

EXHIBIT 55

1 UNITED STATES INTERNATIONAL TRADE COMMISSION
2 WASHINGTON, D.C.
3

4 In the Matter of:

Investigation No.

5 CERTAIN ELECTRONIC DIGITAL
6 MEDIA DEVICES AND COMPONENTS 337-TA-796
7 THEREOF
8
9
10

11 CONFIDENTIAL -- ATTORNEYS' EYES ONLY
12 PURSUANT TO THE PROTECTIVE ORDER
13

14 VIDEOTAPED DEPOSITION OF FLETCHER R. ROTHKOPF
15 Redwood Shores, California
16 Thursday, April 19, 2012
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22

23 REPORTED BY:

24 CYNTHIA MANNING, CSR No. 7645, CLR, CCRR

25 JOB NO. 48527

1 Q. Okay. Do you recall any discussions
2 discussing product design risks with using a
3 cover glass configuration where the top surface
4 of the cover glass is curved?

5 A. Are we talking just about the edges
6 being curved?

7 Q. Top surface being curved in any manner.

8 A. Product design. What is a product
9 design consideration?

10 Q. Well, my question was -- I'm talking
11 about product design risks, so let me just
12 reframe the question.

13 A. Okay.

14 Q. Do you recall any discussions about the
15 product design risks associated with using a
16 cover glass configuration where the top surface
17 is curved in either of the ways that you've
18 described?

19 MR. OVERSON: Objection; vague.

20 MR. KIDMAN: Let me just clear it up.

21 BY MR. KIDMAN:

22 Q. You've talked about cover glass
23 configurations where the entire top surface is
24 curved and then cover glass configurations where
25 the top -- where the edges of the top surface are

1 curved; correct?

2 A. Well, I mostly talked about not seeing
3 configurations where the entire cover glass was
4 curved on an iPhone or iPod Touch, so not really
5 correct.

6 Q. Okay. Let me just -- let me just back
7 up then.

8 Do you recall any discussions about
9 product design risks with using cover glass where
10 the top surface is curved in connection with --
11 with any product at Apple?

12 A. Would a reliability risk be considered
13 a product design risk?

14 Q. Well, you've -- you're familiar with
15 the term "product design risk" or "PD risk";
16 correct?

17 A. Yes.

18 Q. It's a term that you've used in updates
19 that you give concerning devices like the iPod
20 Touch; correct?

21 A. Yes.

22 Q. And when you use that term "product
23 design risk," you -- you include reliability
24 result risk; correct?

25 A. Yes.

1 Q. Okay. So using that definition of "PD
2 risk" or "product design risk" that you've used
3 in update documents at Apple, using that
4 definition of "product design risk," do you
5 recall any discussions about any product design
6 risks associated with cover glass configuration
7 where the top surface is curved?

8 A. If I -- if I include reliability and
9 manufacturing and yield risk and those kinds of
10 things and PD risks, which in those updates I
11 write I do, then yes.

12 Q. Okay. And what do you recall being
13 discussed about product design risks as you've
14 used that term in connection with using cover
15 glass where the top surface is curved?

16 A. I recall yield risks, difficulty in
17 manufacturing some of those curved glasses.

18 Q. Anything else?

19 A. Not specifically related to the glass
20 being curved. I can't remember anything else.

21 Q. When you say not specifically relating
22 to the glass being curved, do you recall any
23 discussions about PD risks with using a curved
24 configuration where the curved configuration
25 contributed in some way to the -- to the PD risk?

1 A. In those considerations where the glass
2 was curved and proud of the rest of the unit or
3 above the rest of the unit, yes.

4 Q. And -- and so you're saying that you
5 recall the discussion of PD risks with curved
6 cover glass and then -- and then in addition, a
7 discussion of PD risks where the curve -- where
8 the cover glass sat above -- noticeably above the
9 edge of the device; is that correct?

10 A. In some cases we consider the glass
11 being above the edge of the device to be a risk
12 in itself.

13 Q. And what was the -- what was the risk
14 with the glass sitting above the edge of the
15 device itself?

16 A. The risk is that the edges of the glass
17 are more likely to contact the ground or anything
18 else in the normal use of the device or abusive
19 cases also.

20 Q. And does that have an impact on
21 failure -- failure rates?

22 A. In some cases it has in the reliability
23 test failure rates.

24 Q. And do you recall any discussions --
25 well, strike that.

1 yield risks that you've told me about?

2 A. They're pretty much one and the same,
3 yep.

4 Q. Is there any --

5 A. Difficult manufacturing processes lead
6 to sometimes low-yield until you have them
7 figured out, so those remain as risks.

8 MR. KIDMAN: Let's mark the next
9 document as Exhibit 2.

10 (Deposition Exhibit 2 was marked for
11 identification)

12 MR. KIDMAN: And for the record,
13 Exhibit 2 is a multipage documents Bates-labeled
14 APLNDC0002455740 through 2455745.

15 THE WITNESS: (Witness reviewing
16 document.)

17 BY MR. KIDMAN:

18 Q. And, Mr. Rothkopf, take a moment to
19 review this. My first question is going to be:
20 Have you seen any part of this -- this document
21 before?

22 A. Give me one minute.

23 Q. Sure.

24 A. I don't think I've seen any part of
25 this before. I don't remember seeing it now.

1 Q. Okay. And particularly, if you look at
2 the third page of the document --

3 A. Mm-hmm, yes.

4 Q. -- there is a chart there. It's got
5 some columns at the top. One says "Layout
6 Diagram." The next column says "Z Stack." The
7 next column says "Time to Market (Ranked)." And
8 then the next column is "Grape Risks." And the
9 next column is "PD Risks."

10 Do you see that?

11 A. Yes, I do.

12 Q. You don't recall having seen this --
13 this chart before?

14 A. No.

15 Q. Do you recall there being any
16 discussion about increased cost using cover glass
17 configurations where the top surface or any part
18 of the top surface is curved as opposed to the
19 glass being flat?

20 A. Yes.

21 Q. What do you recall about that?

22 A. I recall that due to the yield risks
23 associated with the curved surfaces, you see an
24 increased cost as a result of those. So every
25 piece of glass you throw away, you basically have

1 to pay for even though you don't get to ship them
2 to a customer.

3 In addition, the processing time for
4 some of the curved glass configurations was
5 longer than a flat glass configuration.

6 Q. And so the longer processing time adds
7 to the cost?

8 A. Correct.

9 Q. Do you recall any discussion in
10 connection with any curved cover glass
11 configurations, meaning that the top surface of
12 the cover glass is curved or some portion of the
13 top surface of the cover glass is curved, any
14 discussions concerning any difficulties with the
15 operation of the -- the touch sensor?

16 A. Not specifically relating to the glass
17 being curved, but I can see some of those risks
18 highlighted in the document that you put in front
19 of me here.

20 Q. And where is that?

21 A. Under the column labeled "Grape Risks"
22 on the third page of the document.

23 Q. And when you say those risks are not
24 specifically -- specifically relating to the
25 cover glass being curved, is the discussion of

1 grape risks related to the cover glass, cover
2 glass being curved so?

3 A. So I hadn't previously heard of
4 risks -- these type of -- these so-called grape
5 risks here related to the cover glass being
6 curved, but now, you know, I've read this entire
7 column, so now I have -- I know what's on this
8 document for the most part.

9 Q. Independent --

10 A. When I say -- sorry. When I say I know
11 what's on this document, I mean only because now
12 I have seen it in front of me and I have it in
13 front of me.

14 Q. Independent of this document, have you
15 heard any discussion concerning any of the things
16 that have been identified in this document as
17 grape risks in connection with using curved cover
18 glass configurations?

19 A. So some of these risks are -- look to
20 be somewhat general and could also apply to cover
21 glass configurations that weren't curved, and so
22 I've seen some of them before in that context,
23 but not in the context of specifically this is a
24 risk because the cover glass is curved.

25 Q. Now, at least one version of the iPod

1 glass manufacturing, but they are very difficult
2 to see with the naked eye that could be curved to
3 be curved, so --

4 Q. Okay. So when we're talking about the
5 fourth and fifth generation, iPod Nano and we're
6 talking about cover glass that's curved on the
7 top surface, we're talking about cover glass
8 that's visibly curved on -- on the top surface
9 and that was the design intent; is that correct?

10 A. Correct, yes.

11 Q. And you were involved from that product
12 development perspective with both the fourth and
13 fifth generation iPod Nano; correct?

14 A. Really just the fourth.

15 Q. And what was your involvement with the
16 fourth generation iPod Nano?

17 A. I designed some of the parts inside of
18 it and I designed some of the overall
19 architecture of the device as far as the
20 mechanical parts of the architecture and
21 components go.

22 Q. And how is the cover glass on the sixth
23 generation iPod Nano different from the cover
24 glass configuration on the fourth and fifth
25 generations?

1 A. The sixth generation iPod Nano is flat
2 on both sides, so there is no intentional design
3 element that makes it curved.

4 Q. And was there an additional cost
5 associated with using the curved cover glass on
6 the fourth and fifth generation iPod Nanos?

7 A. I don't know.

8 Q. Do you recall seeing any -- any
9 documents that discussed an additional cost
10 related to the use of the curved cover glass?

11 A. I don't specifically recall seeing
12 documents related to that.

13 Q. Do you recall generally there being any
14 discussion about there being an additional cost
15 associated with using the curved cover glass on
16 either the fourth or fifth generation iPod Nano?

17 A. Generally, yes, I can -- I can remember
18 some people talking about that it might be more
19 expensive, but I can't -- only generally. I
20 can't remember exactly what documents were
21 generated or anything like that.

22 Q. And was that additional expense related
23 to the higher -- I'm sorry, the yield risks and
24 the manufacturing difficulty that you described
25 earlier?

1 A. I don't know if it was related to the
2 yield risks or the higher processing time or the
3 larger amount of bulk material required. Any
4 three of those could contribute.

5 Q. And when you say "larger amount of bulk
6 material required," what -- what are you
7 referring to?

8 A. The overall volume of the piece of
9 glass that you start with before you make it into
10 a curved piece of glass, in the center of the
11 glass, sort of at the apex of the curve, if you
12 will, those products are pretty thick, so it
13 takes a lot of -- a thick sheet of glass going in
14 and in some cases I know we pay for glass per
15 square or cubic meter, kind of per weight, so it
16 could have been more expensive because of that,
17 just requiring more raw material input to the
18 process.

19 Q. And why is -- on that curved
20 configuration, why is the glass thicker in the
21 center?

22 A. That curved configuration -- why is it
23 thicker in the center? So as opposed to being a
24 shell kind of shape where the thickness is even
25 and the glass is bent, if you will, you start

1 with a piece of glass that's as thick as the apex
2 and you remove material on the curved sections.
3 So what you end up is towards the edges of the
4 glass, it's thin and towards the center it's
5 thick. Kind of like if you took a sphere and cut
6 a piece off of it.

7 Q. And why is that the process that's used
8 to create the curvature as opposed to, as you
9 said, it just being a shell with a -- kind of a
10 constant thickness?

11 A. It may be possible to do it either way,
12 so I don't know exactly -- I don't know exactly
13 why. It's possible. We probably could have done
14 it the other way if we had a motivation for doing
15 it the other way.

16 Q. And do you have any understanding as to
17 why it was done the way it was done where the --
18 you start with a thicker piece of material and --
19 and remove material from -- from the edges as
20 opposed to creating that shell with the constant
21 thickness?

22 A. Yes.

23 Q. And what's your understanding in that
24 regard?

25 A. Creating a shell with a constant