3 indicator variables in the regression, the improvement  
4 effect of those will be -- be accounted for in the  
5 regression. And all -- the only incremental explanatory 09:47:20  
6 value power from the 7.0 variable will arise to the  
7 anticompetitive effect.

8 Q Give me an example.

9 MS. SWEENEY: Objection to form.

10 THE WITNESS: That if -- if a particular 09:47:33  
11 generation of an iPod was first released in September of  
12 2006 there are technical attributes of that product. I  
13 have a bunch of indicator variables to indicate their  
14 technological -- their functional characteristics.

15 Those will -- the -- the effect on price of 09:47:54  
16 those technical characteristics would be accounted for  
17 in those coefficients. The -- all that's left for the  
18 7.0 variable to take into account is things that were  
19 not part of the functional characteristics of those  
20 models. 09:48:15

21 BY MR. MITTELSTAEDT:

22 Q Okay, so what -- what indicator variables do  
23 you have in your regressions that you say would account  
24 for anything else that 7.0 did that's not allegedly  
25 anticompetitive? 09:48:27

1           A Well, for example, the -- the -- the -- as  
2 time has progressed, the -- the generations are  
3 basically based on capacity changes. And I have all  
4 those capacity variables that are interactive with time.  
5 Plus there's other functionality variables in there as       09:48:43  
6 well.

7           Q Okay, well, that's what I'm asking.

8           A You know, like, Photo and all that -- those  
9 things. I mean there's four or five of them listed in  
10 the regression.   09:48:52

11          Q Okay. I want to be specific on this. Or I  
12 want you to be specific. So what indicator variables do  
13 you have that you say would measure any aspect of 7.0  
14 other than the -- the aspect that is alleged to be  
15 anticompetitive?   09:49:09

16          A Okay, if we -- if a new model of iPod is  
17 introduced in September of 2006, then what's going to  
18 happen? Well, first of all, one of the -- those -- this  
19 first list of variables will get turned on about  
20 Classic, Mini, Shuffle.                                     09:49:24

21          Q Yeah, I want to be on the same page with you,  
22 so what page are you on?

23          A At any of the -- anything in the appendix.

24          Q I know, but just pick one, because you're  
25 looking at one. I just need to know what it is, that's     09:49:34

1 all.

2 A Okay, let's pick one that -- why don't we go  
3 back and pick one that's actually used. Hold on.

4 Okay, go to Exhibit 13.1. "Reseller, sales,  
5 log, regression, results, outliers excluded." 09:50:05

6 Okay. So the first thing that would happen is  
7 the whatever this -- the family the model is, like  
8 Classic, Mini, Nano, Shuffle will get -- will get turned  
9 on if it's one of those. Then the capacity, the  
10 appropriate capacity variable will get turned on. And 09:50:24  
11 typically as time goes through, the new models have more  
12 capacity.

13 And then the interaction with that capacity  
14 will get turned on. And then way at the end there's  
15 photo, video and photo. Those may or may not get turned 09:50:40  
16 on. And then there will be something about the size.  
17 And there will be something about the cost.

18 So all those variables will reflect all  
19 the -- will -- will produce a unique combination of  
20 those attributes that is applicable to that particular 09:51:07  
21 model.

22 Q My question focused on 7.0.

23 A Yeah. So when something is introduced after  
24 the 7.0 update occurs, that product will have attributes  
25 that are new. And it will -- it will produce a 09:51:28

1 Q I'm asking you more in theory at this point.  
2 If 7.0 did something more than what you've just  
3 described --

4 A Like, for example?

5 Q -- and it's not captured in one of these 09:52:43  
6 variables that you just referred to, capacity, whether  
7 it's photo or video or the size or the cost,  
8 then -- then the coefficient for 7.0 would pick up that,  
9 right?

10 A Like what? I mean, I don't understand what 09:53:05  
11 the -- what the 7.0 in principle could do. What is it  
12 in principle it could do?

13 Q Anything that's not captured by one of your  
14 other variables. The effect of that would be captured  
15 in your 7.0 variable, correct? By definition. 09:53:22

16 A So if you lick your iPod it tastes like wine?  
17 Is that what 7.0 does, something like that?

18 I'm just -- I have no clue what you're talking  
19 about, what it might be. If there's some wonderful  
20 attribute of iPods that cannot be obtained in any way 09:53:40  
21 other than 7.0 and that component is in there, sure, it  
22 would affect the price. It would make the -- it would  
23 make it more valuable, assuming it's unique, a unique  
24 attribute that wasn't otherwise included, but I don't  
25 know what it is and I've never seen anybody describe 09:53:57

1 anything like is that.

2 Q And -- this is the point of my question. The  
3 effect of that other attribute would be included in your  
4 7.0 variable, correct?

5 A If there was one, yes. 09:54:11

6 Q And what did you do, if anything, to determine  
7 what 7.0 did over and above, as you put it, create the  
8 incompatibility with Harmony?

9 A I've read the technical expert's --

10 MS. SWEENEY: Objection, asked and answered. 09:54:29

11 THE WITNESS: I'm not the technical expert  
12 about what's in 7.0. I'm not neither your expert nor  
13 the plaintiff's expert. I relied upon their reports.

14 BY MR. MITTELSTAEDT:

15 Q Did you read Apple's press release for 7.0? 09:54:38

16 A Oh, at some point I've read it, yes.

17 Q And did it say -- do you remember anything it  
18 said on this topic?

19 A Not sitting here, no.

20 Q Is it accurate to say that your task was to 09:54:52  
21 opine on whether 7.0 harmed competition in a market for  
22 portable digital players and, if so, to opine on the  
23 amount of damages to iPod purchasers from September 12,  
24 2006 to March 31, 2009?

25 A I was asked to do that, yes. 09:55:23

1           A Well, that's an interesting question.

2           The -- the 7.0 -- the effect of 7.0 on prices is not  
3           necessarily limited to just the products that were sold  
4           that had 7.0 in them.

5           Once 7.0 had been released, and because                   10:09:52  
6           consumers would have the expectation that as products  
7           came along that they would, in fact, be incompatible  
8           with Harmony, so as I -- we went through this in the  
9           last deposition.

10           It's not obvious that the right way to measure       10:10:12  
11           the effect of 7.0 is to focus exclusively on the  
12           products that had 7.0 loaded on them as of September  
13           2006, because consumers' attitudes about iPods and  
14           their -- their -- and -- and their degree to which  
15           they're going to get locked in would depend, would be       10:10:35  
16           perceived as depending on, not only what 7.0 is doing  
17           now, but what it's going to be doing in the future.

18           So that, you know, that that is a problem to  
19           be overcome. Having said that, this is supposed to be  
20           products sold during the class period. That's what it's       10:10:52  
21           supposed to be.

22           Q With 7.0 loaded into them as you say?

23           A I think so, but I'm not certain sitting here.  
24           I would have to check to find out.

25           Q Okay. What would be the reason for doing it       10:11:22

1 I'm -- I'm going to have to check to be sure, but I  
2 believe what's in -- in Exhibits 14 through 16 is all  
3 the products that were sold during the class period as  
4 opposed to just those that had 7.0 loaded on them.

5 BY MR. MITTELSTAEDT: 10:13:52

6 Q Okay. Let's take a break.

7 A But I'm not certain of that. And I'll have to  
8 check to be sure.

9 Q Okay. Well, if -- do you remember what you  
10 instructed Econ, Inc. to do in that respect? 10:14:01

11 MS. SWEENEY: Objection, asked and answered.

12 THE WITNESS: I think so, but I'm not  
13 absolutely certain of it, because I just -- I've just  
14 had --

15 BY MR. MITTELSTAEDT: 10:14:13

16 Q Well, what's your best recollection of what  
17 you instructed --

18 A My best recollection is that it's supposed to  
19 be the ones that had 7.0 on them, but I'm not certain of  
20 that. 10:14:21

21 Q Okay. And what would be the rationale for  
22 doing it that way?

23 MS. SWEENEY: Objection, vague and ambiguous.

24 THE WITNESS: If you did it only for the ones  
25 that had 7.0 on them, it would be because you thought 10:14:29

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1 that the effect was limited to just the products that  
2 had 7.0 loaded.

3 If you, instead, did it for all products, it  
4 was because you thought that the most important effect  
5 was knocking Harmony out of the market. And I -- I 10:14:45  
6 think that the latter is actually correct, but I may  
7 have told them to do the former. I just don't remember.

8 I think knocking Harmony out of the market is  
9 the key event and -- and causing -- causing RealNetworks  
10 longer to try to compete to sell music to play on iPods 10:15:03  
11 is the -- is -- is the market-defining event from the  
12 standpoint of what the pricing strategy of portable  
13 digital media players would be.

14 So I think that's the right way to do it, but  
15 I'm not sure that's exactly what I asked them to do, 10:15:18  
16 because I -- or they understood that that's what I asked  
17 them to do.

18 BY MR. MITTELSTAEDT:

19 Q In -- in this report did you do any analysis  
20 or do you present any analysis of which one of those is 10:15:26  
21 the right way to do it?

22 A I think I -- I do talk about knocking Harmony  
23 out of the market here, yes.

24 Q But -- but specifically as to whether the  
25 damages model should include models that don't have 7.0 10:15:46

1 effect.

2 Q And what I'm asking is why would there --  
3 under what circumstances, precisely as you can, would  
4 you expect to see a continuing effect of 4.7 even after  
5 Harmony's relaunched? 10:53:16

6 MS. SWEENEY: Objection, vague and ambiguous.

7 THE WITNESS: Consumer expectations about the  
8 durability of the relaunch. About whether if I -- if I  
9 actually use Harmony and buy a bunch of songs from  
10 RealNetworks, from Rhapsody, am I going to be stuck six 10:53:30  
11 months from now with them not working because it will be  
12 disabled again.

13 BY MR. MITTELSTAEDT:

14 Q And could that consumer expectation continue  
15 even after 7.0 is issued? 10:53:42

16 A Exactly, it could. And that's -- that's  
17 precisely right. 7.0, you know, could -- could, in  
18 fact, have, you know, a similar story to it. But, in  
19 fact, 7.0 was never undone, so we can't test that  
20 hypothesis. 10:54:04

21 Q What I mean is could the consumer expectation  
22 created by 4.7 continue after 7.0 is issued?

23 A It could in principle, yes.

24 Q And under what circumstance would you expect  
25 to see a continuing expectation created by 4.7 after 7.0 10:54:19

1 is issued?

2 A It would -- well, the effect of 7.0 is going  
3 to be what was it like before 7.0 was -- 7.0 was  
4 launched and what is it like afterwards, okay. And so,  
5 again, it's an empirical question whether -- what 10:54:45  
6 people's state of mind was prior to the launch of 7.0.  
7 I don't --

8 Q Well, what I'm asking is if you -- if you did  
9 the test, the regression, and you saw there was a  
10 continuing effect of 4.7 after 7.0, what theory would 10:54:58  
11 explain that? The same one we've been talking about,  
12 consumer expectation?

13 A Yeah. I mean the issue is how are people's  
14 attitudes about Har -- remember, it's important to keep  
15 our eye on the ball. What we're interested in is what's 10:55:30  
16 happening to the market for iPods. And the market for  
17 iPods is going to be enhanced regardless if there  
18 were -- was anybody out there using Harmony and all of a  
19 sudden they can't, all right. That -- that market  
20 effect is still going to be there regardless of what 10:55:49  
21 expectations were.

22 The way expectations work here is whether  
23 someone would want to actually -- would actually buy an  
24 iPod with the expectation they were going to be able to  
25 use Harmony indefinitely on iPods. And if they had that 10:56:05

1 expectation then 4.7 would have gone away entirely  
2 within shortly after Harmony was relaunched. If they  
3 didn't believe that, then it wouldn't -- it wouldn't  
4 have all completely gone away and it would have had some  
5 residual effect at the time that 7.0 was launched. 10:56:27

6 Q And under that approach how long would that  
7 residual effect last after 7.0, residual effect from  
8 4.7?

9 MS. SWEENEY: Objection, vague and ambiguous  
10 and incomplete. 10:56:38

11 THE WITNESS: Again, there's no way to know  
12 except empirically to find out.

13 BY MR. MITTELSTAEDT:

14 Q What would be the theory that would explain  
15 that; just what you gave? 10:56:45

16 A Yeah.

17 Q The consumer expectation point?

18 A Is it okay if I take a two-minute break? Just  
19 one sec, I'll be right back.

20 Q Yes, sir. 10:56:53

21 Off the record.

22 THE VIDEOGRAPHER: Off the record 10:57 a.m.

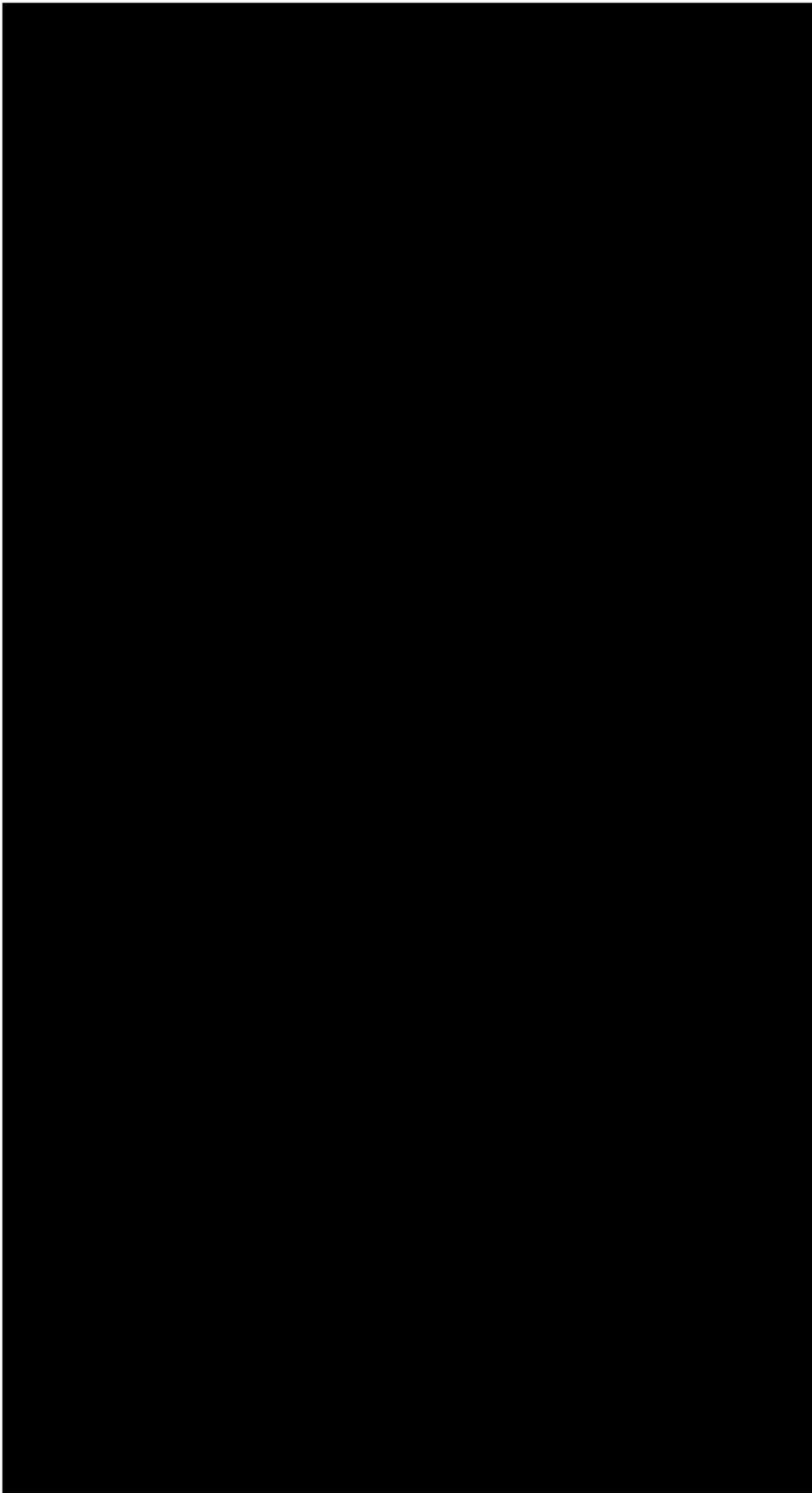
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24 BY MR. MITTELSTAEDT:

25 Q Okay. Just to complete that, what I asked 10:59:00

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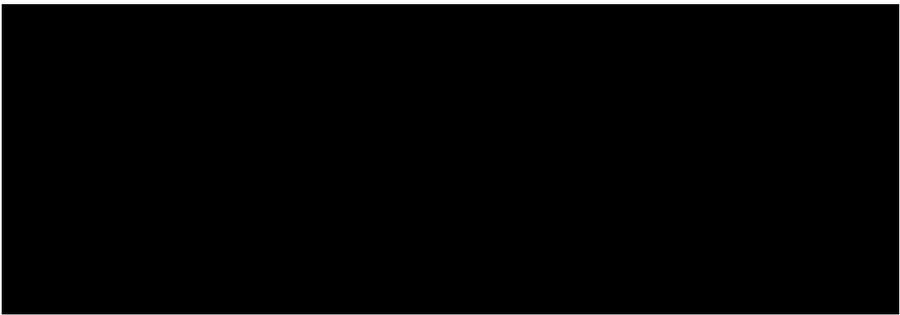
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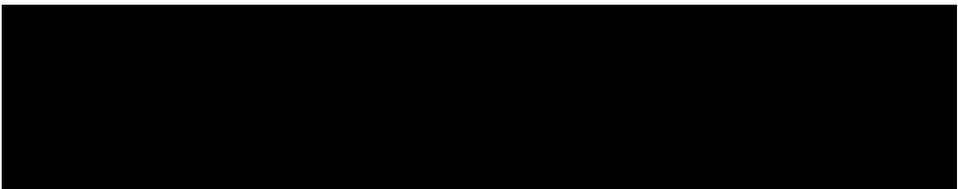
11:13:17

Q And does the size of RealNetworks' market share, would you expect that to have some impact on the degree to which it impacted iPod demand under your theory if there was any impact at all?

A If there was an impact it is the fraction of people who used Harmony to play stuff on an iPod. They're the ones whose demand became elastic. 11:13:38

Q And then your next variable, going back to 13.2, is ITMS all DRM-Free. Why did you include that variable? 11:14:04

A Well, because the -- the main vehicle for the lock-in effect on the Apple side is using Fair Play and when Apple stops using Fair Play on ITS, then anything you buy from ITS from that point on can play on anything. So you're no longer locked into an iPod if you buy your music from ITS, so that -- that strikes me as a big deal. A very important deal. 11:14:27



11:14:49

1 after 7.0?

2 MS. SWEENEY: Objection to form, vague and  
3 ambiguous, compound.

4 THE WITNESS: I have no idea what you're --  
5 what you're talking about. 11:59:43

6 Yes, there are people who are willing to pay a  
7 premium for an iPod and switching costs are one reason  
8 why they might be willing to pay a premium. Just being  
9 in love with Apple is another reason. And then there  
10 are other people who are at the margin, who plus or 11:59:54  
11 minus ten percent in price, can affect their decision.  
12 And it's the latter that determine pricing and the  
13 extent of competition among brands of portable digital  
14 media players.

15 BY MR. MITTELSTAEDT: 12:00:10

16 Q Okay. And how many people fit that profile of  
17 being at the margin where their purchase decision  
18 changed from a non-iPod to an iPod because of 7.0? How  
19 many people are in that category?

20 A We have no way of knowing that. 12:00:24

21 Q Is it -- is it ten people or 10,000?

22 A We have no way of knowing what the number is.  
23 All we observe is the actual pricing behavior and the  
24 implicit change in the elasticity of demand.

25 We're talking about a fairly small fraction 12:00:36

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1 from one to thousands?

2 A Right.

3 Q Okay. And when you say thousands, what do you  
4 mean?

5 A What is there about thousands you don't 12:10:14  
6 understand?

7 Q One thousand, ten thousand?

8 A Yeah, a few thousand.

9 Q A thousand thousands?

10 A Well, let's go back to what the story is here. 12:10:21  
11 The number -- the number of daily sales of iPods is --  
12 you know, I don't know what the number is. Maybe tens  
13 of thousands a day, something like that. And it could  
14 be, you know, one or two percent of that would be the  
15 upper bound. 12:10:45

16 Q So a couple thousand?

17 A Yeah.

18 Q Okay. Do you have any information or any  
19 estimate on how many iPod users bought music from  
20 RealNetworks? 12:11:05

21 MS. SWEENEY: Objection. I think that was  
22 already asked and answered.

23 THE WITNESS: No.

24 BY MR. MITTELSTAEDT:

25 Q Let's turn to music prices. What -- what 12:11:21

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I, Jennifer L. Furia, holding CSR License No. 8394, a Certified Shorthand Reporter, licensed by the State of California, hereby certify:

That the foregoing proceedings were taken before me at the time and place herein set forth; that any witnesses in the foregoing proceedings, prior to testifying, were placed under oath; that a verbatim record of the proceedings was made by me using machine shorthand which was thereafter transcribed by me or under my direction; further, that the foregoing is an accurate transcription thereof.

I further certify I am neither financially interested in the action, nor a relative or an employee of any attorney or party to this action.

IN WITNESS WHEREOF, I have on this date subscribed my name.

Dated: 6/3/2013



JENNIFER L. FURIA  
Certified Shorthand Reporter  
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