UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

SONY COMPUTER ENTERTAINMENT AMERICA LLC

Petitioner

v.

APLIX IP HOLDINGS CORPORATION

Patent Owner

_____

Case No. IPR2015-00533

Case No. IPR2015-00476

Case No. IPR2015-00396

Patent No. 7,218,313

_____

DEPOSITION OF DR. GREGORY F. WELCH

VOLUME I, PAGES 1 - 87

AUGUST 19, 2015

(The following is the deposition of DR.
GREGORY F. WELCH, taken pursuant to agreement of
counsel, at the Hyatt Regency Orlando International
Airport Hotel, Orlando, Florida, commencing at
approximately 9:57 o'clock a.m., August 19, 2015.)

STIREWALT & ASSOCIATES

1 APPEARANCES:
2   On Behalf of the Petitioner:
3   Abran Kean
       ERISE IP
4   5600 Greenwood Plaza Boulevard, Suite 200
       Greenwood Village, Colorado 80111
5
     On Behalf of the Patent Owner:
6
       Robert J. Gilbertson
7   GREENE ESPEL PLLP
       Campbell Mithun Tower, Suite 2200
8   222 South Ninth Street
       Minneapolis, Minnesota 55402-3362
9
   ALSO APPEARING:
10
       Callie Pendergrass, Senior Technical
11   Advisor, Erise IP
12
13
14   I N D E X
15 EXHIBITS   DESCRIPTION   PAGE MARKED
16 Ex 2006   Four-page excerpt of Willner
17   Patent 5,874,906 with handwritten
18   notations   74
19
20
21
22
23
24
25

1   P R O C E E D I N G S
2   (Witness sworn.)
3   DR. GREGORY F. WELCH
4   called as a witness, first duly sworn,
5   was examined and testified as follows:
6   ADVERSE EXAMINATION
7 BY MR. GILBERTSON:
8   Q. Welcome back, Dr. Welch.
9   A. Thank you.
10   Q. You've been retained as an expert witness by
11 Sony Computer Entertainment America and have provided
12 declarations or direct testimony in seven IPR
13 proceedings relating to APLIX; is that right?
14   A. That's correct.
15   Q. That includes IPR proceedings relating to
16 the '245 and '692 patents, and you gave your
17 deposition on those two declarations on July 28 and 29
18 here in Orlando; is that correct?
19   A. That sounds right. I don't remember the
20 dates, but I'll take your word for it.
21   Q. Okay. And you also represent SDEA in
22 connection with three different IPRs challenging U.S.
23 Patent No. 7,218,313, and for the record I'll just
24 note those are IPR2015-00396, IPR2015-00476, and
25 IPR2015-00533; is that right?

1   A. That's correct.
2   Q. And you're here today to give your
3 deposition in connection with those three declarations
4 that you submitted in those three IPRs.
5   A. That's correct.
6   Q. And just for the record, by agreement of the
7 parties we'll have one deposition and one transcript
8 for all three of those. All transcripts from the case
9 can be filed as exhibits in all of the IPRs. I think
10 the idea was that that would reduce the burden on
11 witnesses and reduce duplication. Many of the
12 references at issue in the '313 IPRs are the same as
13 references that were at issue in the '245 and '692
14 IPRs, so we don't necessarily have to cover everything
15 every time.
16   Are you ready to begin, Dr. Welch?
17   A. Yes. Thank you.
18   Q. Do you have in front of you the three
19 declarations? And for the record I'll note in the
20 00396 IPR it's Exhibit 1013, in the 00476 IPR it's
21 Exhibit 1009, and in the 00533 IPR it's Exhibit 1008.
22 Do you have all those?
23   A. I do.
24   Q. And do those declarations contain true and
25 complete statements of your testimony and opinions

1 relating to these IPRs?
2   A. Yes, they do, at the time of the writing for
3 sure.
4   Q. And is there something that's come up since
5 that's caused you to believe that there was an error
6 or something incomplete about them?
7   A. No.
8   Q. Who wrote those declarations?
9   MR. KEAN: Objection to the extent it calls
10 for protected information.
11   A. So I don't know how much we can rely on the
12 previous deposition that we did back on the 18th, but,
13 you know, my answer would be the same as then, which
14 is that the intellectual content -- certainly all the
15 technical intellectual content came from the -- out of
16 discussions. You know, some of it I may have
17 handwritten, some of it someone else may have hand-
18 drafted, but it's all intellectually mine. The
19 legal --
20   And this is -- this is not specific to this
21 necessarily because I don't want to convey -- or break
22 confidences in any way, but that's the way I typically
23 work, is we talk, I respond to questions, I give
24 ideas, and then we draft somehow together, and
25 that's -- I believe that's how we did it here.

2 (Pages 2 to 5)

STIREWALT & ASSOCIATES

1   Q.   And just so you know, the testimony from the
2 '245 and '692 IPRs will be available in this
3 proceeding as well.
4   It sounds like the process you used to
5 create the three declarations for the '313 patent is
6 about the same as the process you used for the '245
7 and '692 declarations.
8   **A.   That's correct, yeah. As I -- as I said,**
9 **that's the way I typically work and I believe that's**
10 **the way we did it here, yeah.**
11   Q.   So as with the '245 and '692 IPRs, am I
12 right that your declarations in the '313 patent IPRs
13 do not include opinions about how particular claim
14 terms in the '313 patent should be construed?
15   **A.   I don't think that they do. I don't recall**
16 **that. I think I refer to proposed constructions,**
17 **maybe, in the -- if I could refer to the 00533**
18 **declaration as the 00533 declaration, I think in there**
19 **I refer to proposed constructions by the petitioner,**
20 **and it's my understanding that -- since then that the**
21 **board has adopted those constructions. But beyond**
22 **that, I have not, that I recall, offered an opinion on**
23 **any claim construction.**
24   MR. GILBERTSON: This is a question for
25 counsel for SDEA. It occurred to me that the

1 transcripts might be more usable for the judges if,
2 when we refer to the 396, 476 and 533, that the
3 transcript would show those with the two zeroes
4 preceding the numbers so it doesn't look like three
5 different patents.
6   MR. KEAN: Sure. Yeah, I think that's a
7 good solution. I think that makes good sense.
8   MR. GILBERTSON: Okay. Thank you.
9   THE WITNESS: I'll try and refer to them in
10 that way also.
11   MR. GILBERTSON: I guess what I'm suggesting
12 is even if you don't, that if, by agreement of
13 counsel, and presuming the court reporter is okay with
14 it, that the trans -- even if we say "the 533
15 declaration," it will be transcribed as "00533." Does
16 that make sense?
17   THE WITNESS: I understand. That makes
18 sense and I like it.
19   MR. KEAN: Yeah. I think that's a good
20 idea.
21 BY MR. GILBERTSON:
22   Q.   Let me ask you about the 00396 declaration,
23 paragraph 14.
24   **A.   Okay.**
25   Q.   In this paragraph you list materials that

1 you analyzed in connection with your work on the 00396
2 declaration; is that right?
3   **A.   That's correct.**
4   Q.   And I'm going to have some questions for you
5 today about Pallakoff and Ishihara. They're listed in
6 the 00396 declaration as Exhibits 1006 and 1007; is
7 that right?
8   Are you having trouble finding them?
9   **A.   I'm having trouble finding Ishihara.**
10   Q.   It's the next one right below Pallakoff.
11   **A.   Yes, I see it. Okay. It doesn't --**
12   **"Certified English Translation..." I got**
13 **it. Thank you.**
14   Q.   And just for the record, I'll note that
15 Pallakoff is Exhibit 1004 in the 00476 IPR and also
16 Exhibit 1004 in the 00533 IPR, and Ishihara is not
17 used in the 00476 IPR but is Exhibit 1005 in the 00533
18 IPR.
19   Dr. Welch, how did Pallakoff initially come
20 to your attention?
21   MR. KEAN: Objection to the extent it calls
22 for privileged information and protected information.
23   **A.   I don't recall, as I think I've said before.**
24 **I looked at and discussed a lot of art -- which is**
25 **typical for me if I do something like this -- with the**

1 **petitioner, and together decided that some was better**
2 **than others for this purpose. But specifically, I**
3 **don't recall.**
4   Q.   Same answer for Ishihara?
5   **A.   That's correct.**
6   Q.   Let me ask you to turn in --
7   Actually, please turn to the 00533
8 declaration to paragraph 33.
9   **A.   Okay.**
10   Q.   And this paragraph appears within the
11 section of your 00533 declaration on Background of the
12 Technology. You cite a couple of exhibits in -- well
13 let me back up.
14   Paragraph 33 of your 00533 declaration has
15 to do with touchscreens generally; right?
16   **A.   Generally, yes, I believe that's correct.**
17   Q.   And you cite a couple of exhibits in that
18 paragraph, one of which is referred to as Sears,
19 Exhibit 1026; is that right?
20   **A.   That's correct.**
21   Q.   If you could have a look at the third
22 sentence of your declaration that begins, "The use
23 of..."
24   **A.   The third sentence in 33, paragraph 33?**
25   Q.   Yes.

3 (Pages 6 to 9)

STIREWALT & ASSOCIATES

1   A. Okay.
2   Q. And just so it's easy for someone reading
3   the testimony, I'll read that sentence into the
4   record. Quote, "The use of sliding gestures on touch
5   surfaces for various applications, including games,
6   was common at least as early as 1990, and was
7   understood to offer 'a more powerful method of input
8   than either target selection or direct manipulation.'"
9   Did I read that correctly?
10   A. Yes.
11   Q. And for that proposition you cite both of
12   the exhibits noted in that paragraph, the first of
13   which is Sears, Exhibit 1026, at page 17; is that
14   right?
15   A. I believe that is correct.
16   Q. That's what it says on the page; right?
17   A. That's right.
18   Q. Okay. Let me hand you just now a copy of
19   Exhibit 1026, which is Sears, and ask you to look at
20   page 17 that you cited in the declaration. Let me
21   know when you're there.
22   A. Okay.
23   Q. And the part of Sears that you quote in the
24   sentence I read from your declaration appears in the
25   first full paragraph on internal page 17 of the Sears

1   reference -- the Sears article; is that right?
2   A. "Internal" means the --
3   Do you mean the original page numbers in the
4   article as opposed to the exhibit page?
5   Q. Yeah. That's the issue with these exhibits
6   is --
7   A. Okay.
8   Q. -- it's exhibit page 18 but the internal or
9   intrinsic page is 17.
10   A. Okay.
11   Q. And the part that you quoted is in that
12   first full paragraph on page 17 of Sears?
13   A. Yes, that appears to be correct.
14   Q. And that paragraph does not specifically
15   refer to sliding gestures; does it? Instead, the
16   words that it uses are "free hand input;" is that
17   correct?
18   A. That's correct. That sentence starts with
19   "Free hand input...," which is, in my mind, defined
20   earlier in the preceding paragraph on the preceding
21   page, which would be -- would be the last paragraph of
22   the intrinsic page 16, where, for example, it says,
23   "Free hand input allows users to move their hands
24   across the screen with every location they touch being
25   used as input." And the next sentence says, "Gestures

1   allow users to draw shapes or letters which are used
2   as input." So just as one example, you know, those
3   would all involve sliding gestures, as would the -- I
4   guess it's the fourth sentence, which says, "Free hand
5   input includes tasks like drawing in a graphics
6   package...," and so on, which would all involve
7   sliding your finger across the screen.
8   Q. The part from Sears that you quoted includes
9   the phrase "target selection." Do you see that in the
10   first full paragraph on intrinsic page 17 of the Sears
11   reference, Exhibit --
12   A. I do.
13   Q. -- 1026?
14   A. I do.
15   Q. That's not referring to targets of a game;
16   is it? That's talking about something you find on a
17   screen that you want to do something with.
18   A. I don't recall. And I could look further
19   through Sears for a definition, but what I say, that
20   seems plausible. So it could include something in a
21   game but more generally would be as you described, I
22   think, just -- you know, sitting here right now just
23   reading that sentence without looking further in the
24   Sears exhibit.
25   Q. And the paragraph we're talking about, the

1   first full paragraph on intrinsic page 17 of Sears,
2   Exhibit 1026 in the 00533 IPR, that comes up in the
3   context of talking about input generally. There's
4   nothing specific in that context about games; is
5   there?
6   A. I don't recall. I would have to look more
7   carefully. But, you know, based just on the title of
8   the article, which is "A new era for touchscreen
9   applications," I believe the methods described would
10   be universal or pervasive across any applications, but
11   I don't recall that there was any specific application
12   beyond the ones I just mentioned, like drawing or
13   graphics packages.
14   Q. In section 4.4 of the Sears reference,
15   Exhibit 1026 in the 00533 IPR that starts on intrinsic
16   page 16 and finishes on intrinsic page 17, that
17   section isn't specific to games; is it?
18   A. That is correct. I don't think that it's,
19   you know, specific to anything. It appears to be --
20   and again, this is just based on a quick read here --
21   general teaching about different -- as it says, many
22   novel applications, but not -- nothing specific that I
23   can see about games.
24   Q. Let me ask you about your 00533 declaration,
25   paragraph 34, the next paragraph after the one we were

4 (Pages 10 to 13)

1   just discussing. Do you have that in front of you?
2   A. I do.
3   Q. The first sentence of your paragraph 34
4   reads, quote, "It was generally recognized that using
5   touchscreen input mechanisms with any computing device
6   created usability issues, including lack of precision,
7   high error rates, figures obscuring detain on the
8   screen, and the screen smudging." Did I read that
9   correctly?
10   A. You did.
11   Q. And you cite for that the Preece document
12 that's Exhibit 1011 in the 00533 IPR; is that right?
13   A. That is correct.
14   Q. Let me show you a copy of that exhibit. The
15 one I'm handing you happens to be from the -- it
16 happens to be an exhibit in the 00396 matter, which is
17 Exhibit 1016, but it's the same document. And you
18 cited page 218 of Preece. Can you turn to that page
19 within the Preece exhibit, please.
20   A. Okay.
21   Q. So I think the material we're talking about
22 appears in the second paragraph on intrinsic page 218
23 of the Preece exhibit, 00533 IPR Exhibit 1011.
24   And I think we've figured out the typo that
25 we talked about in connection with the other IPRs

1   where your declaration uses the word "detain." Am I
2   right that you meant to say "detail?"
3   A. That sounds entirely plausible. Where is
4   that in my declaration?
5   Q. It's in that sentence I just read, first
6   sentence of paragraph 34.
7   A. Oh. Yes. Absolutely. It must be "detail."
8   Q. And then in the middle of the second
9   paragraph of intrinsic page 218 of Preece it uses
10 similar language, including fingers obscuring detail
11 on the screen. Do you see that?
12   A. I do.
13   Q. Okay. Obviously, no big deal on the typo, I
14 just wanted to make sure we were looking --
15   A. Yes.
16   Q. -- at the same thing.
17   Preece cites the usability issues that you
18 note in your declaration and it also cites one more:
19 arm fatigue; is that right?
20   A. That's right. The first part of that
21 paragraph is describing good things, and starting at
22 that point Preece is describing bad things, and you're
23 right, he also describes arm fatigue in the next
24 sentence.
25   Q. So of the bad things or downsides of

1   touchscreens, if you put the touchscreen on the back
2   of a device, would I be right that that might do
3   something about fingers obscuring detail on the screen
4   and screen smudging, but wouldn't in itself do
5   anything about the lack of precision, the high error
6   rates or the arm fatigue? Is that correct?
7   A. That's a -- you know, that's a very broad
8   question, so I would say broadly that all of those
9   things depend on every aspect of the system, not any
10 one thing, so -- and, you know, I think Preece would
11 agree that those are very broad, general
12 characterizations. So it would depend on what was
13 drawn on the screen, you know, how the device was
14 meant to be held and all sorts of other things. So
15 it's hard to answer with any definitive answer. It's
16 a very broad question, it depends on a lot of
17 different factors, some of which are listed here, but
18 not all of them.
19   Q. Well it's easy to say that if you put the
20 touchscreen on the back, you won't have fingers
21 obscuring the detail on the screen; right?
22   Isn't that issue one where you've got a
23 finger between your eyes and the screen?
24   A. That's true. Your physical finger,
25 absolutely, would not be in front of the screen. If

1   there's a screen on the front of the device and your
2   hands are on the back of the device, then obviously
3   your fingers would not be obscuring anything on the
4   display. If the display is opaque that is; you know,
5   for example, is not transparent.
6   Q. But that step of taking a touchscreen and
7   putting it on the back instead of the front, you can't
8   say that by itself that would do anything to deal with
9   the other problems that Preece identified: lack of
10 precision, high error rates, and arm fatigue.
11   A. It's -- it's hard to say. I wouldn't say
12 that it can't. It might play a role. What I mean to
13 say is that there's nothing here that I can think of
14 sitting here right now, aside from the potential point
15 that you just mentioned, that would exclusively or by
16 itself address those problems, that the mitigation of
17 any of those problems is usually done by a combination
18 of a lot of different design factors.
19   Q. The Preece exhibit, 00533 IPR Exhibit 1011
20 at intrinsic page 218, also notes that there was a
21 survey that implied that of various cursor control
22 devices studied, touchscreen was the fastest but least
23 accurate; is that right?
24   A. I'm sorry, can you point me to that on that
25 page?

5 (Pages 14 to 17)

STIREWALT & ASSOCIATES

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.