

EXHIBIT 2
FILED UNDER SEAL

1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF CALIFORNIA
3 SAN JOSE DIVISION
4

5 APPLE INC., a California
6 corporation,

7 Plaintiff,

8 vs.

CASE NO. 11-CV-01846-LHK

9 SAMSUNG ELECTRONICS CO., LTD.,
10 A Korean business entity;
11 SAMSUNG ELECTRONICS AMERICA,
12 INC., a New York corporation;
13 SAMSUNG TELECOMMUNICATIONS
14 AMERICA, LLC, a Delaware
15 limited liability company,

16 Defendants.
17 _____/

18 C O N F I D E N T I A L
19 A T T O R N E Y S ' E Y E S O N L Y
20 O U T S I D E C O U N S E L
21

22 VIDEOTAPED DEPOSITION OF RAVIN BALAKRISHNAN, Ph.D.
23 SAN FRANCISCO, CALIFORNIA
24 TUESDAY, AUGUST 16, 2011
25

26 BY: ANDREA M. IGNACIO HOWARD, CSR, RPR, CCRR, CLR
27 CSR LICENSE NO. 9830
28 JOB NO. 41176

1 you just sort of turn it.

2 A This way?

3 Q Yeah.

4 A Okay. It may be a little difficult. It just
5 flipped around and did something.

6 Q If you hold it --

7 A Touch sensor. So tell me how you want it,
8 and then I'll -- I'll keep it that way and --

9 Q Hold it straight up like that, and then you
10 can --

11 A All right. I'm gonna try and manipulate it,
12 if I can.

13 Q Okay. So what -- so what are -- so what are
14 we --

15 A Let me just do this again.

16 Q Okay. So you zoomed in on it first; right?

17 So is it fair to say that your opinion -- for
18 purposes of the gallery here, the -- the photograph
19 has to be zoomed in on it?

20 MR. MONACH: Object to the form of the
21 question; incomplete hypothetical; inadequate
22 opportunity to examine the device; vague.

23 You can answer.

24 THE WITNESS: In this particular example that
25 I'm gonna walk you through is an infringing example, I

1 did zoom in. But whether or not it has to be zoomed
2 in, I need to spend a bit more time making sure
3 whether it has to or not. I have not done that right
4 now on this device.

5 MR. JOHNSON: Okay.

6 THE WITNESS: So, on this device, I went
7 through the -- the preamble. It's clearly a
8 computer-implemented method. It has a device with a
9 touchscreen display. It is displaying right now a
10 first portion of an electronic document. The
11 electronic document here happens to be a photograph or
12 an image, some kind of a picture of something.

13 MR. JOHNSON: Q. Is the electronic doc --
14 what -- what does an "electronic document" mean in the
15 context of this patent?

16 MR. MONACH: Object to form to the extent
17 it's calling for a legal conclusion, but you can give
18 your views on that.

19 THE WITNESS: In the context of this patent,
20 my understanding, having read the patent and the
21 claims, is the electronic document is some visual
22 representation on the screen that has a defined length
23 and a width, as an example, or defined set of
24 boundaries, because they may not have to be a
25 rectangular set of boundaries.

1 MR. JOHNSON: Q. So can it -- it can be
2 anything with a defined length and width?

3 A It could be any visually represented thing
4 with a defined boundary. I'd rather use the word
5 "boundaries," because length and width may connote a
6 rectangular thing. It may not be a rectangle,
7 necessarily.

8 Q Okay. So an electronic document is anything
9 that can be visually represented with a defined
10 boundary?

11 MR. MONACH: Object to the form of the
12 question; object as calling for a legal conclusion.

13 THE WITNESS: In the context of this patent
14 and the claims, reading the patent and the claims, I
15 would say that would be a -- my definition of an
16 electronic document would be something visually
17 representable on the screen that -- that has a defined
18 set of boundaries.

19 MR. JOHNSON: Okay.

20 Q How about the next limitation?

21 A Okay. So, as I said earlier, it's got a
22 first portion of an electronic document. We already
23 went through that.

24 Q And -- and -- I'm sorry.

25 A I'm sorry.

1 Q What does "first portion" mean?

2 MR. MONACH: I'm going to object to the form
3 of the question to the extent it calls for a legal
4 conclusion.

5 THE WITNESS: In -- in this particular
6 example, I would say the first portion is the -- the
7 portion of the image that we see displayed on the
8 screen, which I don't know how to describe this --

9 MR. JOHNSON: Can you zoom in more on the
10 screen, just so we see it better. Yeah, okay. That's
11 good. Thanks.

12 THE WITNESS: Everything, including the
13 yellow blob in the middle and the blue stuff around
14 it.

15 MR. JOHNSON: Q. So it's everything that's
16 shown on the screen is the first portion?

17 A Well, obviously, not this word "Samsung" and
18 things like that.

19 Q Yeah.

20 A The actual display, maybe if I -- without
21 touching it, if I can sort of indicate, you see the
22 bottom boundary there --

23 Q Okay.

24 A -- the top boundary, right boundary, and left
25 boundary?

1 more likely, he is -- he is more than ordinary skill
2 in the art.

3 Q Looking back at the Exhibit 21 and the -- the
4 non-zoomed in image we were just talking about, when
5 the entire image is displayed, I think you -- you
6 testified that that was the first portion; right?

7 A When the full image is on screen?

8 Q Yeah, just show it to the -- so the camera
9 can see it. That's the one I'm talking about.

10 A In -- in this example?

11 Q In that example, right.

12 A That would be a -- I guess, a first portion.

13 Q Right.

14 A Okay.

15 Q So -- so a first portion can be the entire
16 image; right?

17 MR. MONACH: Object to the form of the
18 question as calling for a legal conclusion.

19 THE WITNESS: Yes, I would say so.

20 MR. JOHNSON: Okay.

21 Q Can the first portion and the electronic
22 document, as described in the claims of the '381
23 patent, be the same thing?

24 MR. MONACH: Same objection; incomplete
25 hypothetical.

1 THE WITNESS: I'm not sure I understand the
2 question. I'm sorry.

3 MR. JOHNSON: Q. So -- so, in that example,
4 which has gone dark now, in that example, what's --
5 what's the electronic document?

6 MR. MONACH: Objection; incomplete
7 hypothetical; lack of foundation; calling for a new
8 opinion at the deposition.

9 THE WITNESS: So I haven't thought about this
10 in -- in great detail, but sitting here right now,
11 looking at this, I would say the electronic document
12 would be the -- this image that's shown on the screen,
13 with the boundaries being the -- the edges of that
14 image, as I've just, kind of, outlined here.

15 MR. JOHNSON: All right.

16 Q And -- and for an electronic document, you
17 can have --

18 A Sorry. I'll keep my finger on here so it
19 doesn't go away.

20 Q Under your understanding of an electronic
21 document, an electronic document can have an internal
22 boundary; right?

23 MR. MONACH: Object to the form of the
24 question as misstating the prior testimony and vague.
25 Object as calling for a legal conclusion and a new

1 opinion.

2 THE WITNESS: I don't think I talked about
3 internal boundary at all.

4 MR. JOHNSON: Okay.

5 Q Can an electronic document have an internal
6 boundary?

7 MR. MONACH: Object.

8 MR. JOHNSON: We talked about it in the
9 context of the contacts on the Tab 7 that had the --
10 the list of names.

11 MR. MONACH: Object to the form of the
12 question as vague, misstating the prior testimony.

13 MR. JOHNSON: Q. So do you understand my
14 question?

15 A I -- I'm not 100 percent sure, because the
16 word "internal boundary" I don't think, has come up
17 yet, and if I look at the con- -- if I go back to the
18 contacts list discussions, if I recall correctly this
19 morning, the only thing that when we talked about the
20 boundary of the contact list, I mean, there's the
21 application that has more decorations around it,
22 but -- so it -- you know, maybe you can be more
23 specific about what you mean by -- when you say
24 "internal boundary."

25 Q Okay. So if we -- you can put that one down

1 and pick up the tab -- this is Tab 7.

2 A Okay.

3 Q And if you go to the contacts --

4 A Yes, I'm at the contacts.

5 Q -- location, right.

6 If you -- so my question is: I think earlier
7 you said, use a pen, if you want to use a pen, can you
8 draw -- just can you just sort of show the camera what
9 the electronic document is in that context?

10 MR. MONACH: Object to the form of the
11 question; calls for a legal conclusion, incomplete
12 hypothetical; asking for a new opinion.

13 THE WITNESS: Okay. Let me just refresh
14 myself on what this thing does here.

15 So I think I -- I believe I testified that
16 the electronic document -- this would be a portion of
17 the electronic document, because the entirety is not
18 shown. It's will be this, this stuff that's displayed
19 in this rectangular column, and right now it's showing
20 me a partial --

21 MR. JOHNSON: Yeah.

22 THE WITNESS: -- amount.

23 MR. JOHNSON: Q. So there -- there are
24 pieces above the F and below the T?

25 A There --

1 MR. MONACH: Object to form.

2 MR. JOHNSON: Q. Or maybe not below it.

3 A Yeah, there is stuff above the F and below
4 the T, yes.

5 Q Okay. So all I was asking was, you can have
6 an electronic document that has an internal boundary
7 within a screen; right?

8 MR. MONACH: Object to the form of the
9 question as vague. Objection; calls for a legal
10 conclusion.

11 THE WITNESS: So I -- I'm not -- again, I'm
12 still not sure what you mean by "internal." It --

13 MR. JOHNSON: I'm --

14 THE WITNESS: Are you saying that this is the
15 boundary of the electronic document?

16 MR. JOHNSON: Yeah.

17 Q I just meant that that's internal because
18 it's -- it's located within the middle of the screen?

19 A So in that -- that boundary doesn't match the
20 edge of the screen --

21 Q Exactly.

22 A -- is what you're -- is that what you're
23 saying?

24 Q Exactly.

25 A Sure, the boundary of the document doesn't

1 have to align with the screen.

2 Q So you can have -- you can have the edge of
3 the boundary be something other than the edge of the
4 screen?

5 MR. MONACH: Objection; vague.

6 MR. JOHNSON: I think we're saying the same
7 thing. I'm just -- I'm really bad with trying to --

8 A I want to make sure I say the right thing
9 with my understanding of what you're saying, too.

10 Q So all I'm saying is, under your view of an
11 electronic document, an electronic document can have a
12 boundary that is internal to the screen or, you know,
13 doesn't have to be at the edge of the screen --

14 MR. MONACH: Objection; form.

15 MR. JOHNSON: Q. -- right?

16 MR. MONACH: Objection; calling for a legal
17 conclusion; asked and answered.

18 You can do it again.

19 THE WITNESS: So as I answered earlier, and
20 my opinion is that the boundary of the electronic
21 document, in this case, this -- this edge is one
22 boundary of it, does not have to match the edge of the
23 screen, yes.

24 MR. JOHNSON: Okay.

25 Q So just, during the lunch, I had the guys

1 just print up a sheet of paper with some squares on it
2 for me. So if you imagine, sir, that the -- the
3 quadrants that are labeled 1 to 36 on here are the
4 entire -- that's this -- that's the screen of the
5 display.

6 A So the whole -- the big rectangular is the
7 screen?

8 Q Right.

9 A Okay.

10 Q So you can have an electronic document that
11 consists of smaller grids within the screen; right?

12 MR. MONACH: Object to the form of the
13 question; calling for a legal conclusion; incomplete
14 hypothetical; asking for a new opinion.

15 THE WITNESS: It would depend on what one
16 considers to be the electronic document. It could be
17 one of these, let me call it sub rectangles that you
18 can label with numbers. It could be some combination
19 of them. It --

20 MR. JOHNSON: Right.

21 THE WITNESS: -- really depends on -- depends
22 on how, you know, you want to put the boundary around
23 it.

24 MR. JOHNSON: Q. So you could draw a
25 boundary, hypothetically, around squares 15, 16, 17,

1 18, 21 and 22, 23 and 24?

2 A Say -- sorry. 15, 16, 17, 18, 21?

3 Q 22, 23, and 24.

4 A So kind of like this?

5 Q Yeah, go ahead and draw it.

6 MR. MONACH: Object to the -- object to the
7 form of the question as vague and ambiguous;
8 incomplete hypothetical.

9 MR. JOHNSON: Q. Make it a little more
10 noticeable for me.

11 A We've got black lines around it.

12 Q Yeah, okay.

13 So that could be an electronic document;
14 right?

15 A Depend --

16 MR. MONACH: Same objection.

17 THE WITNESS: Sorry. I jumped in there.

18 Depending on the context, depending on the
19 application, it could be.

20 MR. JOHNSON: Okay.

21 THE WITNESS: Or some other collection.

22 MR. JOHNSON: Q. It's not limited to that;
23 right?

24 A I would not say it's limited.

25 Q So it could be also a -- a six-by-six grid or

1 a two-by-two grid?

2 MR. MONACH: Same --

3 MR. JOHNSON: Q. -- or even a three-by-three
4 grid, I guess --

5 MR. MONACH: Same objection.

6 MR. JOHNSON: Q. -- right?

7 MR. MONACH: Vague and ambiguous; incomplete
8 hypothetical.

9 THE WITNESS: Again, it would depend on the
10 def- -- you know, how -- whoever is being the
11 application, what they consider to be the document --
12 to be the extent of the document, yes.

13 MR. JOHNSON: Q. Under your view, though, it
14 could be those, those grids; right?

15 MR. MONACH: Objection; same objection as
16 before. Also, misstates the prior testimony.

17 THE WITNESS: Depending on the context, it --
18 it could take on different forms.

19 MR. JOHNSON: Okay.

20 Q Does the grid need to be a rectangle?

21 MR. MONACH: Same objection.

22 MR. JOHNSON: Strike it. Let me ask it
23 again.

24 Q Does -- would the grid need to be a rectangle
25 in order for it to be an electronic document?

1 MR. MONACH: Same objection.

2 THE WITNESS: Well, I think the electronic
3 document doesn't have to be anything to do with the
4 grid. It --

5 MR. JOHNSON: Okay.

6 THE WITNESS: -- it's any visual thing with
7 defined boundaries --

8 MR. JOHNSON: So -- so it --

9 THE WITNESS: -- by my definition of it.

10 MR. JOHNSON: Q. Could -- if you -- if you
11 drew lines around squares one, two, and eight, for
12 example --

13 A One, two, and eight. So this kind of, I
14 guess, inverted L?

15 Q Yeah.

16 Could that be an electronic document?

17 MR. MONACH: Objection; vague; incomplete
18 hypothetical; calling for a legal conclusion and a new
19 opinion.

20 THE WITNESS: So to the extent that I haven't
21 considered this, this style of odd-shaped documents
22 prior to coming here today, just thinking on the fly
23 here, a -- based on my understanding of, you know,
24 boundaries, that wouldn't -- would satisfy the notion
25 of a boundary, again, depending on the context of the

1 application and what a document means in that context.

2 MR. JOHNSON: Q. If -- going back to the
3 original two-by-four rectangle of 15, 16, 17, 18, 21,
4 22, 23, 24, if you look at that, is it fair to say
5 that this line right here is an edge of the electronic
6 document?

7 A The line --

8 MR. MONACH: Object.

9 Hang on a second.

10 THE WITNESS: I'm sorry.

11 MR. MONACH: Objection; vague and ambiguous;
12 incomplete hypothetical; calling for a legal
13 conclusion and a new opinion.

14 THE WITNESS: So, again, I haven't considered
15 this prior to this, you putting this in front of me.

16 Thinking on the fly here, so you're saying
17 this line -- the vertical line between --

18 MR. JOHNSON: Since the witness is pointing,
19 I just want to make sure you get what he's pointing
20 to.

21 Yeah.

22 THE WITNESS: The vertical line between 14
23 and 15, and 20 and 21, here, this --

24 Q That -- that's right, yeah.

25 A -- line.

1 Given this hypothetical scenario, where
2 you're saying the -- this two -- I'm sorry --
3 two-by-four grid of elements -- rectangle is an
4 electronic document in this hypothetical scenario,
5 that would be indeed, I guess, one boundary one
6 edge --

7 Q Okay.

8 A -- of that.

9 Q So let's just label that "edge" for me, just
10 so I can keep track of it after the deposition.
11 Just --

12 A What do you want me to call it?

13 Q Just call it "edge," and then maybe put it
14 down at the bottom and draw an arrow down to the line,
15 or something.

16 A Like this?

17 Q Yeah.

18 A Okay.

19 Q Okay. And then, is it fair to say that
20 the -- the -- the Blocks 14 and 20 are an area beyond
21 the edge --

22 MR. MONACH: Same --

23 MR. JOHNSON: Q. -- of the electronic
24 document?

25 MR. MONACH: Same objection.

1 THE WITNESS: So, again, considering this for
2 the first time here, I haven't thought this in detail,
3 if, in this hypothetical scenario, the document is
4 this two-by-four grid, labelled 15, 16, 17, 18, 21,
5 22, 23, 24, if that is the document, then anything
6 beyond that edge would be an area outside the document
7 beyond the edge of the document.

8 So given those hypotheticals, area 14 and 20
9 would be beyond the edge of the document, given that
10 scenario.

11 MR. JOHNSON: Okay.

12 Q So can you just label that "beyond the edge"?

13 A How -- just label each one of these?

14 Q Yeah, or just draw -- however you want.

15 A Well, we're getting a lot of drawings on this
16 thing, so I don't know. "Beyond."

17 Q Speaking of which, let me just mark the --
18 the grid as Exhibit 104.

19 A Put it on the bottom?

20 Q Thanks.

21 (Phone marked Balakrishnan Exhibit 104
22 for identification.)

23 MR. JOHNSON: Q. Can you look at the Galaxy
24 Tab, which is Exhibit 101, and pull up for me the
25 contacts application.

1 A Okay.

2 Q And I noticed, in your declaration, you did
3 not include this particular application on -- as one
4 that infringes the '381 patent, so the question is:
5 Why? Why not?

6 MR. MONACH: Object to the form of the
7 question, and if -- if your answer would -- I'll
8 instruct the witness not to disclose any
9 communications with counsel, other than facts and
10 assumptions that he relied on in forming his opinion.

11 THE WITNESS: So, at the time of writing the
12 report, I was, as I testified earlier, the -- the -- I
13 was -- I was told that Apple was alleging these four
14 devices and the particular applications, and they
15 were -- as far as I know, were not alleging the
16 contacts list on the Galaxy Tab 10.1, so I did not
17 analyze that in great detail.

18 So if you want me to go through this right
19 now, I'm happy to walk you through this and see which
20 portions of the claims I'm having -- which are not, if
21 you want me to do that.

22 MR. JOHNSON: Q. So you haven't -- you
23 haven't done that analysis before today?

24 A I haven't done it in detail sufficiently,
25 just talk about it right off the cuff, without walking

1 through.

2 Q Okay. So when -- when Apple gave you the
3 roadmap to look at what was allegedly infringing,
4 contacts in the Galaxy tab wasn't included?

5 MR. MONACH: Object to form.

6 THE WITNESS: I -- yes, the -- the contacts
7 on the Galaxy Tab was not one of those I was -- it was
8 not one of those that I was told was being alleged to
9 infringe.

10 MR. JOHNSON: Okay.

11 Q So take a look at contacts in the Galaxy Tab
12 and -- and now that you have it, tell me --

13 A Sorry. It just keeps flipping. If you give
14 me a second here.

15 Q -- why it doesn't infringe.

16 MR. MONACH: Object to the form of the
17 question.

18 THE WITNESS: Okay, so I'm just gonna walk
19 through the claims here and try to match it up and
20 tell you where -- where it matches and where it
21 doesn't match, if that's okay.

22 So the Galaxy tab, as we've gone through it
23 before, has a complete computer-implemented method
24 that's in the preamble, compromising a device with a
25 touchscreen display. So we've already established

1 that the device has a touchscreen display. It -- it
2 clearly displays a first portion of an electronic
3 document in this example right here that I've got.
4 I've got an electronic document, which is this
5 contacts list.

6 MR. JOHNSON: Q. Would you mind just showing
7 the camera.

8 A So I'm walking through this, too, so --

9 Q Yeah, that's fine.

10 A -- I may have to go back and forth.

11 Q Yeah, that's fine.

12 A So you got it --

13 Q So where -- where is the electronic document
14 there?

15 A Okay.

16 MR. MONACH: Hang on a second.

17 THE WITNESS: Sorry.

18 MR. MONACH: Object to the form of the
19 question; calling for a legal conclusion; asking for a
20 new opinion at the deposition; and vague and
21 ambiguous.

22 THE WITNESS: So, again, I'm doing this on
23 the fly. I haven't -- haven't thought about this in
24 great detail before.

25 So the electronic document here is this list

1 of -- of contact information on, you know, Big Bird,
2 Genie, Playhouse, and so forth; and what's shown on
3 the display right now, the -- the electronic document
4 is -- well, it just stopped here. It has -- starts
5 with the elements that, starting with a B, all the way
6 down to Tommy Bahama at the bottom, so that would be
7 the -- the first por- -- the portion of the electronic
8 document.

9 MR. JOHNSON: Okay.

10 THE WITNESS: Not the entirety. Clearly
11 there's more stuff.

12 MR. JOHNSON: Okay.

13 THE WITNESS: There appears to be more stuff
14 on the two -- beyond the two edge -- boundaries.

15 MR. JOHNSON: Okay.

16 Q But the area to the right of the edge is not
17 part of the electronic document?

18 MR. MONACH: Same objection.

19 THE WITNESS: So --

20 MR. JOHNSON: Q. So this, this area right
21 over here, is not part of the electronic document?

22 MR. MONACH: Same objection.

23 THE WITNESS: So in this example
24 application -- in this application, looking at it just
25 right now at this deposition, I would say the

1 electronic document does not include the -- the area
2 right here.

3 MR. JOHNSON: Okay.

4 Q Okay. How about the next limitation?

5 A Okay. So I think I already said first
6 portion of the electronic document.

7 The next limitation, detecting a movement of
8 an object on any other touchscreen display. So,
9 again, I'm gonna put my finger down, which would be
10 the object, and it's on or near -- it clearly detects
11 movement of the object on or near the touchscreen
12 display.

13 In response to -- then, the next element
14 would be "In response to detecting the movement,
15 translating the electronic document displayed on the
16 touchscreen display in a first direction to display a
17 second portion of the electronic document, wherein the
18 secret portion is different from the first portion."

19 So let me go back to where I was here. I
20 think it was something like that, with a B, I think it
21 had Tommy Bahama on the bottom there. That's where I
22 was before. So I'm gonna put my finger down, which is
23 the movement, and I'm gonna move it down a little bit,
24 and that would give me the -- translating the
25 electronic document in a first direction display a

1 second portion, where the second portion is different.

2 So the second portion here now has an A on
3 the top part of the portion that's displayed on the
4 screen, and on the bottom, instead of Tommy Bahama on
5 the -- the first portion now has Missy, Missy
6 Buttersworth at the bottom, so that's a different
7 portion of the document.

8 So now we can go on. So it says, in
9 response -- the next element says -- of the claim says
10 "In response to an edge of the electronic document
11 being reached, while translating the electronic
12 document in the first direction, so while the doc --
13 while the object is still detected on or near the
14 touchscreen display, displaying an area beyond the
15 edge of the document."

16 So I'm gonna continue moving, and now I see
17 that it stops. The document there got the As in it
18 stops at the word "14 contacts" that is part of the
19 document. It stops there. It doesn't go -- it
20 doesn't seem to go beyond the edge, so it doesn't seem
21 to meet this thing of going beyond the edge and
22 displaying an area beyond the edge of that document.

23 And so that -- I don't know what the number
24 of this element is, but that -- that part of the claim
25 is not -- it doesn't appear to be met in this

1 CERTIFICATE OF REPORTER

2
3
4
5 I, ANDREA M. IGNACIO HOWARD, hereby certify
6 that the witness in the foregoing deposition was by me
7 duly sworn to tell the truth, the whole truth, and
8 nothing but the truth in the within-entitled cause;
9

10 That said deposition was taken in shorthand
11 by me, a Certified Shorthand Reporter of the State of
12 California, and was thereafter transcribed into
13 typewriting, and that the foregoing transcript
14 constitutes a full, true and correct report of said
15 deposition and of the proceedings which took place;
16

17 That I am a disinterested person to the said
18 action.
19

20 IN WITNESS WHEREOF, I have hereunto set my
21 hand this 17th day of August, 2011.
22

23 

24 ANDREA M. IGNACIO HOWARD, RPR, CCRR, CLR, CSR No. 9830
25