UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
TYLER DIVISION

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MIRROR WORLDS, LLC,

Plaintiff,

VS. No. 6:08 cv 88 LED

APPLE INC.,

Defendant.

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December 11, 2009

9:10 a.m.

Videotaped deposition of JOHN LEVY, Ph.D, at the offices of Weil, Gotshal & Manges, 767 Fifth Avenue, New York, New York, before Nancy Mahoney, a Certified Court Reporter, Registered Professional Reporter, Certified LiveNote Reporter, and Notary Public within and for the States of New York and New Jersey.

A P P E A R A N C E S:

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BY: STEVEN CHERENSKY, ESQ.

ALSO PRESENT:

Lisa Olle, Apple
(Via Conference)

Jessica Choi, Paralegal

Harris Teran, Videographer
Merrill Legal Solutions

I N D E X

EXHIBIT INDEX

is -- does not include the generating the timestamp.

And so the structure for selecting a timestamp is user-oriented and has only to do with date and time values.

MR. STEIN: I don't mean to interrupt your line of questioning, but my failure to eat breakfast this morning has made me very hungry, so whenever you want to take a break, I'd appreciate it.

MR. CHERENSKY: That's fine. We can take a break.

THE VIDEOGRAPHER: We're off the record. Time is 12:19 p.m.

(Luncheon recess.)

THE VIDEOGRAPHER: We're back on the record. Time is 1:21 p.m.

BY MR. CHERENSKY:

Q. Good afternoon, Dr. Levy.

A. Good afternoon.

Q. When we broke for lunch, we were discussing the timestamp to identify limitations that's on Page 12 of your declaration, Paragraphs 36 to 38. Why don't you turn back there, if you would.

13:22:17 A. Okay.

13:22:22 Q. In Paragraph 38 -- do you have that?

13:22:23 A. Yes.

13:22:28 Q. -- about halfway through you talk about the situation where a user might set the date and time for the same value for more than one document and, therefore, the date and time alone cannot serve as a unique identifier.

13:22:49 And you agree that the timestamp that's ultimately used to identify documents needs to be unique for the documents to be placed into a mainstream, correct?

13:23:03 A. Yes.

13:23:06 Q. Then you say that -- you continue to say that, "In that case, further information must used in addition to the date and time in order to identify data units."

13:23:22 What -- what further information is disclosed in the '227 specification to uniquely identify data units?

13:23:47 MR. CHERENSKY: Off the record.

13:23:48 THE VIDEOGRAPHER: We're off the record. Time is 1:23 p.m.

(Recess taken.)

13:34:00 THE VIDEOGRAPHER: We're back on
13:34:04 the record. Time is 1:34 p.m.
13:34:06 BY MR. CHERENSKY:
13:34:07 Q. Okay. Dr. Levy, we were talking
13:34:10 about timestamp to identify in Paragraph 38, and
13:34:15 I was asking you about the -- the statement in
13:34:20 your declaration in Paragraph 38, a little bit
13:34:23 more than halfway through that paragraph where
13:34:28 you state, "In that case" -- in that case being
13:34:31 the case where the date and time alone cannot
13:34:35 serve as a unique identifier -- "further
13:34:38 information must be used in addition to the date
13:34:42 in time in order to identify data units."
13:34:44 And my question is: What further
13:34:50 information is disclosed in the '227
13:34:52 specification for further -- what further
13:34:55 information is disclosed for -- in addition to
13:34:59 date and time in order to uniquely identify data
13:35:00 units?
13:35:02 A. Okay. By the way, I didn't use the
13:35:06 word "uniquely" in my sentence, but,
13:35:06 nonetheless.
13:35:09 The specification taken as a whole
13:35:17 and the specifics about identifying simply leave
25 one of ordinary skill in the art to understand

that when the date and time values are not sufficient to create a unique identifier, that something in addition will be needed.

Q. Okay. Is there any explicit recognition in the '227 specification that date and -- date and time may not be sufficient to uniquely identify data units?

A. I don't believe that is explicit in the specification.

Q. Also, there's no explicit discussion in the specification regarding the use of any additional information beyond date and time in order to uniquely identify data units.

Isn't that right?

MR. STEIN: Objection.

THE WITNESS: Could I hear that one?

(Record read.)

A. Try to regard that as a simple question. I think there is nothing that identifies specific fields or values that would be used that one of ordinary art -- skill in the art would understand that needed to be used.

Q. You state in the last sentence in

Paragraph 38 that, "One of ordinary skill in the art would also understand that timestamps, as frequently used in various software applications, identify data items on the basis of timestamps based on the date and time, plus additional information."

What additional information would one of ordinary skill in the art understand might be used?

A. Anything that suffices to make the timestamp unique.

Q. Can you provide any examples?

A. Sure, I'll offer an example.

When the resolution of the clock is not sufficient, then one could append a pseudo random number, let's say a 32-bit number, which would then be used as part of the unique identifier.

Q. And it's your opinion that one of ordinary skill in the art would understand that that could be -- I'm sorry, did you say could be appended to the timestamp -- to the date and time?

A. That is the word I used.

Q. Okay. So, and one of ordinary

skill in the art would understand that this 32-bit pseudo random number could be appended to the date and time specifically within the context of the -- of Claim 1 of the '227 patent.

Is that right?

A. I'm not quite sure what you mean by specifically to that claim.

Q. Sure.

So you testified that one of ordinary skill in the art would understand that if the resolution of the timestamp was insufficient to uniquely identify, then a pseudo random -- a 32-bit pseudo random number could be appended to the date and time.

Would one of ordinary skill in the art understand that that specific method could be used in the context of Claim 1?

A. Well, I'm speaking of one of ordinary skill in the art using timestamps in a variety of software applications. And so, by implication, that would include the type of system referred to in Claim 1.

Q. Can you identify any specific applications that append a 32-bit pseudo random number to a date and time in order to uniquely

identify data units?

A. No, I'm not prepared to do that today.

Q. All right. So that's one method that could be used to provide additional information to date and time in order to uniquely identify data units.

Can you provide any other examples of methods that could be used to provide additional information to date and time in order to uniquely identify data units?

A. Yes.

One could use some other field that already existed in the data unit that would, when appended to the date and time, make it unique --

Q. And --

A. -- make -- make a unique timestamp.

Q. Do you have any particular date -- any particular fields in mind that could be used for that function?

A. Well, I haven't thought about it very much, but the size of the data unit, if it were there, might be a field one could use. There could be others.

Q. How would one of ordinary skill in the art know that using the size of the data unit appended to the date and time would uniquely identify data units?

A. Well, it depends --

MR. STEIN: Objection.

A. -- it depends on what type of data units we're talking about. If they were -- if they were, say, text files, typically most text files differ in length from each other; and, therefore, for two text files that happen to have the same date and time, it would be unlikely for them to have the same length. But that's just an example.

Q. It would be possible that two text files have the same size and the same date and time.

Isn't that right?

A. Yes.

Q. Okay. Can you -- I'm sorry. Did I interrupt?

A. Yes. I -- I was only using that as one example.

In fact, any field in which those data units which have the same date and time,

any field which would then distinguish between those which have the same date and time would be sufficient.

Q. Do you know of any applications that use a field in the data unit in combination with date and time in order to uniquely identify data units?

A. Well, I'm not sure I can name an application to you, but there's a classification of applications that involve managing messages being stored and forwarded where, in order to identify a message, one needs a unique identifier, and that may be constructed from a time and date plus additional information.

Q. But you don't have any specific applications in mind that use that method?

MR. STEIN: Objection.

A. I'm not prepared to name any today.

Q. Okay. And you don't know what additional information might be used in any of those unnamed applications in order to append to date and time to uniquely identify data units, do you?

MR. STEIN: Objection to form.

A. Well, I -- I don't think that's

13:43:39 1 quite fair. I believe I -- I could go on with
13:43:42 2 additional examples and eventually I might
13:43:45 3 recall an application I've worked on where one
13:43:48 4 particular kind was used.
13:43:55 5 Q. And this appending of the contents
13:43:57 6 of a field of the data unit to the date and time
13:44:02 7 information in order to uniquely identify data
13:44:05 8 units isn't discussed anywhere in the '227
13:44:07 9 specification, is it?
13:44:13 10 A. Only by implication.
13:44:15 11 Q. And by implication, are you
13:44:17 12 referring to your opinion that one of ordinary
13:44:21 13 skill in the art would know that date and time
13:44:24 14 alone might not be sufficient, so something else
13:44:27 15 might need to be done, or is there something
13:44:29 16 more specific that you have in mind?
13:44:37 17 A. No, I think that's generally it.
13:44:39 18 Q. Are there any other examples,
13:44:44 19 beyond the two that you've testified about, that
13:44:47 20 you're aware of for additional information to be
13:44:52 21 used along with date and time in order to
13:44:56 22 uniquely identify data units?
13:44:58 23 A. Yes.
13:45:00 24 In the case where the date and time
25 are set by a user -- or selected by a user, the

system clock may well have additional time resolution which could then be used at the time of the creation of the stamp, in other words, the low order bits of a realtime clock could be used as the appended differentiating data field.

Q. Is that method of uniquely identifying data units discussed anywhere in the '227 specification?

A. I don't believe so.

Q. Anything else that you have in mind as an example of additional information that could be used in -- along with date and time to uniquely identify data units?

A. Well, in the -- not an additional type of -- of field, but in the case where an agent or some software activity applies a timestamp -- is generating a timestamp, when the clock is sufficiently fine-grained, then it's not even necessary to add another field to make sure it's differentiated and unique.

Q. Does the '227 specification discuss anywhere that a clock of finer resolution would be used to set date and time by an agent versus that that would be otherwise set?

A. No. This is merely something that

disclosed in the '227 specification for -- that creates data units -- I'm sorry -- that generates data units by the computer system?

A. Well, I believe these applications all generate data units, and so the reference to an application program that generates data units is a reference to that package, which includes executable code.

Q. But the executable code itself isn't disclosed in the '227 application, is it?

A. Only by inference.

Q. Okay. Let's move on to the next limitation, the means for selecting a timestamp to identify each data unit. That's Paragraph 79 through 81 of your declaration.

Why don't you read those paragraphs and let me know when you're ready.

A. All right.

Q. In the second sentence of Paragraph 79, you state that, "If this term is interpreted as a means plus function limitation, then the corresponding structure is executable code that selects a timestamp for a data unit based on the present time or a time designated by the user."

Is there any executable code disclosed anywhere in the '227 specification that selects a timestamp for a data unit based on the present time or a time designated by the user?

A. As in the other examples, with software, the functional description implies the underlying executable code.

Q. But there's no explicit disclosure of any executable code for performing that function, is there?

A. There is no listing at the detailed level of executed code -- executable code.

Q. Okay. Let's move on to the next limitation, means for associating each data unit with at least one chronological indicator having the respective timestamp, and that's Paragraph 82 through 84 of your declaration.

And you can review those paragraphs, and I'll ask the same sort of questions I've been asking.

A. Okay.

Q. In Paragraph 83, you state, "While I disagree with Apple's position, if it is interpreted in that manner, then the

corresponding structure would be executable code implementing the mainstream," and I think we -- well, by -- earlier -- in an earlier term, you talked about instantiating the mainstream.

Is implementing the mainstream and instantiating the mainstream the same thing?

A. Not necessarily. The -- as this says, the mainstream is a data structure comprised of various things, including chronological indicators.

So, here, implementing the mainstream includes -- or means, in part, populating it. So as a daily unit is pop -- being populated, it's associated with at least one chronological indicator having respective timestamps.

Q. Okay. Is there any executable code expressly disclosed in the '227 specification for implementing the mainstream, as you've used -- defines that term "implementing" here.

MR. STEIN: Objection.

A. There is no detailed code listing here.

Q. The -- it's your opinion that this claim is -- should not be construed as a --

17:37:20 1 the record. Time is 5:37 p.m.
17:37:20 2 BY MR. CHERENSKY:
17:37:22 3 Q. Okay, I'm actually going to move on
17:37:28 4 to limitation Z, so -- which is Paragraphs 88
17:37:33 5 through 90 of your declaration.
17:37:37 6 I'm really only going to ask about
17:37:40 7 Paragraph 88, but review those paragraphs and
17:39:48 8 let me know when you're ready.
17:39:49 9 A. All right.
17:39:51 10 Q. Okay. You state in Paragraph 88
17:39:55 11 that, "The structure in the specifications that
17:39:59 12 correspond to this limitation is executable code
17:40:01 13 that dynamically updates the mainstream and
17:40:06 14 executable code that dynamically updates
17:40:07 15 substreams."
17:40:13 16 Is there any executable code,
17:40:18 17 Dr. Levy, disclosed in the '227 specification
17:40:22 18 that dynamically updates the mainstream and
17:41:32 19 dynamically updates substreams?
17:41:39 20 A. Let's take, for example, Column 5
17:41:46 21 at lines 1 to 13. Your -- your specification is
17:42:01 22 describing the operation of substreams.
17:42:03 23 So a person of ordinary skill, of
17:42:05 24 course, will understand that all of the
25 operation here is implemented by executable

code. And so this is giving a fair amount of information about how that executable code is to operate, such as automatic monitoring of information and automatic collecting -- automatically collecting all arriving mail, and so on.

Q. There is no actual executable code disclosed in the paragraph you just referred to on the top of Column 5 for dynamically updating the mainstream or dynamically updating substreams, is there?

A. While there's no -- there's no detailed code listed here, one of ordinary skill in the art would certainly understand that that's what's underlying each of these operations.

Q. Okay. Let's move on to limitation AA, means for displaying alternate version of the content of the data units. That's Paragraphs 91 through 93 of your report.

Please take a look at those paragraphs. I'll have a few questions for you.

A. All right.

Q. First of all, what is an alternate version of the content of the data units as

17:56:01 A. There's -- there's further
17:56:03 discussion of browse cards at Column 7 at the
17:56:06 bottom, as I think you may have pointed out,
17:56:14 starting at 64, and the purpose of it is to help
17:56:17 user identify a document by providing the user
17:56:21 some idea of the document's contents in a small
17:56:25 window.
17:56:29 So, anyway, I believe those give
17:56:33 you some examples of ways in which alternative
17:56:43 view -- excuse me -- alternative versions of the
17:56:46 content of data units are displayed.
17:56:48 Q. Okay. Let's move on to
17:56:51 limitation BB, the means for archiving a data
17:56:58 unit associated with a timestamp older and a
17:57:00 specified time point, and it goes on.
17:57:04 That's Paragraphs 94 through 96 of
17:57:09 your declaration. Feel free to read those
17:57:12 paragraphs. I'm just going to ask you about
17:57:51 Column -- I'm sorry -- Paragraph 95.
17:57:51 A. Okay.
17:57:55 Q. In Paragraph 95, second sentence,
17:57:57 you state, "While I disagree" -- referring to
17:58:00 Apple's position -- "if it is interpreted in
17:58:02 that manner, then the corresponding structure
25 would be computer hardware and executable code

implementing archive of data units."

Dr. Levy, there is no computer hardware or executable code explicitly disclosed in the '227 specification for implementing archiving of data units, is there?

MR. STEIN: Objection to form.

A. Oh, by the way, I found the paragraph in which the time order was reversed. It's Column 10, lines 13, 15 -- 12 to 15.

So the reference to Column 10, 16 to 33, describes the actions taking place when archiving -- an example of how archiving may be done.

Q. But there's no explicit disclosure of computer hardware or executable code there, is there?

MR. STEIN: Objection.

A. Well, again, in line -- Column 10, line 28, "Streams operating system monitors remaining disk space," and that implicitly refers to code -- programs.

Q. My question specifically asked about explicit disclosure of executable code.

There's no explicit disclosure of executable code implementing archiving of data

18:00:17 1 units in the '227 specification, is there?
18:00:20 2 A. Well, again, every time the
18:00:23 3 operating system is described as taking an
18:00:26 4 action, a person of ordinary skill in the art
18:00:29 5 understands that executable code is what enables
18:00:30 6 it to take that action.
18:00:32 7 Q. Okay. I'm not asking you what one
18:00:35 8 of ordinary person skill -- skilled in the art
18:00:37 9 understands. I'm asking you about explicit
18:00:40 10 disclosure in the specification. All right?
18:00:42 11 There is no explicit disclosure in
18:00:46 12 the specification of executable code
18:00:51 13 implementing archiving of data units, is there?
18:00:53 14 A. In the same terms as we spoke of
18:00:56 15 before, I do not see a detailed listing here
18:00:58 16 showing the lines of code.
18:01:00 17 Q. Okay. And there's no executable
18:01:04 18 code implementing user selectable operations on
18:01:07 19 streams -- there's no explicit disclosure of
18:01:11 20 executable code implementing user selectable
18:01:14 21 operations on streams in the '227 specification,
18:01:14 22 is there?
18:01:21 23 MR. STEIN: Objection.
18:01:22 24 A. I'm sorry. Where -- where is that
25 in my report? Could you point me to it?

18:01:27 Q. Well, I -- I'm trying to move on.
18:02:09 So this is Paragraph 98.
18:02:09 A. Okay.
18:02:11 There is no detailed listing of
18:02:12 such executable code.
18:02:14 Q. Okay. And there's no executable
18:02:19 code explicitly disclosed in the '227
18:02:22 specification for implementing incremental
18:02:25 substreams, is there, Dr. Levy?
18:02:27 And I'm referring to Paragraph 100
18:02:27 now.
18:03:07 MR. STEIN: Objection.
18:03:11 A. Again, the last sentence in the
18:03:21 paragraph ending at Column 7 at 30 talks about
18:03:24 what operation is required to do this type of
18:03:28 incremental substreams, and that implies the
18:03:29 underlying code.
18:03:32 Q. But there's no explicit disclosure
18:03:34 of executable there, is there?
18:03:35 MR. STEIN: Objection.
18:03:36 A. There -- there is not a listing of
18:03:37 detailed code.
18:03:41 Q. Okay. Last -- lastly, there is no
18:03:44 explicit disclosure of executable code
implementing alternative versions of data units

in the '227 specification? And I'm referring to Paragraph 102 here.

A. Okay. Well, the references -- citations to the '227 patent at Column 4 and at Column 11, again, give a description of the operations to be taken, those operations understood to be implemented by executable code.

Q. But that executable -- there's no explicit disclosure of that executable code in the '227 specification, is there?

A. There are no examples of detailed code listings here.

MR. CHERENSKY: Okay. I have no further questions. Thank you for your time.

THE VIDEOGRAPHER: This concludes today's videotaped deposition. Time is currently 6:05 p.m. This is going to be the end of tape four of four. We're now off the record.

(Time noted: 6:05 p.m.)

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JOHN LEVY Ph.D.

Subscribed and sworn to before me this _____ day of _____, 2009.

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C E R T I F I C A T E

STATE OF NEW YORK)

: ss.

COUNTY OF NEW YORK)

I, NANCY MAHONEY, a Certified Court Reporter, Registered Professional Reporter, Certified LiveNote Reporter, and Notary Public within and for the States of New York and New Jersey, do hereby certify:

That JOHN LEVY Ph.D., the witness whose deposition is hereinbefore set forth, was duly sworn by me and that such deposition is a true record of the testimony given by the witness.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of December 2009.

NANCY MAHONEY, CSR/RPR