IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

IP INNOVATION, L.L.C. and TECHNOLOGY LICENSING CORP.,	)	
Plaintiffs	)	Civil Docket No.
VS.	)	2:07-CV-447-RRR
	)	April 29, 2010
RED HAT, INC. and NOVELL, INC.	)	
Defendants	)	1:00 P.M.

TRANSCRIPT OF JURY TRIAL
BEFORE THE HONORABLE RANDALL R. RADER
UNITED STATES CIRCUIT JUDGE

APPEARANCES:

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(Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

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P R O C E E D I N G S

(Jury in.)

THE COURT: Let's continue. Please be seated.

Q. (By Mr. Gibbons) Good afternoon, Mr. Gray. How are you?

A. I'm fine. Thank you.

Q. Did you get a chance to get some lunch?

A. I did get a bite to eat. Thanks.

Q. Good. Good. That's good to hear.

During your testimony this morning, you talked about servers. Do you remember that, sir?

A. I do.

MR. GIBBONS: Could you pop up that screen, please?

Q. (By Mr. Gibbons) And this is the slide that you were talking to, right?

A. Yes, it was. Yes.

Q. Now, I'd like you to take a look at the bullets here, if you don't mind. And looking at the first bullet, it says: Server farms have no display on site.

Do you see that, sir?

A. I do.

Q. Okay. Which server farms are we talking about?

A. Server farms that I'm familiar with and that I believe that the -- that are generally the way servers are installed.

Q. Well, how many server farms are we talking about here in the U.S.?

A. I don't know that I have a number for that.

Q. Did you look at all of them?

A. No, I didn't look at all the server farms in the U.S.

Q. Well, that's a pretty broad statement, isn't it, sir? Server farms have no display on site; isn't that correct?

A. It's a statement that's intended to mean that there aren't displays associated with the servers in server farms.

Q. Right. Well, you didn't look at all the server

farms, though, did you?

A. As I say, I didn't -- I didn't inspect all the server farms in the United States.

Q. Do you know how many there are? How many server farms there are in the U.S.?

A. No, I don't know how many.

Q. And you certainly didn't look at all of them, correct?

A. That's correct. I did not look at all of them.

Q. So this statement may not be entirely true; is that correct?

A. You know, its intent is to try and explain that server farms that have no displays are not infringing. So I don't know what else to say about that.

Q. Well, I think we all know what its intent is, sir, but it's not entirely true, is it?

A. I don't know if it's true. It may be overstating. It may be an overly broad statement.

Q. Now, you were here for the opening statements, correct, on Monday?

A. I was, yes.

Q. And you heard the Defendants' lawyer tell us that server farms can be big, right?

A. Yes.

Q. And he talked about a server farm which is so

big that it fills Texas Stadium; is that correct?

A. I think I remember that.

Q. Did you look at that server farm?

A. I did not.

Q. Now, let's take a look at the second bullet here. It says: The remote display does not use display objects.

Do you see that?

A. Yes.

Q. Now, we've already established you haven't looked at all the server farms, correct?

A. That's correct.

Q. So this statement is an overstatement as well, isn't it?

A. Remote displays that are arranged in server farms, in my experience, don't use display objects.

Q. Well, your experience is limited, isn't it?

A. I -- sure. I mean, it's limited in some ways.

Q. So there could be some remote displays at server farms or connected to a network at server farms that do have display objects?

A. Lots of things are possible.

Q. Uh-huh. And you never investigated that, did you?

A. Investigated what?

Q. Whether all remote displays do not use display objects when they're connected to server farms.

A. I'm only relating my experience here on this slide.

Q. And, again, your experience is limited, correct?

A. I should also say my understanding as well as my experience, but, yeah.

Q. And that's limited, correct?

A. Sure.

Q. Now, the next bullet says: Remote displays -- strike that -- remote display does not use multiple workspaces for GUI administration.

Do you see that, sir?

A. I do.

Q. Okay. Again, that's a fairly broad overstatement, correct?

A. It's been my experience.

Q. But, again, you haven't done a complete and thorough investigation of all remote displays at all server farms, correct?

A. I don't claim to have done that, no.

Q. Well, that's a statement that appears to say that you did; would you agree?

A. It wasn't the way I wrote it. It wasn't how I

intended.

Q. That's how I'm reading it. Remote display does not use multiple workspaces for GUI administration.

A. I understand what you're saying.

Q. Now, you were here this morning for some testimony from Mr. Rex, who is the Novell corporate representative, correct?

A. I think I missed Mr. Rex's testimony this morning.

Q. Did you miss that?

Okay. Well, are you aware that Novell removed the rotating cube from its SLES product? And you know what the rotating cube is, correct?

A. I do know what the rotating cube is.

And do I know that they removed it from SLES? I wasn't aware one way or the other.

Q. Do you know if they removed the rest of the switching functionality from their SLES product? And by SLES, I mean the server product?

A. I understand.

I don't know.

Q. You never investigated that?

A. I didn't look specifically to see whether they removed all of the workspace switching functionality from the SLES product.

01:09 Q. Well, that's one of the accused products here, correct?
01:09 A. That's correct.
01:09 Q. Okay. Have you used the Novell cube?
01:10 A. I have seen it in action. I don't know that I have ever -- I may have used it. Yeah, I think early on I probably did.
01:10 Q. You're aware that, Fedora 9, which is the Red Hat product, that also has the cube, right?
01:10 A. I was not aware of the Fedora 9 having the cube. I didn't know that.
01:10 Q. Have you used Fedora 9?
01:10 A. I have.
01:10 Q. Okay. You never enabled the desktop effects on Fedora 9?
01:10 A. I don't think that I have ever -- I don't remember using the cube on Fedora 9.
01:10 Q. So you didn't do that investigation as part of your report here today?
01:10 A. It's not part of my report.
01:10 Q. Okay. And if it's true that Fedora 9 also has the cube, if you enable the desktop effects -- well, strike that, because you weren't here for Mr. Rex's testimony, were you?
01:10 A. I was not.

01:10 Q. Okay. Now, sir, if I'm right, you get paid
01:11 $360 an hour; is that true?
01:11 A. I believe that's true.
01:11 Q. That's for your testimony and your work here
01:11 today and while you're in Marshall, correct?
01:11 A. It's for my work on the matter.
01:11 Q. Okay. So the beginning of the matter from when
01:11 you started your opinion on this case through today,
01:11 you've been paid $360 an hour?
01:11 A. Yeah. I don't have any different rate for
01:11 testifying or something. It's all the same rate.
01:11 Q. Okay. Well, for all of your work on this case,
01:11 how much did you or your company bill the Defendants?
01:11 A. I don't know.
01:11 Q. You don't know?
01:11 A. I don't know.
01:11 Q. You never asked?
01:11 A. No. I mean, I don't -- I just don't know.
01:11 Q. Well, you submitted a pretty lengthy opinion, a
01:11 big report?
01:11 A. I submitted a report; I did.
01:11 Q. How many hours have you worked on this case so
01:11 far?
01:11 A. I didn't add it up. I don't know.
01:11 Q. Hundreds?

A. Probably hundreds.
Q. 500?
A. Probably less than that.
Q. So some place less than 500 hours at $360 an hour, correct, sir?
A. It could be considerably less than that. I don't know.
Q. But you don't know how much money you made in this case?
A. No, I don't. I didn't add it up.
Q. Okay. Fair enough.

Thank you very much for your time, sir.

MR. GIBBONS: I pass the witness.

THE COURT: Mr. Lyon?

MR. LYON: Thank you, Your Honor.

REDIRECT EXAMINATION

BY MR. LYON:

Q. Let's just start, I guess, working backwards to make it easier to follow.

So, Mr. Gray, is your pay in any way associated with the outcome of this case?
A. No, none whatsoever.
Q. Just being paid for the time that you're actually investing working on the case?
A. That's correct.

01:12 Q. Okay. Now, Mr. Gibbons also talked to you about the cube.

Does the cube have any effect on your infringement opinions?

A. No, it does not.

Q. And why not?

A. The cube is just an effect. It doesn't really have much to do with workspace switching or any of the matters that are at issue in this case.

Q. It's just an animation, essentially?

A. Yes, it's an animation essentially. It's an effect, yeah.

Q. There are other ways to trigger switching in workspaces?

A. Certainly, like some I outlined this morning.

Q. Now, also going back to the slide that Mr. Gibbons put up on servers, do you understand who has the burden of proof on infringement in this case?

A. I do.

Q. Who does have the burden of proof of infringement?

A. I think the Plaintiffs.

Q. Have you seen any evidence from Plaintiffs whatsoever on how many server farms actually use displays or actually use displays in a real context in

all the different points that Mr. Gibbons went through with you?

A. No, I have not.

Q. Now, let's talk a little bit about flexibility and continuity. I think you recall Mr. Gibbons talking to you about those concepts?

A. I do.

Q. Have you ever said that those exact words were in the claims of the patents?

A. No, I have not.

Q. So what's your point with the flexibility and continuity?

A. I think the terms flexibility and continuity are really concepts in the way of thinking about what the patents mean. That's the extent of it. It's a way of thinking about it.

Q. As part of your work here, do you have an obligation to help the jury understand the patents?

A. Sure. That's where I think the concept is valuable. It's helpful for us to understand it in language that we can all cope with.

Q. In your experience, do normal people say words like perceptible is the same?

A. Probably not very often.

Q. Display object means?

A. Display object means doesn't generally come up in normal conversation.

Q. So do you sometimes have to use other concepts to convey what is being meant by words like that?

A. Sure.

Q. Now, let's look, if we could, at -- well, let me -- you were here for day one of the testimony, correct, Mr. Gray?

A. I was.

Q. You heard Dr. Henderson testify, correct?

A. I did.

Q. Do you recall Dr. Henderson testifying about flexibility and continuity in his patents?

A. I do.

MR. LYON: If we could, put up day one, Page 136 of the transcript.

Q. (By Mr. Lyon) And as we note, at Lines 4 and 6 of the transcript, the question is to Dr. Henderson: So I have the flexibility to change in one window and leave it the same in the other windows.

ANSWER: Yes.

And then farther down: And there's --

MR. LYON: Well, can we do the question and answer before that so that it's complete? It's going to be a long one, isn't it?

Q. (By Mr. Lyon) QUESTION: Right. And the content is continuous, right?

I didn't say that well.

QUESTION: The content stays constant between the two windows, so when I want to zoom my work in the second workspace, Figure 1B, I can go ahead and do that. I don't have to recreate everything, right?

ANSWER: Once you move, then it's the same content; that's right.

QUESTION: Right. Okay.

ANSWER: And there's the continuity of when you come back to 1A, you'll discover the content has continued.

Do you recall that testimony?

A. I do.

Q. So that was from the named inventor himself talking about flexibility and continuity, right?

A. Yes, it was.

Q. Now, do you recall Mr. Gibbons talking to you about the calendar program and sticky windows and ordinary windows and whether one was -- whether the calendar was sticky or ordinary.

Do you recall all that?

A. I do.

Q. Now, you would agree with me that in the

context of a sticky window, the one where there's only one display object, that you would agree that that is perceptible to the same between the two workspaces, right?

A. That's correct.

Q. Because it is the same?

A. It's the same window, same display object.

Q. All right. Now, what about ordinary windows; are they perceptible as the same?

A. Without being able to continue the work, no.

Q. And you can't -- in the calendar program -- now, have you looked at the calendar program as part of your analysis here?

A. Yes, I have.

Q. Are you able to continue your work in the calendar program under all circumstances?

A. No.

Q. Now, let me turn to --

MR. LYON: Can we have Slide 31 of Mr. Gray's presentation up here?

Q. (By Mr. Lyon) And with regard to ordinary windows like the programs that Mr. Gibbons was showing you, there's another aspect to this, isn't there? There's -- I believe he talked about the display object.

Do you recall that?

A. I did.
Q. And is it your opinion that the patent requires one or multiple display objects?
A. Multiple display objects.
Q. So it's your opinion --
A. I'm sorry. The patent requires a single display object means.
Q. And I think I confused you. Now, with respect to the products, how many display objects means would fit in with the products?
A. Again, they have multiple display objects.
Q. All right.
MR. LYON: And so if we go to Slide -- this is -- I'm sorry. I have the wrong slide up there. I told you -- I was looking at Slide -- I meant to look at Slide 29.
Q. (By Mr. Lyon) All right. So this is the display object means.
I apologize. I was directing you to the wrong patent. I apologize.
A. Okay.
Q. All right. And so your answers were with respect to this patent claim?
A. Correct.
Q. And I apologize for any confusion.

01:18 MR. LYON: All right. Now, can we go back to 31, please.

Q. (By Mr. Lyons) Now, this one has display object data as opposed to display object means. Do you recall that?

A. Yes, I do recall that.

Q. Do you recall Mr. Gibbons talking to you about why there was -- where there was a requirement for different display object data?

Do you recall those questions?

A. Yes. He was asking if the words were there or something like that.

Q. Does that matter at all to your opinion, whether there's different object data?

A. Yes.

Q. It's because of the different object data in the products, correct?

A. That's correct.

Q. But the claim requires what?

A. Display object data the processor can use to generate first and second display objects.

Q. And that's one, right?

A. That's one.

Q. Not different?

A. That's correct.

Q. One?
A. Correct.
Q. Okay. This argument applies to all the claims, correct?
A. That's correct.
Q. Across all ordinary windows?
A. That's correct.
Q. Okay. Let me just quickly ask you a question. You heard something about stacking of sticky windows.
Do you recall those questions?
A. Yes.
Q. And how some could be on top of others. I believe you called it Z-ordering?
A. I did refer to it as Z-ordering.
Q. Can you explain a little bit about what you mean by Z-ordering?
A. Sure. It's a three-dimensional concept, so that's kind of hard to think about, but Z-ordering, if you look at a screen, it's going to have an X coordinate, a Y coordinate, and then the third dimension is the Z coordinate.
So Z-ordering is just the stack of the windows along that Z axis. I don't know if that's helpful or not, but you asked me, and that's the explanation.

Q. So can you give sort of a real world example of what's meant by stacking like that?

A. For example, in -- some of the slides showed windows overlapping each other, and so the overlapping of the windows would be the Z-ordering. It's the ordering along the logical Z axis.

Q. Does that have any effect on whether we have one display object or multiple display objects with respect to sticky windows?

A. No, it does not.

Q. And why not?

A. It's still just one display object -- excuse me -- that wasn't very clear.

The sticky window, wherever it is in that stack, is still just the single object. Think of it like a deck of cards. I've got the ace of spades. If the ace of spades is on top or on the bottom or in the middle of the cards, it's still just one ace of spades, unless someone's cheating.

But, I mean, there's only one ace of spades, wherever it is, it's in the stack of the cards.

MR. LYON: I have no further questions.

MR. GIBBONS: Briefly, Your Honor, if I may.

THE COURT: You may, Mr. Gibbons.

02:44 RECROSS-EXAMINATION

BY MR. GIBBONS:

Q. Now, there's some questions that your lawyer just asked you on redirect regarding the servers and the burden.

And you understand that one -- or two of the models that our damage expert is calculating numbers are on the Fedora and openSUSE products, correct?

Were you here for his testimony?

A. I was not here for his testimony, and I don't believe I've read his latest iteration of the reports.

Q. Well, that's one part of his opinion. Other than your one experimental use of Fedora, no servers, in your opinion or in your knowledge, use Fedora or openSUSE, correct?

A. I'm not aware of any sitting here today.

Q. Now, you understand that patent claims are not normal language? It's pretty obvious, correct?

A. They're English but, yeah. A peculiar structure to the language, yeah.

Q. And so your words or even Dr. Henderson's words can't alter the words of the claim, correct?

A. I think that's correct.

Q. Okay. And that's why we have the Judge to construe what the words of the claim mean, correct?

A. I agree, the Court does that.

MR. GIBBONS: Nothing further, Your Honor.

THE COURT: Thank you, Mr. Gibbons.

Mr. Lyon?

MR. LYON: Nothing further.

THE COURT: You may step down.

THE WITNESS: Thank you.

MR. LYON: At this point, the Defense would like to call Dr. David Wilson.

THE CLERK: Please raise your right hand.

(Witness sworn.)

MR. LYON: Your Honor, I have a couple of witness binders. May I give one to the witness and to you as well just to speed things up?

THE COURT: Yes, please.

DAVID WILSON, Ph.D., DEFENDANTS' WITNESS, SWORN

DIRECT EXAMINATION

BY MR. LYON:

Q. Good afternoon.

A. Good afternoon.

Q. Would you please introduce yourself to the jury.

A. My name is David Wilson.

Q. What do you currently do for a living?

A. I have my own consulting and software company

in San Jose, California.

Q. Dr. Wilson, could you speak up a little bit. It sounds like the jurors are having a hard time. Maybe if you speak more into the mic.

A. I'm self-employed in San Jose, California, and I really have three different jobs that my company does.

One, I do consulting and sometimes expert witness work. Two, I teach training classes on advanced computer programming. And the fun part of my job is I build apps for the iPhone and for the new Apple iPad. So I spend as much time as I can writing apps.

Q. What types of apps?

A. The latest one is learning about how to be a better photographer. I've also written apps on a math program for kids, two real estate programs, and a deadline program to manage deadlines, because there are --

Q. Can I get a copy of that one?

A. -- too many deadlines these days.

Q. So what are you here to talk to the jury about?

A. Talk about my investigations on -- of the patents being asserted and investigations of prior art that might potentially have an impact on the patents.

Q. Now, we've all been staring at some things on a table out here. Can you tell us what we're actually

looking at?

A. Well, I have two examples of prior art where I actually assembled old computer software and hardware and managed to find sets of things that represented prior art to the time the patent was filed.

And I will show you those in operation, which is a lot more fun than just hearing me talk about them.

Q. Now, are you an employee of any of the parties in this case?

A. No, I'm not.

Q. But you were retained by the Defendants?

A. Yes.

Q. And how much are you being paid?

A. $275 per hour.

Q. Is your pay in any way related to the outcome of the case?

A. No, it's not.

Q. Can you briefly summarize your educational background for the jury?

A. Well, I have a bachelor of science degree in engineering and physics from Cornell University, and then I discovered it didn't snow in California, so I moved to Palo Alto and went to Stanford University and got a master's and Ph.D. in applied physics at Stanford.

01:25 Q. And so what computer languages do you have
01:25 experience programming in?
01:26 A. Well, I won't go through the whole list. My
01:26 first job where I was paid to do computer programming
01:26 was for IBM in 1966 using what they called for Fortran
01:26 assembly language on a mainframe.
01:26 And I've shrunk my programming down over
01:26 the years from the room-filling mainframe down to iPhone
01:26 that fits in your pocket. I programmed in Fortran,
01:26 Paschal, C, C++, Smalltalk, Objective-C, various visual
01:26 programming languages. And, in fact, my son and I
01:26 invented a kind of dataflow visual programming language
01:26 for one product we shipped.
01:26 Q. What does that mean, you invented a visual
01:26 dataflow programming language?
01:26 A. Well, we invented a language -- a new kind of a
01:26 spreadsheet where you actually -- it was all drag and
01:26 drop and you wired components up together, and it
01:26 represented a way to program the spreadsheet rather than
01:26 typing in formulas like you do in Excel. It's very
01:26 cool.
01:26 Q. You mentioned you teach classes. What kind of
01:26 classes do you teach?
01:27 A. Well, starting in 1984, the year the Macintosh
01:27 was introduced, I started -- I was contracted by Apple

Computer to put together their first general purpose programming classes on how to program the Macintosh. So I spent over ten years teaching Apple developers how to write programs for the Mac.

Since then, I've also taught database programming and applet programming at Boeing. I've taught -- I worked for Sun Microsystems, who invented Java, to teach advanced Java classes.

But, of course, Sun Microsystems doesn't exist anymore. They were swallowed by Oracle. I worked at Portal Software in Cupertino, which made an internet-billing system, and now they've been swallowed by Oracle.

In fact, I realized when thinking about this that my son, Steve, who worked at Sun has now been swallowed by Oracle, and he's an employee at Oracle now.

MR. LYON: At this point, Your Honor, I'd like to move Dr. Wilson in as an expert witness.

MR. HILL: No objection, Your Honor.

THE COURT: You may proceed.

MR. LYON: Thank you.

Q. (By Mr. Lyon) So now, Dr. Wilson, were you asked to -- I'm sorry.

THE COURT: Let me explain to the jury.

When you become an expert, you can offer

opinions testimony, not just factual testimony. That's what we've done each time. There have been several expert witnesses, and they can offer an expert opinion.

Please proceed.

MR. LYON: Thank you very much, Your Honor.

Q. (By Mr. Lyon) Were you asked to perform any work in connection with this case?

A. Yes, I was.

Q. What were you asked to do?

A. I was asked to look at the patents that are at issue, analyze them, and then analyze a wide range of prior art to see how they related to the patents.

Q. And if we could --

MR. LYON: Well, why don't we get Slide 1 up, please?

Q. (By Mr. Lyon) Can you explain a little bit about what you did in order to perform this work?

A. Well, to analyze the patents, you really -- among other things, you look at the prosecution history of the patents, which means the interaction that the applicants had with the Patent Examiners themselves as they went through the process of eventually getting the patents issued.

When the patents finally issue, all three

patents at issue have a common specification, which is kind of a bonus, if you're studying them, because you don't have to read the specification three times. You just read it once.

The difference in the three patents are in the claims, so then, after you study the specification, your job is to study the claims, analyze the claims, and interpret them.

But as we've discussed this morning already -- so you've heard this before -- I don't get to make up what the terms mean. I can't say, just because I'm an expert, a display object is a chicken. I have to use the Court's definition of display object. I can't make up what a workspace is. I have to use the Court's definition of workspace.

And I can interpret the claims in the context of the Court's definition. And that's my understanding -- and I'm not an attorney, but that's my understanding of how to interpret the claims. And I understand that the Court will actually give you instructions on how to interpret the claims as we go along.

Q. So now as part of this case, did you have an opportunity to do some research and investigation into user interfaces that existed prior to the patents being

filed?

A. Yes, quite a lot of research.

Q. Okay.

MR. LYON: And if we take a look at Slide 2.

Q. (By Mr. Lyon) Does this summarize the types of research that you did?

A. Yes. First, because I've been around since the beginning of the personal computer revolution, I had a lot of personal experience with products, including some of the products on the table.

I also reviewed lots of publications and user manuals and publications in learned journals and publications in popular magazines. And then I obtained old software and hardware, picking and choosing the parts that fit together that I knew were the correct dates and the correct versions for what we're interested in.

And then I started getting them actually to work and testing them and taking screen shots and figuring out how they worked.

Q. Now, as part of your work in this case, have you formed any opinions?

A. Yes.

Q. And what opinions have you formed?

A. Well, I found a number of prior art systems that anticipate each of the claim elements and render the claims invalid.

Q. When you said anticipate, what do you mean by that?

A. Well, the claim -- elements of a claim are anticipated, if, in a prior art system, you find every feature described in the elements of the claim based on the Court's claim construction, how to interpret the claims.

And those features may be explicitly there. If the claim calls for a display object, you look on the screen and say, okay, I have a display object. If the claims call for some data structure underneath the display object, that may be -- it's not explicitly something you can see on the screen, but it's inherently there. It has to be there for that thing that you see on the screen to exist.

Q. Now, which prior art systems did you investigate?

A. Well, I have a long list of them, so I put together a timeline just to summarize them before we dive into detail on three of them.

MR. LYON: Can we bring the timeline up?

A. Now, I have to make a comment here that struck

me as funny this morning.

These are really about graphical user interfaces for the most part, and you've heard them described as GUIs. And, in fact, this morning's discussion went into some detail about GUI trash cans and GUI sticky windows. And I thought if I told my wife that I spent the whole day working with GUI trash cans and GUI sticky windows, she'd first say, ooh, that's gross, and then she'd say be sure to wash your hands before you come in the house.

But that's the way we talk about it. So I'm going to talk about GUIs, and I'm going to show you some trash cans and I'm going to show you some windows.

Q. All right. Let's start over on the left-hand side. What period of time is this timeline representing?

A. This covers basically the two decades leading up to the time that the patent was actually filed. And the reason I went back two decades is there were significant things that happened in the world of computing starting all the way back in 1968.

Q. Let's start in the far left. Why don't you tell us what you're showing there.

A. Well, fortunately, I think we -- I'm going to try to advance these slides so -- I guess it's taken

01:33 care of for me.

01:33 The first great demonstration of what's come to be personal computer capabilities was done by Doug Engelbart, a researcher at Stanford Research Institute. And at least in 1968, it was called Stanford Research Institute. It was part of Stanford. When I worked there in the '70s, it was called SRI International, but it was the same place.

01:33 That is not Doug Engelbart's picture, but he was doing a demo showing the future of computing. And it's been called in publications the mother of all demos, the greatest single demo ever done, probably better than the one you're going to see today.

01:34 Q. Why was it called the mother of all demos?

01:34 A. What Doug Engelbart and his team did was invent the mouse and they showed the mouse in operation. They showed live video-conferencing, which is still a relatively new feature for many of us even today. They showed collaborative text.

01:34 He basically came up with the first place where I've seen windows talked about. And what Engelbart said was a window back in 1968 was just a rectangular area of the screen that contains a certain kind of information. So he's showing a video window on top. He's showing a text window on the bottom.

Now, these windows weren't as fancy as the windows that came later in the Macintosh or today's computers, but they still represented windows, and they represent -- in terms of the patent, these represented display objects.

Q. All right. How about the next entry on the timeline, what's that?

A. Well, now we're going to jump ahead to almost ten years to where people had been working on all these ideas and doing research, and lots of different universities and research labs were now doing developments that we're starting to try to bring some of this eventually to where we get it.

So if you could -- I picked as an example -- there were many different research projects going on. One of them was Smalltalk -- called Smalltalk 76, where 76 represented some year in the development, 1976, and this was a Xerox PARC project. And, again, PARC stands Palo Alto Research Center.

And since I lived in Palo Alto, I used to sometimes ride my bicycle past PARC. Later on, I started going to seminars there. And later on, I actually started to teach Smalltalk programming for a PARC spinoff called PARC Place.

So PARC and Smalltalk had -- by 1977, they

already had multiple virtual workspaces. They had a graphical user interface with menus and buttons, and I talk about bit map graphics, which Engelbart's system had.

What I mean by bit map graphics is every little pixel on the screen could be turned on or off independently, which means you can do things like show graphics. I'll show you some later systems that didn't have bit map graphics and you could only see text, but this was a system that had graphics and text.

Q. How about the next entry?

A. So the next entry is one of the very first personal computers ever sold.

THE COURT: Can I ask, how many pixels was on that last screen?

THE WITNESS: I'm going to guess -- I don't know. I'm going to guess about 800-by-600, but I'm only guessing. I never thought to look.

THE COURT: Excuse me.

A. When I worked with Smalltalk in later years, it could handle different pixel sizes depending on what your graphics card supported.

Okay. So let me jump ahead to this system. This was one of the very first personal computers sold, the Commodore Pet, and I put in

asterisks next to it because I bought the Commodore Pet the first month it was on sale. And the good news is, it was a personal computer.

THE WITNESS: Let me try the laser pointer.

THE COURT: Top button.

THE WITNESS: I don't see red. There it is. Okay.

A. That thing is a cassette tape deck. That's how you loaded programs in. It was a nightmare. If you loaded a game, it could take 15 minutes to load the game in.

Now, on the other hand, you could do games with character graphics. And my son, Steve, and I thought this was way cool at the time, but it wasn't a great leap forward in graphical user interfaces. It didn't really have one. It didn't have a mouse.

Now, as we go into 1980, the Three Rivers PERQ graphical workstation is an example of the great leaps forward that started in the '80s. Now we had things that started to look modern. We had sophisticated graphical user interfaces with workspaces with lots of display objects. We had calculators; we had clocks.

Again, it doesn't contain everything that

we're talking about in the patent, but we're moving rapidly toward that at this point. So starting in the '80s, things really -- there was an explosion of innovation, creativity, and new systems, including systems as we'll see that were sold to ordinary people.

Q. (By Mr. Lyon) What comes next?

A. Well, we're going to move along to the most important for many people, the personal computer ever introduced, which is the IBM PC. So the IBM PC came out on a certain date in August 1981. And the day it came out, I went and picked mine up, put my Commodore Pet in the closet and eventually sold it to a neighbor, and said, all right, now I've got a computer with floppy disk drives. That was a great leap forward.

But you notice I said it doesn't have a GUI, didn't have a mouse. It used the DOS command line, which means you had to type -- I don't really want to go there yet.

You had to type commands on this line, and you had to memorize them. And the funny thing about command lines is real nerds still love command lines. A lot of database administrators and a lot of server administrators who run big server systems feel like they can type commands faster than they can use a mouse. And they think mice and GUIs are for sissies. Real men use

01:39 the command line.

01:39 And I know a lot of people that still feel that way. I'm not one of them.

01:39 Q. And, again, just to remind everyone, so when you say GUI, you're referring to a graphic interface, right?

01:39 A. Yes.

01:39 Q. As opposed to this text interface?

01:40 A. Right. And so this text interface is not a GUI. It didn't have a mouse. You just had to remember what to type. To help people remember what to type, I wrote a little book called the IBM PC Disk Guide and had it published by McGraw-Hill, because it was the kind of thing where you just couldn't quite remember all of what the exotic commands were.

01:40 Now, the GUI systems brought things like menus where you didn't have people to memorize so much, and from now on, that's what we'll be talking about. But I mention this because of the fact there's so many systems today, particularly servers, where the administrators feel like the macho way to do it is to use the command line, and they think they can work faster using a command line. And that's often what they do.

01:40 Q. Let's go to the next entry in your timeline.

A. So now we're going to go to one of the pieces of prior art I'm going to discuss in some detail. This is called the Chan Room System, and Patrick Chan was a grad student at the University of Waterloo. And I'm going to go into some detail on this.

But one of the things that was interesting about this, in prosecuting one of the patents at issue in this case, the applicant said to the Patent Office, the Chan System is especially relevant. And I really think it is, and I'll show you why as we go along.

It has multiple virtual workspaces; it has switching objects for switching from one workspace to another; each workspace contains multiple display objects. You can have the flexibility to move display objects around between workspaces, and you can have the continuity to start a task with a display object in one workspace, and then go to a tool that's perceptible as the same tool in the next workspace, which is a lot of words.

I will show you -- I don't have the running system, but I'll show you an animation of what it did based on the documentation I have.

Q. All right. Now, how about the next entry?

A. The next entry is the thing that changed my career. When the Macintosh came out in 1984, it really

had a graphical user interface with a mouse, so I took my IBM PC, pushed it aside, and bought a Macintosh. And I said to my son, Steve, wouldn't you like a computer? Here's the IBM PC. And he said, no, I don't like that. I want a Macintosh.

And eventually, we all had them.

A Macintosh brought a sophisticated workspace with lots of display elements inside a bit map GUI. And I'll go through this in some detail, but I'm going to show you a later version of it, because that's the most relevant. And I'm going to demonstrate live a later modification of it.

Q. Okay. Let's go to the next entry then.

A. Now we get to the one that's going to be one of our demos, this Switcher Construction Kit. And Andy Hertzfeld, one of the Apple engineers who had designed the original OS and knew how the operating system worked in detail, wrote an add-on called Switcher that Apple started selling in 1985.

And it allowed you to keep multiple virtual workspaces in memory and switch back and forth between them. And it's fun even today to play with them, so I'll give you a live demo of that.

Q. And how about the next one?

A. Well, this is an example of trying to bring the

poor IBM PC people into the game. So Digital Research introduced something called GEM, a graphical environment manager, which brought a Macintosh-like display to the IBM PC. So it would now have bit map graphics. You could have windows and menus, but we're not going to be discussing it in detail.

I do remember in, I think, late '85 going to an IBM PC user group and showing them GEM, and most of them thought it was quite amazing, because they hadn't moved into this world yet.

But by this time, you can see that we've gone from Doug Engelbart with just kind of here's some text and here's some video to very fancy user interfaces with lots of display objects. And as you'll see, we'll have multiple workspaces and switching and lots of other things going on.

Q. And the next one?

A. Another system -- the other system I will demonstrate live is the Commodore Amiga Workbench, and for some reason, I let down the economy. I didn't actually get rid of my Mac and buy a Commodore, but it was a very advanced system in terms of its sound and speech synthesis and graphics.

And I'll demonstrate how that has multiple workspaces and how you can easily switch between

workspaces and manipulate and share display objects.

Q. And then finally, what do we come to at the end?

A. So by this time, these products have been on the market and in use for quite some time in some cases, and now we get to March '87 when the first of the patent applications was filed.

So the things I've shown you before all came prior to the patent application being filed and some of them are just part of the development along the way. Some of them represent what I believe to really be anticipatory prior art.

Q. So can you just summarize, then, state of the art at the time the patents were filed?

A. Well, there were systems out there, well-known systems that had multiple virtual workstations -- workplaces (sic). They had -- workspaces -- they had switching display objects that allowed you to switch back and forth between them.

They had shared display objects where you could have a display object that you could put in one location in one workspace, and what appeared to be the same tool in another workspace in a different location. And you could start a task. They had the continuity to allow you to start a task for the tool in one workspace

and then go to the other workspace and continue operating on that tool.

So they had the flexibility of moving things around. They had the continuity of continuing your work.

Q. Now, in your opinion, what new development did the patents that we're talking about here today bring to the state of the technology?

A. By the time we got to March of '87, there was nothing new in the patents. Those ideas had already been in these existing systems.

Q. We've been talking a lot about some of the terms here. Are there particular terms you think are useful to explore, given the Court's claim construction for purposes of validity here?

A. Yes. Originally -- and, again, I put this slide up to mention that we have to interpret the claims in terms of the Court's claim construction. I can't just say I'm an expert, trust me, this is what the word means. I have to work with what the Court said.

There are a lot of terms that are actually important, and in Dr. Gray's testimony, he actually covered a number of these. But I want to at least mention two of them again, and I hate to repeat myself, but I do want to do that.

01:47 MR. LYON: Can you go to Slide 22, please?
01:47 A. Well, this one is an easy one. I'm not going to focus on it.
01:47 The systems need a display, but, of course, there has been some controversy this morning about whether servers and server farms have a display or not. I'm just saying that a display is required to be one of the elements of the patent.
01:47 Display object is a key term, and notice the definition of display object is quite broad. A visually distinguishable display feature is the first part.
01:47 So, for example, I'll show you on the Apple Macintosh there's an Apple icon in the upper left-hand corner. That Apple icon is a display object. Now the other part of the definition is a set of features which is coherent in the sense of sticking together in the display.
01:48 So if I go, for example, to the display object, the text editing window in the patent, it's a display object because it's a set of features, but it better stick together, because I'd be very disturbed if I dragged this window down here and the letters all fell out.
01:48 And I, in fact, had this happen on

Macintosh recently on one of these old Macs when I ran the wrong version of the software. I ended up, when I tried to move a window, pieces got left behind. And if the programs break, that happens, but that's not the kind of display object we want.

So if I have a clock icon here and I move the clock, I want the hands to go with me. So that's a display object.

Menus are a display object. Icons are a display object. Windows themselves are display objects.

MR. LYON: How about if we go to Slide 26, please.

A. So workspace is obviously the term we probably heard the most today. So what's workspace?

It's a display system entity. Well, that means that we can see it on the screen. It's displayed in our display system. It includes a collection of display objects. That's, again, a very broad definition.

That means that what I have shown in the patent, for example, Figure 1A, all of those three items inside are display objects, and the whole outer edge of the display represents the workspace. So that's one workspace and the patent says that.

In the Amiga system, I'll show you how

the -- one of the Amiga Workbench programs running, provides a workspace full of display objects. In the Chan system, I'll show you how one of the Rooms in the Chan system represents a workspace. And when you go to another Room, you'll be going to another workspace.

And in the Macintosh, I'll show you a big enough space so you can actually see it, and do a live display, how all the different graphics, icons, menu bars, and menus, et cetera represent display objects, and one of those applications is a workspace.

Q. (By Mr. Lyon) Now, you mentioned that you believe that the patent claims are anticipated. Which prior art systems do you think anticipate the claims at issue?

A. In fact, the three shown here I'm going to discuss in more detail. The Amiga system, I'll give you a live demo of that and tell you why I think it anticipates the claims.

Under the -- but the Amiga system is special. It anticipates the claims under the interpretation of the claims that Dr. Zimmerman has given.

The Chan Room system anticipates the claims under my interpretation and Dr. Zimmerman's, and so does the Switcher system. So I'll show you an

animation of the Chan Room system or a simulation of it. I'll show you the Amiga live and Switcher live, so you can make up your own minds.

Q. Let's start with Switcher. Can you describe what Switcher is?

A. Switcher, again, was an add-on product that was added on to the basic Macintosh system in 1985. And its purpose, as the name implies, was to allow you to switch from one workspace to another with a simple click of a mouse or typing a key on the keyboard.

And it was really very sophisticated programming to do that, and it was probably only done because Andy Hertzfeld wrote a lot of the original Macintosh system, so he knew how it worked.

Q. How did you first become familiar with Switcher?

A. Well, I was working at Apple, basically full-time teaching Macintosh programming. I wasn't an employee; I was a contractor, but I was teaching Macintosh programming on the Apple campus, and I was out there constantly working with the engineers and engineering support people and trainers. So I saw Switcher as soon as it became public.

Now, it had a long, varied history, because Andy kind of wrote it for himself first and then

eventually Apple adopted it, and it became part of the Apple official products.

Q. When did you first begin using it?

A. I suspect that I probably began using it in January '86 when I got the Mac Plus, but my original 128K Mac didn't have enough memory to run Switcher, so I needed the next generation Mac so I had enough memory.

And being a good consumer, as soon as I could buy one, I went out and bought one.

MR. LYON: If we can have Defendants' Exhibit 577 up on the screen, please.

Can we rotate that just so it's easy -- there we go.

Q. (By Mr. Lyon) Do you recognize this exhibit, Dr. Wilson?

A. Now that we've rotated it, yes.

This is the user manual that Apple shipped for the Switcher Construction Kit, as it was called. None of us ever called it a construction kit. We just called it Switcher.

MR. LYON: And if we go to, I think, it's Page 2. Well, maybe not. Keep going. It's not that page.

I think that's it. Can you turn this around?

A. This is what's called anticipating a figure on the screen.

MR. LYON: Back up a little bit to the page you had just before this. And then the bottom, can you flip it again and update that?

Q. (By Mr. Lyon) Okay. And we see a copyright date down there. What is that date?

A. Well, that says copyright 1986. The version of Switcher that I'm going to show you has a menu item you can bring up to find the version, and the version I'll show you is Version 4.4 shipped in 1985.

Q. And if you --

MR. LYON: Now if we go to -- I guess it will be Page 21761 of this -- of this exhibit.

Two more pages. There we go. Can we blow that figure up, please, and rotate it?

Q. (By Mr. Lyon) Okay. Can you use this figure to just explain briefly what Switcher did and how it worked?

A. Right. What Switcher was doing was kind of allowing you to load up to four different programs. It represented four different workspaces and switch between them. And this was kind of like a square dance where you circled around and you go from the first one to the second to the third to the fourth and back to the first.

But I don't want to pretend that I go to square dances, because I don't. I went to one when I was a kid and when I saw this yesterday, it made me think of it, but I haven't been to one since. And I was a kid a long time ago.

MR. LYON: Do we have the floppy disks?

THE WITNESS: Oh, they're back in the back of the room.

MR. LYON: Can someone go --

THE WITNESS: They're in my green -- I forgot to bring them up.

MR. LYON: Your Honor, may I approach the witness?

THE COURT: You may.

Q. (By Mr. Lyon) Could you identify the Macintosh switcher disk that's in there?

A. This is the disk I'm going to use for the live demonstration.

MR. LYON: Just for the record, this will be substituted in for a DVD that we produced as software already as DX721. We'll substitute in the floppy. I think that was by agreement?

MR. GASEY: We have no problem with that substitution, Your Honor.

THE COURT: Thank you.

01:55 Q. (By Mr. Lyon) What software is on that floppy disk?

01:55 A. Well, it has, first, the Macintosh operating system that was appropriate for the 1985 because you need that to actually boot up the machine and do anything. And then it has a system file that's part of that boot-up process, and the system file contains things that are needed by the various applications, and the things that most of us cared about that were in there were all the little desk accessories I'm going to show you and the fonts.

01:56 So the Macintosh was one of the first systems to have different fonts that you could use. So the fonts that were available are in the system file on this disk.

01:56 Then I added switcher, and I wanted to make sure I got a 1985 version of switcher, so I contacted a former Apple vice-president, Dr. Patel, and said: Do you have a version such and such of switcher? I think it's 4.4. And he did have it, so he gave me a copy of it. And then I put on MacPaint and MacWrite from that same time period.

01:56 Dr. Patel and I both have a large stack of floppy disks of various versions of Mac software, but I wanted to pick versions that were all truly from 1985,

so I assembled the disks that had the right pieces.

Q. And how do you know the software that's on that disk is switcher and from that time period?

A. Well, there are a number of ways to determine what it is. First, of course, you start by just the software has this software dialogues you can bring up that will show copyright notices and version numbers and dates, and I can show you those.

Number two, we've looked at the switcher user manual, for example, and you'll see that everything that I show on the screen looks exactly as was shown in the switcher user manual for the screen shots that they did show.

The user manual didn't show you everything I'm going to show you, but what I -- what I do see in the manual, I see the same thing on the screen.

Further, we have other documents about how MacPaint should look and how MacWrite should look, and, of course, I owned MacPaint and MacWrite and switcher, and I remember how they looked and how they work, and the other thing is a little more technical.

If you think of open-source software at one end of the spectrum, Apple is at the other end of the spectrum. They're not open source, they don't ship their source code, and they hardwire their hardware and

01:58 software together because they were not the slightest
01:58 bit interested in having you run Macintosh stuff on a
01:58 PC.
01:58 So what happens when you boot a Macintosh
01:58 is it starts by going to code that's burned into ROM on
01:58 the motherboard, and that contains a lot of the library
01:58 routines we call the tool box, and it contains hardware
01:58 drivers for the mouse and the keyboard.
01:58 And if you were to try to substitute, say,
01:58 a different year's system software that this ROM didn't
01:59 know about, it would just crash, and there are three
01:59 kinds of crashes, and the worst kind of crash is when it
01:59 can't boot, and it comes up with something called the
01:59 Sad Mic -- Sad Mac icon, and it shows a very sad face
01:59 and what looks likes curse words underneath.
01:59 Now, the modern version of that in Mac is
01:59 you get something called a kernel panic, and it comes up
01:59 with an error message in about 12 language. The modern
01:59 version of that in windows is called the blue screen of
01:59 death, BSOD.
01:59 Q. All right. So, now, we have a computer -- a
01:59 Macintosh computer in the courtroom, correct?
01:59 A. Yes.
01:59 Q. What type of computer is that?
01:59 A. That's a Mac 512K. That was the second version

of Mac released. The 128K Mac in 1984 only had 128,000 bytes of RAM, which means it didn't have room to fit all -- multiple virtual -- multiple programs into memory at the same time.

And, in fact, Bill Atkinson, who wrote MacPaint, told me that to fit MacPaint originally into the Macintosh memory, he had to do obscene nasty programming tricks, like writing self-modifying code to even make it fit at all.

The Mac 512K had four times as much memory, so not only could you fit MacPaint in, you could put other programs in addition. They'd all fit into memory. You could swap back and forth.

Q. And when did the Mac 512K come out?

A. That came out in 1985.

Q. How were you able to obtain the old computer?

A. We -- I have a number of old Macintoshes at home, but I didn't have one from 1985. So I looked on eBay, found one that was currently being bid on, and, frankly, I asked these guys how much could I bid? And they said, $1,000. So I bid 1,000, but it only cost 300 to get it, so I only paid 300 to get it.

Q. Thank you. How did you -- how did you know this is a Macintosh and the software for the time frame? I guess, is it just the interaction?

A. Well, again, the interaction, what's on the screen, my memory, again, if you took a later version of my Macintosh, it didn't even have the same connector for the keyboard or the same connector for the mouse.

So I -- I tried using a different mouse and keyboard at one point, and I couldn't connect them up. It was all very hardwired for the Mac 512K.

Q. Now, let's turn to your opinion that these claims are invalidated by the Macintosh switcher program. What -- on what do you base that opinion?

A. Well, again, as I'll show, the ability to have multiple virtual workspaces, each containing a set of display objects, having a switcher display object that allows you to switch from one workspace to another, being able to share display objects between workspaces, so, for example, I could open up a clock or a notepad in one workspace, then open a clock and notepad in another workspace but put them in different locations and even in some cases different window sizes and then switch back and forth and have the flexibility to have all these different tools in use and the continuity to be able to start using a tool in one workspace and continue and use it in another workspace. And all those elements of the claims were found in switcher.

MR. LYON: At this time, Your Honor, would

it be all right if the witness were to step down and demonstrate the computer?

MR. HILL: No objection, Your Honor.

THE COURT: Thank you. Dr. Wilson, would you please --

THE WITNESS: If anything goes wrong with the demo, I'll show --

THE COURT: You have to speak in a manner that the record can pick up.

THE WITNESS: Oh, okay.

THE COURT: So you need to take that. Repeat what you just said to the jury, please, so that she can record it. Dr. Wilson, will you tell her right now what you said to the jury a second ago when you were walking across?

THE WITNESS: I said: If anything goes wrong with the demo, I'll show you -- describe two other ways the Macintosh can crash.

THE COURT: Now, we'll say nothing until we get a mic. Doctor, would you see if this microphone is working right here? And if you can...

THE WITNESS: All right. We'll do the best we can here.

A. At Carnegie Hall, Harry Belafonte said: Never turn your back on the audience. And I'm kind of turning

02:05 my back on the audience. I apologize.

02:05 So the first step, does it light up? And I'm told you can see the screen over there. Is that our screen? It is, good. So it's waiting for a floppy disk. These early Macs did not have a hard drive, so if you didn't have a floppy disk, nothing ever happened and you were done.

02:05 So now it says the famous, welcome to Macintosh, and it now works for a while to load the system and finder into software -- into the memory and start up.

02:05 Q. (By Mr. Lyon) Now, Dr. Wilson, before you start with the demo, can you just give a quick moment to describe what are the components that are there and what are seen on the screen?

02:05 A. So let's start with the hardware. We have a built-in display. This was the appliance version of the Macintosh. We have a floppy disk drive. We have a keyboard. We have a mouse. If you had a torques -- weird screw driver, you could take the case off, and there's a motherboard inside with a processor and read-only memory which contains a lot of the boot code and then regular memory that you can use to load your programs.

02:06 The software, I have the MacPaint

application here. We'll get to that momentarily. I have the MacWrite word processor here.

Thank you. All right. Yeah, I'll use this stand here if we can, because I do need my hands available.

MR. LYON: Before you go on, Doctor, just let me -- one thing, I'd like to apologize to the Court and the jury for one thing, and that is, apparently, our camera isn't particularly compatible with the system, so you're seeing a little bit of flicker every once in a while. I apologize in advance for that. Since these things don't have video out, we're doing the best we can.

A. What we're having is just a problem. Macintosh didn't refresh its screen too often, so you often get bars when you try to photograph it or make a movie of it.

So we have the MacPaint drawing program, the MacWrite writing program, the switcher application itself, which I'll show you shortly. We have the system folder containing system software, and the system file here is particularly important.

In that little file, it's actually one-third of the floppy is just that file in terms of bytes, and it contains the fonts which I've stripped

down to a minimum number so it all fits, and it contains a few desk accessories which I've stripped down so it all fits. It's very hard to fit all this onto a 400K byte floppy, but it's all here.

Now, what I'm going to do is launch the switcher program and have it launch MacPaint and MacWrite, and then I'll show you multiple workspaces in operation.

Now I need to talk while all of this happens. So, first, it's going to load the application switcher program. This is a Switcher Construction Kit. And then I've already given it instructions on what to do, which are described in that user manual we mentioned earlier. And so now it's loading MacPaint by Bill Atkinson, one of the best programmers I ever met.

But then it's going to continue on after it loads the MacPaint document to go back to switcher and then load MacWrite. So if you're used to your computer being blazingly fast, you just haven't gone back in time to 1985 lately.

And you'll notice a 128K over to the right in switcher that we saw. What it's doing is allocating 128K bytes of memory for each of these two programs. So I think it's almost done.

So I'm going to start by going -- I'm in

02:09 Workspace No. 1, which is MacPaint. So let me tell you
02:09 what's here. All Macintosh programs had a menu bar at
02:09 the top with various menu items, and they differ from
02:09 one application to another, but one common element is
02:09 the Apple menu. The Apple menu is supposed to be the
02:09 first menu in your program.
02:09 Now, it's not -- it doesn't come
02:09 automatically. It's up to the person who writes the
02:09 application to put it there, and I had to teach people
02:09 how to use the MacLibrary routines to put an Apple menu
02:09 there and then how to load all the desk accessories into
02:09 the Apple menu. If you wrote bad software this didn't
02:09 appear.
02:09 MR. LYON: Dr. Wilson, just for a minute.
02:09 Your Honor, would it be helpful for the
02:10 Court and jury to come and actually see the computer
02:10 rather than trying to see it on the screen?
02:10 THE COURT: I think they can see here.
02:10 I've been watching.
02:10 MR. LYON: I just want to make sure that
02:10 everybody can see it.
02:10 THE COURT: Are you comfortable that
02:10 you're seeing everything that's going on? Just nod your
02:10 head yes. I see everyone nodding their head, so they
02:10 feel that they're seeing everything. Let's proceed.

MR. LYON: That sounds great. Sorry to interrupt.

A. So, again, choosing the Apple menu, putting on the desk accessories was something that each application did, but all good Macintosh applications did it, so everybody always expects to see the Apple menu.

About MacPaint describes this particular program, and it says this was version MacPaint Version 1.5, copyright 1985. To tell you how long ago that was, I spent an hour with Bill Atkinson two weeks ago. He does not have a bushy head of hair anymore.

So this Workspace No. 1, why is it a workspace? Well, all these menus are displayed objects, including the font menu with the fonts we get from the system file. The window itself is a display object with graphics inside. This is actually another window. This is called the tools window. And each of these were tools used to do drawing. So if you wanted to use the spray paint, then you chose that tool. This is a window to choose another window with icons and that controls a line. All these patterns are icons in another window.

So this actually is a program that's showing us four windows only one of which has the title of the document, Workspace 1.

MR. LYON: We're have a little bit of

technical difficulties for some reason.

THE WITNESS: Oh, did I bump that? Okay. So we're okay for now. Thank you.

A. So let me -- now you need multiple virtual workspaces for this patent. So I hope I have another workspace here. Up in the upper right-hand corner, I have the switcher icon with an arrow.

Q. (By Mr. Lyon) Okay. Before you do that, though, can you explain a little bit about what the function of that switcher icon is?

A. Well, again, normal Macintosh programs before switcher didn't have this icon, and the function of this icon is to let you switch. And you don't -- you can do it with the icon, or you can actually do it with a keyboard command. I'll show you both ways. But this is an example of a switching display object, because when I click on it, it's a very cool animated effect. Watch one workspace slide out of the way and the other one slide in. And we all in 1985 said, oh, cool.

And so now we're in a totally different workspace. This one has a -- MacWrite has a somewhat different design in that the window is resizable, and instead of the icons being in separate tool pallets, they're all up in this top part of the window much like Microsoft word might be today. But it still has clearly

a lot of different display objects and icons and rulers that are all part of this window.

And, again, the menus are part of this whole workspace. So this has a different set of menus, even though it shares common display items, like the font menu, for example, it has the Apple menu. I'll go and choose about MacWrite so we can see what version of this application we're using. And this was Version 4.5 from April 4th, 1985. And MacWrite, MacPaint were two programs shipped for free with the original Macintosh.

Q. Dr. Wilson, are there any menu items that are in common between the two workspaces?

A. Yes. First, the Apple menu items of alarm clock, calculator, notepad, and scrapbook are common to both of those applications. And The font menus, this is the same notice, Chicago, Geneva, New York, Venice, Monaco.

Let's go to our other workspace, and we'll see, again, the same font menu. And, again, those are fonts found in the system file itself common to both workspaces, which is why it's the same set of fonts. There is only one set of fonts. All of the applications are using it.

Q. Is it possible for you to create another display object in this workspace?

A. Yes. The desk accessories are small programs that can be open in any workspace. So, for example, I can open the note pad, and I've typed some text into the note pad. And if I -- and let's say I'll move it over to the upper right, and I'll switch back to our other workspace. I'll go to the Apple menu and open the notepad and leave it in another location.

So now I have a shared display object. I can start working in one workspace, I can read it, I can go over to another workspace.

Now, let me give you another example. This morning we saw discussion -- a somewhat complicated discussion of a calendar program. So Mac didn't at this point ship with a calendar, but it shipped with an alarm clock, which served calendar-type functions.

You can see the time, and so I'll put it over here in Workspace 1. I'll switch to Workspace 2. I'll open up the alarm clock. I'll put it at a different location, and, in fact, I'll open it up so you can see the date. And you noticed that you're back in 1953.

And that's because to keep track of the date, there's a little battery inside these systems, which is probably since died, so it doesn't do a good job of keeping track of the date anymore. But it says

it's 6:27 p.m. somewhere in history, and if I switch over here, it says it's 6:27 p.m.

So, again, I have a display object that I can use in one workspace, switch to another workspace, and continue to use it in that workspace, even though it has a different location, and in one case, I may be open to show the date. I can open this one and show the date, also. It will be the same date.

So the note pad is one example. The clock is another example where we have -- obviously, we have switching between virtual workspaces. We have multiple display objects. We have shared display objects.

Q. What happens -- I'm sorry, Doctor. What happens if you make a change to something on the clock?

A. Well, let's say if I said it's really 1954, let's go to our other workspace and see if it's -- that's actually the switcher workspace. We'll come back to that, and there -- it updated to 1954.

So it does what you'd expect -- it shows the continuity that we've talked about, the continuity requiring that if I switch from one workspace to another, my shared display object allows me to continue my work.

Q. Can you go back to that screen we just saw for a second?

A. The switcher screen.

Q. Yeah, the switcher screen.

A. If I click in the middle -- well, not good enough. I'll go over to the switcher menu item. Now, this is, again, showing two of my dancers in my dance, and I can just cycle through them, but I'd like to add another application. This is a risky business now. We'll see if I get away with this.

It says I should be able to launch another application, and I only have one application left. And it's the finder itself, which is our desktop app. So I'm going to say open the finder, and if this behaves itself, we will -- you never know with old computers. So let me switch over. Here's Workspace 1. Here's Workspace 2 with our shared display objects. Here's Workspace 3 which is -- we're back at the finder.

It still has an Apple menu, and if I open the alarm clock here, I'm going to assume that in our trip back to the future, it's 1954 here, also. So this is another example of a workspace. It's a desktop workspace. And we have three different kinds of workspaces, but there's no question they all contain display objects. These are all workspaces according to the Court's definition.

Q. Dr. Wilson, were you able to obtain any source

code for switcher?

A. No. Again, I have never seen Apple ship source code to their shipping products.

Q. Then how do you know how switcher operates underneath?

A. Well, I had to teach people how to write Macintosh applications, that was how I made my living in -- in those years. And so I -- I know that there are -- for example, I know that these desk accessories are actually a special type of resource in the system file of four capital letters, DRVR, and that's what we would call a display system object, that's the -- that's the code for each one of these device drivers that controls that particular desk accessory.

So desk accessories, for those of you who care about such things, were treated as device drivers in the Macintosh OS. But what happens is each application, when it opens the desk accessory, accesses a window data structure in the system file to find out where to open -- initially open the window, and then the application manages the window structures after that, which is why I can put the clock in one location in MacPaint, put it in a different location in MacWrite, because each of those workspaces then manage that data structure.

They originally start off assuming let's do what the window resource in the system file says, and they come up in some particular location. Then the apps manage it after that, maintain their own data structures.

Q. Do you have anything else you want to show with respect to the switcher?

A. I have the feeling I should quit while I'm ahead.

Q. All right. Well, now that we've seen the operating switcher, why is it you believe that switcher invalidates the claims?

A. As I said, the claims require that I have multiple virtual workspaces, switch display object to switch between them. That I have the flexibility to open multiple display objects and change their locations potentially and change their display characteristics.

And it's -- and the claims indicate that I should be able to perceive a tool in one workspace, be perceptible as the same tool in another workspace, and in my mind, there's -- as a user, even if I didn't know how the system worked, I'd look at the alarm clock at each workspace and say, yeah, that's the same display object. It's my alarm clock. And we saw that it updated and kept its information current or at least as

current as 1954 can be.

Q. And was switcher something that was considered by the patent office when the patents were being examined?

A. Yes, it was.

Q. And what was -- what was considered by the patent office?

A. They -- they saw the separate manuals for MacWrite and MacPaint as stand alone applications before switcher had been introduced, and then they saw the switcher manual that we showed you excerpts of earlier.

Q. Well, why, in your opinion, doesn't it matter that the patent office looked at these manuals?

A. Well, the manuals didn't show the things I showed here with regard to switcher. What the switcher manual did is say, here's how you launch switcher. Let me go back to switcher for a moment so we can talk about it.

It showed how to load applications into this collection of dancers that I can have MacPaint, I can have MacWrite, I can have the finder. And then it showed you how to use the switch icon to switch between them. It didn't talk about opening desk accessories having a common display object in Workspace 1 and another display object in another location in

Workspace 2.

You know, the purpose of the switcher manual was just to show you how to use switcher. It didn't address some of the issues that we have to address in regard to these patent claims.

MR. LYON: Now -- so I guess at this point, unless there's anything else -- Your Honor, do you want to take a break at this point, or do you want him to continue on for a while? We can -- we can move to the next step. I just didn't know what you preferred.

THE COURT: Let's take a break. I took some nonverbal cues from my jury. Five or ten minutes.

(Recess.)

(Jury in.)

THE COURT: Please be seated.

Mr. Lyon, remind us where we are and where we're going.

MR. LYON: Thank you very much, Your Honor.

Q. (By Mr. Lyon) So we just finished, Doctor, with your demonstration of the Macintosh Switcher or the Apple Switcher System.

Now, do you recall hearing Dr. Zimmerman talk about the Switcher System when he testified earlier

this week?

A. Yes, I do.

Q. And did you agree with what he said about the Switcher System?

A. No.

Q. Why not?

A. Well, the most important point is I disagree with Dr. Zimmerman regarding what is a menu -- or I mean, what is a window and what is a workspace.

And in particular, when he discussed workspaces, he said an application cannot be a workspace, but I've shown you the MacPaint application with multiple windows, with multiple display objects, with display objects in the menu, with desk accessories you can open as other sharable display objects.

According to the Court's construction, there's no restriction on workspace other than a collection of display objects. Those applications are workspaces.

MR. LYON: Let's take a look at Slide 40, if we could, please.

I'm sorry. I gave you the wrong number. Hang on. Slide 40 -- no, it's 40, I think. The application, I believe it's Slide 40.

Yeah, there you go.

Q. (By Mr. Lyon) Did you prepare this slide, Dr. Wilson?

A. Yes, I did.

Q. So what were you trying to show with this?

A. Again, showing that an application such as MacPaint has a host of display objects inside. They're visually distinguishable display features. Some of them are a display feature like the Apple menu; it's just an Apple icon. Some of them are sets of features, such as the windows that contains a number of icons in the bottom.

And so all those are display objects. The workspace is a display system entity. Well, this application appears on the screen. It's a display system entity, and it's a collection of display objects. And it manages the spatial relations between them.

In the MacPaint program, there's code to manage where each of those windows goes, where each of those icons goes (sic), where the desk accessory currently is. In fact, I had to teach people how to write code to build the menu bar. The menu bar is actually a separate data structure. Each of those menus is a separate data structure. It meets the definition of workspace.

MR. LYON: Now, if we could go to

Slide 42.

Q. (By Mr. Lyon) Could you give us a summary of what we've seen here with Switcher?

MR. LYON: 42, please. There we go.

A. Okay. Well, again, we saw multiple virtual workspaces. We saw the Switcher icon to switch between -- there's also a keyboard command to switch between.

We have the flexibility to arrange the notepad or the clock or other desk accessories in different locations in each workspace. We can use a tool like the clock in one workspace and continue using it in another workspace.

And you couldn't determine how these desk accessories behaved under Switcher from reading the manual. You actually have to use it and try it as I did here. And that kind of demo was never presented to the Patent Office. The Patent Examiner didn't have the information that you have.

Q. (By Mr. Lyon) All right. So in sum, what is your opinion with respect to the Switcher and the patents?

A. Switcher invalidates all the claims of the '412 patent by anticipating them all. There's nothing new in the '412, Claim 1 patent. There's nothing new in '412,

Claim 21. Switcher, again, anticipates all the elements of the claims.

And also for the '521 and the '183 patents, all of those claim limitations are present, interpreting the claims in the context of the Court's claim construction. And I believe that those patents are invalid on that basis.

Q. When you say -- we're talking about the asserted claims in particular, correct?

A. The asserted claims. Pardon me.

Q. That's fine.

Now, let's switch over, euphemistically speaking, to the Chan Room System, and let's talk about --

MR. LYON: Can I pull up Exhibit 5 -- DX535, please?

Q. (By Mr. Lyon) Do you recognize DX535?

A. Yes. This was a paper, again, by Patrick Chan. It was a republication of his master's thesis at the University of Waterloo.

Q. And was this part of the record of the patents-in-suit?

A. Yes. The Patent Examiner, in fact, was told by the applicants that this was an especially relevant reference, and it was called the Room Model. We call it

the Room System, and -- but it was referenced in the patents.

MR. LYON: And if we could look at Slide 30.

Okay. My numbering seems to be off. Slide -- I have Slide 30; it's the prosecution history.

There we go.

Q. (By Mr. Lyon) Is this what you're referring to about what the applicant said about the --

A. Yes. This is, again, from the prosecution history in one of the patents. This was a comment to the Patent Examiner from the applicants, that the Chan report was especially relevant as a user interface design.

It had the Room Model and it talks in the Chan report -- it's quite a technical paper, because he's trying to get his master's thesis, so he describes the data structures. And the only problem with it is he -- it's not always the easiest paper to understand, because he includes a lot of other information on other topics, too.

Q. So have you reviewed Defendants' Exhibit 535, the Chan paper, in detail?

A. Yes.

Q. And what does it describe generally?

A. Well, it describes a system of virtual workspaces, each one of which is called a room. He talks about organizing your work so you go into a room, and you do some work. And then he has door icons and you click on them and you go to another room, which is another workspace.

You can see why this is relevant, because the applicants already talked about their Rooms paper where you have one room and you go into a door -- click on a door to go into another room.

Well, this one is called room instead of rooms, but Chan describes multiple rooms.

Q. Are you aware of any other descriptions of Chan systems?

A. Yes.

Q. What other descriptions are you aware of?

A. Well, Chan was a graduate student for Professor Malcolm at the University of Waterloo. Malcolm and a co-worker, Doug Dyment, I think it was, wrote a paper published in the proceedings of the ACM, which is one of the major technical journals for programmers, where he described this system and provided considerable additional detail beyond what Chan did.

MR. LYON: Could we have Defendants' Exhibit 601 up on the screen, please?

Q. (By Mr. Lyon) Is this the Malcolm paper you were talking about?

A. Yes. Here -- because he's the professor, he gets to change the name and call it the Waterloo Port System, but he -- I have a lot of evidence that he's describing the same system, and, of course, he gives Chan credit for it later on.

Q. How do you know it's describing the same system?

A. Well, there are -- in the Chan paper, he has hand drawings of what the screen looks like done by an artist, I guess, but they're not actual screen shots.

In the Malcolm paper, he has actual screen shots, and I've put them up side by side and compared them, and it's clear they're describing the same multiple room model with doors you can click on to go from one room to another.

And in addition, there are various technical details. Chan talks about being part of the Port operating system, and, in fact, they both talk about the usage of the system. And what Chan says is there were 100 fourth-year computer science students, approximately, using the system.

What Malcolm said was there were 120 fourth-year and graduate students using the system.

Again, they seem in every evidence that I can find to be describing the same system.

MR. LYON: Now if we could see what I think is Slide 33.

THE TECHNICIAN: 32 or 33?

MR. LYON: Well, I think it's 33 on mine. We'll see if my numbering is off.

There you go. That is right.

Q. (By Mr. Lyon) So what are we seeing here?

A. Again, this is Chan's drawing on the left of what a Room system looks like, and Malcolm's actual screen shot on the right. I like the screen shot because it shows a real system in operation. I like Chan's diagram, because he has labels attached to the various pieces so you're sure what they are.

But to me, they're both describing a system with multiple rooms and room icons that you can click on to go from one room to another and lots of display objects in each room.

Q. Can you briefly just point out what we're seeing as far as the types of things on the screen right now?

A. Well, I will as best I can from this little picture.

This is a tool called a file browser, and

Chan and Malcolm both mention a tool called the file browser. And what that is, it's like a file browser we have today. You can open it up and look at the files you have on your hard disk, for example. And so if you want to open a file browser tool, you click on that icon.

Up in the upper right corner, we're right now in the office room. And in Chan's drawing, the room name is in the lower left. But it, again, shows the room name in the border of the window.

When you click on a door, and here's a door icon and here's a door icon, you go from one room to another. So you can go from the office room to the work room, and, again, spread some of your work out in each room. So you work for a while in one room, click on a door, go to another room, continue your work, and you can put these tools in more than one room.

Q. So, Dr. Wilson, you mentioned you had a simulation that you created.

A. Yes.

Q. How did you create that simulation?

A. I -- basically, because I liked the real screen shots, I used the information in both papers. I used the screen shots from the Malcolm paper and I used a screen shot of a workspace, and then he had a detailed

screen shot of the file browser window.

Chan also has window diagrams. He didn't happen to diagram the file browser window. He diagramed a different tools window.

MR. LYON: If we could go to the next slide.

Q. (By Mr. Lyon) Are these the windows that you're talking about?

A. So here's an example of the window from the Chan paper, which is an editing window of some sort. Then Malcolm is showing a file browser window down here, but, again, you can see that there are a bunch of commands here.

And my understanding from reading the papers is these commands are dependent on what tool you're in. So this particular tool, the developer gave it a quick command, the save command, et cetera. Down here, there's an edit command, and quit is over on the far right, where in the other window it's over on the left.

But these both are windows that will appear when you click on a particular tool icon in one of your workspaces.

MR. LYON: Can we quickly pull up the simulation then, please?

02:49 Q. (By Mr. Lyon) All right. So tell us what
02:49 you've done here with your simulation.
02:49 A. Well, one thing I've done is intend to be able
02:50 to operate it. How are we going to do that?
02:50 Q. I think you could just tell Jason what you
02:50 would like to do and he'll take care of it.
02:50 A. Well, the first thing is, here's what I call
02:50 Workspace No. 1. In the upper right-hand corner, it
02:50 says it's the office.
02:50 THE WITNESS: Jason, if you'd click on the
02:50 power button down below for a moment.
02:50 A. What we've added to the simulation that wasn't
02:50 in this screen shots is interpreting what the various
02:50 icons mean. And the green one -- if you can see the
02:50 difference between yellow and green, the green objects
02:50 are switching objects that let you switch to other
02:50 rooms.
02:50 The other icons are various other kinds of
02:50 display objects that let you do work.
02:50 THE WITNESS: And so I guess you can
02:50 unclick the power button, please.
02:50 A. So, for example, these languages down here are
02:50 editors on various programming languages, and we
02:50 discussed the number of different programming languages
02:50 briefly before, but you can program here in Basic with

this tool or Paschal with this tool or Fortran with this tool.

And then this file browser up here is an icon we can click on to open a file browser.

THE WITNESS: So if you'd click on the file browser icon.

A. Now, again, this is the not running code. I'm not giving you a live demo, because I couldn't find this code. The problem with stuff done in 1983 like this is we didn't have the internet as we do today, so you can't find everything on the internet. And I couldn't find this. So this is a simulation based on what I've learned from looking at the papers.

But this file browser allows you to edit documents and files in your system, and what the Malcolm paper shows that was never mentioned in the Chan paper is that it's a live view of the file system. And if someone changes the file system, this will update automatically, which means if I click on quit here to close this window, go to another room, which is work room, I think, now I'm in a room where we've rearranged some of the tools.

The basic tool is not in the same location as it was before, even though it's a display object that exists in each workspace. But the file browser is still

here. We have another file browser here. If we click on it here, we'll bring up a view of the file system.

Now what we said -- what I said I was looking for is I was looking for continuity. I wanted to be able to start using a tool in one workspace, continue using it in the other. And what Malcolm's paper told me was that the file browser will have that continuity, because it will update automatically when the file system is changed.

So if I look at my files in one workspace and then make a change -- if I go to the other workspace, the file browser will update. I don't have a live demo of it, but that's what Malcolm says will happen.

MR. LYON: Can we pull up Slide 36, please?

Q. (By Mr. Lyon) So, Dr. Wilson, what are the differences between the paper and the Chan paper that you think are important?

A. Well, to me the first thing was the Malcolm paper was just easier to understand. Chan's paper had to impress the thesis committee, and I've had to do that myself. And that means you have to sound very erudite.

And so he went into long discussions of the psychology of user interfaces and things, which

Malcolm didn't do. So it was easier to really get at some of these issues in the Malcolm paper. Malcolm had the live screen shots, which Chan didn't.

Malcolm had the technical details -- whoops, wrong button -- that told me what the file browser would update automatically. And that's important, because I was looking to see if there was continuity, where I start a task in one workspace, switch to another workspace, and continue the task; do I have that continuity.

Chan's paper, I didn't see it explained that as clearly as explained in Malcolm's paper. Malcolm's paper, of course, was in a major publication, which many, many researchers would read. And Malcolm's paper was not submitted to the Patent Office. And I'm not at all saying that the applicants should have submitted it, merely that it wasn't submitted. The Examiner never saw this paper.

Q. And so because the Malcolm paper wasn't cited to the Patent Examiner, how does that affect your opinion?

A. I believe if the Examiner had seen both of these papers together and seen the kind of thing that I've talked about today, the Examiner would have realized that the Chan system anticipates all the claims

of the asserted patents, and the Examiner would have rendered the claims invalid.

Q. And you're basing that on the -- your understanding of the Chan room system based on the combination of the Malcolm paper and the Chan paper?

A. Yes. Each one provides different information. Combined together, you get a much better picture of the system.

Q. Now, let's turn, if we could, to your opinion regarding the Amiga workbench.

How did you first become familiar with the Amiga 1000?

A. Well, originally, there was an article published in the August 1985 issue of Byte Magazine. Back in those days, everyone I know, including me, read every issue of Byte Magazine; everyone I know being a geek.

And Byte Magazine was where you got your updated information, so it had a cover story on the Amiga computer.

MR. LYON: And if we could pull up Defendants' Exhibit 679.

Q. (By Mr. Lyon) Is this the cover of the Byte Magazine that you're referring to?

A. Yes, with one unfortunate problem.

The actual cover of Byte Magazine was in color, and the reason that's interesting is because unlike the Macintosh, the Amiga was a color computer. So this picture was proud of the fact there was color showing on the Amiga screen.

Q. And this was one of the articles that you reviewed in your research?

A. Yes.

Q. Now, what, in general, does the Byte Magazine article describe?

A. Well, first, it describes the hardware, which, as you'll see in the picture right there, the actual computer hardware looks just like what we have in the courtroom.

It describes the architecture. It has a photo of the motherboard showing all the back panel connectors and the processor and memory and things.

Q. Let me stop you there, if I might, Doctor.

MR. LYON: Can we show Page 86 of the article, please?

Q. (By Mr. Lyon) Is that the photo you referred to?

A. There's the motherboard. For those of you who don't tear computers apart, the motherboard has nothing to do with your mother, but it's where the pieces live

that run the system.

Q. And the boxes along the top, are those the connectors?

A. Those are the connectors, and if you look on the back of the Amiga, later on you'll see all those different connectors back there.

Q. Now, if you turn to Page 90 of the article, what do we see here?

A. Well, again, we see a set of black-and-white pictures that in the article are color pictures showing the Amiga screen. The top is just a game running on the Amiga. The bottom is what is called Amiga workbench, which is the equivalent of the Macintosh finder. It's where you manage your files and launch your programs, launch your -- which they call tools.

MR. LYON: If we could, have introduced -- if we could have up on the screen Defendants' Exhibit 455, please.

Q. (By Mr. Lyon) What is Defendants' Exhibit 455?

A. Well, this is an internet-based document, I believe, that's describing the history of the Amiga. And up on top, you'll notice it talks -- it says released in December 1985 was Workbench Release 1.1, Version 31.334, along with Kickstart Version 31.34, which is what I want to demonstrate to you today.

02:58 MR. LYON: If we could have up on the screen Defendants' Exhibit 342.

Q. (By Mr. Lyon) And what is Defendants' Exhibit 342?

A. This is a page of the Amiga user manual that was shipped with the Amiga.

MR. LYON: Would you turn to the second page of the document, please?

Q. (By Mr. Lyon) And what do we see? The copyright date?

A. Up at the top, I think. Copyright 1985.

MR. LYON: And if we turn to Page -- it's the page -- I think it's 4-1 or the page Bates-numbered 58, 0058.

Q. (By Mr. Lyon) What is this section?

A. Again, the Workbench software is a software that you start the computer up with to get to your desktop. So that's their version of the desktop, and it represents a workspace with numerous display objects, icons that represent files, and tools with folders of various kinds.

MR. LYON: Turn to the next page of the document.

Q. (By Mr. Lyon) What do we see there?

A. There's a screen shot of the desktop, for

example.

Q. And does the rest of this chapter describe the workbench?

A. Yes, it does.

Q. And did you read through the Amiga manual as part of your research here?

A. Yes, I did.

MR. LYON: If we could have --

Q. (By Mr. Lyon) Do you have the floppy disks for the Amiga handy?

A. Yes. The Amiga system early on required a disk called the Amiga Kickstart to kickstart it into action. So in the demo, I'm going to start by showing you the Kickstart floppy.

And I have -- what I had to do was acquire as much Amiga software as I could, so I have all different kinds of Amiga floppy disks here, but I wanted to stay in 1985, because the patent was filed in 1987, and I couldn't find a disk with the Amiga labels from 1985, even although I did find the right files for 1985.

So I made my own floppy disks and made sure I had the right software with the right copyright dates and the right version numbers for this demo.

Q. What version of software do you have on those two floppy disks?

A. Again, I'm running Workbench Release 3.1, which is Version No. 31.334. And for some reason, they had both of those designations for it.

Q. Did you say 3.1? Workbench Version 3.1?

A. 1.1. Pardon me. It says 1.1 on the disk. I misspoke.

THE COURT: How do you know that what you have on those disks with the handwriting on them is from 1985?

THE WITNESS: Well, the reasons that -- this was a concern of mine, how do I know this.

First, of course, when I boot it up, it says copyright notice 1985. It says it's Workbench 1.1. It says it's Version 31.334, and the screens, as I'll show you, look exactly like the screens in this user manual and look like the screens shown in the Byte Magazine article.

So since what I'm showing you is what appears on the screen, the most important thing to me was that what appears on the screen was exactly as documented back then. And I haven't found any deviations.

Q. (By Mr. Lyon) Does -- the Workbench software that you have on those disks, does it behave as depicted in the Amiga manual?

A. Everything I've seen looks exactly as depicted.

THE COURT: The other disks you have are labeled as from 1985, right?

THE WITNESS: Well, the Kickstart disk is also 1985. It's mentioned in that previous document, again, Version Release 1.1, and this has 1.1. Now, these are -- one of them is the Workbench 1.2, and it is a later version, so I didn't want to try to demonstrate that. I wanted to stick with 1985.

THE COURT: And so your handwritten disks are compatible with the 1985 disks?

THE WITNESS: Yes, these are the 1985 versions, and it -- the later versions get prettier, but they're not relevant, because they're the wrong dates.

MR. LYON: Anything further, Your Honor?

THE COURT: No.

Q. (By Mr. Lyon) Now, can you show the jury here what you have as far as the Amiga computer?

THE WITNESS: May I?

MR. LYON: If it's okay, may he step down, Judge?

THE WITNESS: Whoops, I forgot one. Kickstart. You have to start with Kickstart.

A. Now, the Amiga didn't ship with a built-in monitor. You were supposed to provide your own monitor

or use your home television or something like that. So we've got a monitor here just for display purposes.

I'm going to turn this on, and it's going to start booting up from its internal read-only memory just like the Mac, but it won't finish booting up. It's going to then ask us for this Kickstart floppy, and it's going to ask for it upside down. So if you look at it and say, well, what's that, but what it is, is it's that. When you look at it that way, it's upside down.

I always wanted to stand on my head when I used the Amiga.

So now it's going to finish its boot process with Kickstart, and then it's going to ask me to insert a Workbench disk. So then I'll insert Workbench 1.1, which is the 1985 version.

It's much harder to find an old Amiga than it is an old Macintosh, because I don't think they sold as many. So upside down, that says that I want the Amiga Workbench. So I just pop this out, and I'll put in the Amiga Workbench disk.

Q. Doctor, while that's happening, can you tell us where you got the Amiga?

A. The Amiga -- I asked the attorneys if someone could find an Amiga somewhere out there in the world, because I looked in all my local junk shops in Silicon

Valley, and I couldn't find one. And they were able to find an Amiga enthusiast who loaned us this computer.

Now, one of the things he loaned us also was a second floppy drive, and I want to do a demo with two floppies, but, unfortunately, when I got this last September, the floppy drive wouldn't work. It was just sick, which is not surprising. So it was only this month that we were able to find a substitute floppy drive so that I could show you this demonstration.

I think we got it ten days ago when it finally came in. And, in fact, we didn't find this release of Workbench until this month, also, when we bought it from oldsoftware.com. So should you need old software, go to oldsoftware.com.

Q. Can you quickly go through and walk through a demo, please, Dr. Wilson?

A. Yes, and we will have to make this quick.

I'm opening up what I've called Workspace No. 1, and it has various tools inside such as the trash can. And so a trash can is a display object. I can move it from one place to another.

Now, I'm going to put a second copy of Workbench in the external floppy drive. And as the Amiga manual shows, you'll end up with two icons on the desktop, one for each floppy drive. So here's my other

workspace, Workspace No. 2.

And what's interesting about the Amiga user interface is it has what they call gadgets up in the upper right, and it has a front gadget and a back gadget. And I'm going to use those as switching display objects, and I'm going to make both windows the same size for this demonstration.

And so what I have here is what I've called Workspace 1 with a bunch of display objects, and I'll put the clock in the upper right and the trash can in the lower left. I'm going to click on the back gadget to bring up Workspace No. 2. And I'll put the trash can in the upper right and the clock icon down here.

And as I toggle back and forth, I'm going from one workspace to another, and we have display objects that are located in different places. And to a degree, they're perceptible as the same object, because this is called trash can; this is a clock icon; and this is called trash can; this is the clock icon.

Q. Now, you said to a degree. What did you mean by that?

A. Well, Dr. Zimmerman's interpretation of the claims is that this would be sufficient -- or one of his interpretations is this would be sufficient to meet the

elements of the patent claim.

But I believe you have to be able to continue your work in each workspace. So is this trash can really the same tool?

Well, if I open up the trash can in Workspace No. 1 and see what's inside, it says I have a file called March travel plans. If I switch workspaces, open up the trash can here, it says I have a file called tax info. And what happens is there's a trash can for each floppy disk.

So although I see what looks like identical icons on the desktop, one of them represents the trash can for inside, and one of them represents the trash can for outside. So I don't actually believe you can continue using the trash can from one workspace to another and continue to do your work, because it's really a different trash can.

Q. Then why do you think this Amiga might be relevant to the issue of the validity of the claims?

A. If you interpret the claims the way Dr. Zimmerman has in one of his interpretations, then you don't really need the continuity. You just need the flexibility to be able to move the display object in one workspace relative to the other.

So this shows flexibility, but it doesn't

show continuity. And I'm going to briefly show you another demo that behaves differently.

So I'm going to open the utilities folder and open the calculator and pick a random number to put in the calculator. I'll put 456. So the calculator says 456.

I'm now going to switch from Workspace 1 to Workspace 2. I have the same calculator setting there. It's -- I have a display object that's shown in both workspaces, and it does provide continuity. I can begin my calculation in one workspace and continue it in the other.

But what it does not provide is flexibility, because I can't locate the calculator in one place in Workspace 1 and a different place in Workspace 2. This is what was talked about this morning as a sticky window. This window sticks in one location. It isn't two different display objects. It's one display object just setting there when I switch workspaces.

So this is a sticky window. The trash can was not sticky. I had two trash cans, but here I have one calculator.

Q. Doctor, could you go back up and take a seat and we'll continue. Thank you.

A. (Complies.)

MR. LYON: So can we jump -- can we jump to -- I'm having a hard time reading the numbering -- I believe it's Slide 40 -- 50?

Q. (By Mr. Lyon) Could you summarize your opinions with respect to the validity of these claims?

A. Well, what I've done here, in the interest of keeping the slide shorter, is reference all three prior art systems plus the patent in regard to this claim. And if -- I'm going to not read all the claims, because you've had to suffer through that before, so I'm just going to say to start with, all of these systems have a display.

MR. LYON: Next slide.

A. The patent and each of these systems has first and second workspaces that set on the display, and I've outlined in yellow what the workspaces are for each of these particular pieces of prior art.

MR. LYON: Next slide, please.

A. Each of the workspaces includes a set of display objects. And I've outlined a number of different display objects, so you've seen all of these once, so I won't talk to you through them all again. But three have multiple display objects in each workspace.

MR. LYON: Next slide.

A. So now I need a display object means for generating display objects, and I need data structures that manage the display objects. The workspace data structures are really inherent.

If I move a window around and I switch out and come back to it and it's in that location, then I know there was a data structure that managed the placement of that window. The display object means -- is really what's underneath something like the clock desk accessory in two different workspaces and how does it make it work. But it's all there.

MR. LYON: Next slide, please.

A. We need control means for switching from one workspace to another, and I've shown you various techniques for clicking on icons to switch from one workspace to another.

MR. LYON: And the next slide.

A. And, again, this gets to the question of having a first and second display object that are perceptible as the same tool when you switch workspaces. I've shown you the notepad in Switcher, for example, perceptible as the same notepad in each workspace.

I've shown you a file browser in Chan, perceptible as the same tool in each workspace. And

I've shown you two possible interpretations of Amiga where I can either switch from one workspace to another, and the first and second display objects are the trash can, perceptible as the same tool, or the calculator window, perceptible as the same tool, depending on your interpretation of the claims.

If you interpret that we only need objects to be flexible, then moving the trash can from one workspace to another would fit. If you interpret that we only need continuity, then I can start working and continue working.

THE COURT: Excuse me one second.

MR. HILL: Your Honor, it seems the witness is talking about interpretation of the claims to the jury, as if the jury is going to be engaged in the function of interpreting the claims, which he knows is the Court's function.

THE COURT: I have your point. And I think the witness is stating it in a manner that makes it clear to the jury that he is just giving alternatives for alternative instructions. He can continue.

MR. LYON: Thank you, Your Honor.

THE COURT: You may need to pose a question that puts him back into context.

MR. LYON: Certainly, Your Honor.

Q. (By Mr. Lyon) So let's move, shall we, to Claim 21 of the '412 patent and go through that quickly as well?

How does your analysis of all these prior art systems affect your analysis of the validity of Claim 21?

A. Well, again, it has a display, and input means meaning keyboards and mice and ways for the users to get signals into the system.

Q. Next -- I'm sorry.

A. It has a way to generate sets of display objects and a way to present the first set of display objects and then have a switching display object.

Q. Does it also have a tool display object?

A. And a first tool display object such as the notepad.

Q. All right.

MR. LYON: Next slide, please.

A. Then when you get a switch signal request -- and what I've shown you in Switcher is clicking the right upper icon. What I've shown you in the Chan model is click on a room door. In the patent, you click on a room door. In the Amiga, you click on the gadgets up in the upper right corner of the window, and you can switch from one workspace to another.

And you'll, again, see objects perceptible as the same tool, even though they may be in different locations on the screen in each workspace.

Q. How about the '521, Claim 8?

A. Again, we have a display. I mentioned along the way occasionally, these systems have processors. They generate display objects that we can see on the screen, and I know there's memory in the systems, and the data that is operating these programs is stored in memory. So those are there in all the systems.

MR. LYON: Next slide, please.

A. Each of the workspaces has a set of display objects. Each of the display objects is perceptible as a -- with a coherent set of display features as we talked about in claim construction.

And they have spatial positions relative to one another, so I can move the trash can around or the calculator around or the alarm clock around.

MR. LYON: Next slide, please.

A. And, again, you'll see that the first and second display objects are again perceptible as the same tool, again under the particular interpretation you make for the claims as to what perceptible as the same tool would mean.

Q. And then finally the last patent, '183,

Claim 1?

A. Again, we have a display. We have an input device. We have a data processor for each of these systems. The display presents images that include display objects. And you've seen the display objects, and they're perceptible as coherent sets of display features, clocks and notepads and windows, et cetera.

Again, you operate the data processor to present the first workspace with display objects, and there will be a subset that would be some first display object tool, such as the trash can in Amiga or the file browser in Chan or the notepad in Switcher that will then -- that are perceptible in the first workspace.

MR. LYON: Next slide, please.

A. Then when you get a switching display signal, again, the switch signal -- here they talk about a switch signal sequence. It doesn't have to be a signal -- single signal. It could be a set of them, but in the examples I've shown you, it really is a single signal.

And so you click on an icon and you switch from one workspace to another. And then you get a second set of display objects, and the second display object is also perceptible as a tool that can augment users' capabilities. And those first and second display

objects are perceptible as the same tools.

I apologize for going so fast, but I am told there are time issues.

Q. So, Dr. Wilson, now is it your opinion that each of the Amiga Workbench, the Mac Apple Switcher, and the Chan room model anticipate all the asserted claims by themselves?

A. The Chan room model by itself anticipates all the asserted claims, all the claim elements of the asserted patents, and invalidates those claims.

Switcher also by itself anticipates all the asserted claim elements -- the claim elements of the asserted claims and invalidates the patent.

And the Amiga system, if you take Dr. Zimmerman's interpretation of how to interpret these claims, I believe it meets the elements of each of these claims and invalidates the patents.

MR. LYON: And I just have one more housekeeping thing. I think the Amiga disks that we're talking about we are going to substitute in for what has been marked as Defendants' Exhibit 714 and use those disks that were actually used here today, if counsel is okay with that.

MR. GASEY: With a substitution, we're fine.

MR. LYON: With the substitution, yes. Understood.

With that, I'll pass the witness.

THE COURT: All right. Do you want to start right in?

MR. HILL: If we could take a moment so I can gather my notes.

THE COURT: Why don't we take five minutes. It's towards the end of the week, so we're trying to give you a lot of time to move around. Five minutes and we'll be right back.

(Jury out.)

THE COURT: If I interpret right, you want to take a quick break.

MR. HILL: Yes, Your Honor.

THE COURT: Five minutes, though.

(Recess.)

(Jury out.)

MR. HILL: We are ready for liftoff.

THE COURT: I need my procedural masterminds for a couple of points.

MR. KREVITT: On -- on this examination?

THE COURT: No, on this -- on the case in general. The point is, as you know, the Court has obligations in Washington Monday morning, so I'll return

to Washington. And first thing I'd like to know is that if the deliberations go a little longer, do you have any objection to Judge Everingham accepting the verdict?

MR. GASEY: That's fine.

MR. KREVITT: Fine.

THE COURT: Can you note they both said fine?

MR. KREVITT: The masterminds.

THE COURT: Yeah. And then I expect to be present in the courtroom via the phone, and I may even say a word or two to the jury by phone after we've received their verdict, but it would be Judge Everingham sitting here in the chair.

Now, it gets more complex. That will not be on Sunday -- on Monday -- next Monday. That may be this Saturday. The reason is that Judge Everingham has a judicial conference on Monday that he needs to attend. So now you can see what I'm going to tell the jury at the end of the day today is that if their deliberations carry on past a closing time on Friday, which I will let them set, I will have them back on Saturday to continue their deliberations. And Judge Everingham would be here to receive, if it's after my departure time. I have a departure time on Saturday.

Does all of this sound like this can work?

MR. HILL: Sounds like we ought to get a verdict on Friday doing it that way.

THE COURT: Well, that's probably the effect, but that I won't say. I will simply say to them today -- at the end of today that there is a chance that they would need to plan to be here Saturday morning if their verdict goes beyond closing time Friday so they can adjust schedules, if at all necessary. I'll give them a day of notice on that.

Is this all okay, Mr. Krevitt?

MR. KREVITT: Yes, very much.

THE COURT: Is this okay, Mr. Gasey?

MR. GASEY: That's fine, Your Honor.

THE COURT: Okay. Thank you. Let's bring our jury back and keep going.

(Jury in.)

THE COURT: If we could be seated.

Mr. Hill, are you going to inquire?

MR. HILL: Yes, Your Honor. Thank you.

CROSS EXAMINATION.

BY MR. HILL:

Q. Dr. Wilson, how are you doing this afternoon?

A. I'm doing fine.

Q. Well, let me be consistent and welcome you to East Texas, as well?

A. Thank you.

Q. Now, you covered a fair amount of ground, so we've got some things we need to talk about, but I'm going to try to do it as expeditiously as we can.

We're going to talk about all three of the systems that you talked about that you say are anticipatory references, okay?

A. Okay.

Q. But before we do that, let's go over a couple things. Let's first talk about what is involved with the issue of invalidity in a patent case, okay?

A. Okay.

Q. First off, you understand that the only basis of invalidity that the Defendants in this case are pursuing is what's called anticipation. You understand that?

A. Yes.

Q. They're not pursuing -- there's another kind -- there are other types of invalidity out there, so they're chasing an invalidity defense with these references based off what's called anticipation?

MR. KREVITT: Your Honor --

THE COURT: Yes.

MR. KREVITT: -- I know it's not deliberate. We -- we do have other invalidity theories,

not -- not based on prior art.

MR. HILL: Right, not based on these --

THE COURT: That --

MR. KREVITT: I want to make sure that's clear.

Q. (By Mr. Hill) And I don't mean to imply as much, Dr. Wilson. You understand that the only reason people are looking at these prior art systems is anticipation?

A. Correct.

Q. Okay. And anticipation means that every element -- every element of the claimed invention -- so every element in the claims of this patent -- and these three patents has to be present -- literally present in a single prior art reference. You understand that?

A. My understanding -- and, again, I'm not an attorney -- was explicitly present or inherently present.

Q. And -- but it has to be in a single prior art reference, right?

A. Correct.

Q. No mixing and matching?

A. Correct.

Q. So we can't take a little bit of the Chan reference and a little bit of the Apple or the

Macintosh, right?

A. I would never do that.

Q. We can't take a little bit of the Amiga and a little bit of the Macintosh?

A. Correct.

Q. You have to look at each one independently, and within that single piece of prior art you've got to find every claim element of the patent claims, correct?

A. Correct.

Q. You also understand that there's a different burden of proof that applies when you're dealing with the issue of anticipation; is that right?

A. Correct. That's my understanding.

Q. That's called the clear and convincing evidence burden of proof; isn't that right?

A. Correct.

Q. And were you here when we selected the jury in this case?

A. No, I was not.

Q. When we selected the jury, I had an opportunity to talk to them about the different burdens of proof in a patent case, so let me talk to you about that and see if -- since you weren't there, see if your understanding is the same as mine.

To prove infringement, Plaintiff has to

prove -- you have the scales of justice -- they have to prove infringement by a preponderance of the evidence. Do you understand that?

A. Yes.

Q. Which means more likely true than not true. You've got two situations, yes or no, you look at what's more likely true or not true?

A. Okay.

Q. That means just enough to tip the scales.

A. Okay.

Q. Some people use football analogies as crossing the 50?

MR. HILL: Your Honor, I think we have a jury question.

THE COURT: You can just continue, Mr. Hill. We'll work this in in due course.

MR. HILL: Thank you, Your Honor.

Q. (By Mr. Hill) Now -- so that's infringement. That's the plaintiff's burden of proof?

A. Okay.

Q. The defendant's burden of proof for invalidity --

THE COURT: Mr. Hill, could you suspend for one second?

MR. HILL: Yes, Your Honor.

THE COURT: And we're going to take a brief recess right now, ladies and gentlemen, just maybe two or three minutes.

(Jury out.)

THE COURT: Gentlemen, Juror No. 8, Ms. Nash, is having a considerable health problem at the moment. You noticed that she had been wearing sunglasses, and -- and she just out of your presence to me detailed the difficulty she's experiencing and I'm making the judgment to excuse her from the rest of the service. Is there any objection to that?

MR. HILL: No objection from the Plaintiff, Your Honor.

THE COURT: Mr. --

MR. KREVITT: No objection, Your Honor, if she can't serve.

THE COURT: No, she cannot serve. She is -- we would have to stop now. She may go from here directly to a medical facility, and so we will proceed. We'll bring the jury back. We will now proceed with 11 jurors. She will no longer participate, and I've explained to her that she is not to discuss this matter with anyone else. Thank you.

(Jury in.)

THE COURT: Ladies and gentlemen, I just

wanted to assure you it's well within all the federal rules for you to continue to deliberate as a group of 11 now. And if we can just proceed, having lost one of our jurors, we will do so. Please be seated.

Mr. Hill, sorry to interrupt you.

MR. HILL: Thank you, Your Honor.

Q. (By Mr. Hill) Now, Dr. Wilson, talking about the clear and convincing evidence burden of proof. Clear and convincing burden of proof is what applies to the Defendants -- defense of anticipation. Do you understand that?

A. Yes.

Q. So when you look at a prior art reference and you want to decide whether it anticipates a claim and invalidates it, you have to judge it by a much different standard than what you judge infringement, a much higher standard. You understand that?

A. Yes.

Q. Clear and convincing burden of proof, the Judge will instruct the jury, means highly probable, an abiding conviction. Are you aware of that?

A. I wasn't aware of those particular phrases.

Q. And if we use our scales of justice analogy again, that means sufficient to significantly tip those scales.

A. Okay.

Q. Go back to our football analogy. Some people would say that means getting it deep into the red zone.

A. You don't actually have to score though.

Q. No, it's not a touchdown, but it's deep into the red zone, okay?

A. Okay.

Q. Now, were you aware of those burdens of proof when you were performing your work?

A. Yes.

Q. Let's talk a little bit about the three references that you discussed. You're only discussing three, correct?

A. Correct.

Q. It's only been three things put forward that these Defendants claim invalidate these patents?

A. Correct.

Q. Two of those three, won't you agree with me, were before the Patent Office?

A. There was information about them before the Patent Office.

Q. Let's look at those things. I want to look first at Plaintiffs' No. 1. This is our patent. We're going to go -- this is the '412 patent.

And let me ask you something, too, as

well. We've been talking throughout this trial, this patent was filed in 1987?

A. Right.

Q. But you understand that the filing date of a patent doesn't necessarily mean that's the date you consider when determining whether or not something is prior art?

A. Correct.

Q. It may be earlier than that?

A. Correct.

Q. Are you aware of the priority date for these patents?

A. My understanding was it was March 25th, 1986.

Q. March 25th, 1986?

A. Right.

Q. So it's a full year earlier than the date that's marked on the front of the patent as the filing date?

A. Which is why I showed demos of 1985 systems.

Q. Okay. But, again, it's an '86 issue, so if we see copyrights on things that say '86, those may not be before the -- before the priority date; isn't that right?

A. It depends on -- yes, you have to go for more than just the copyright date.

THE COURT: Excuse me.

MR. LYON: Your Honor, I'm not sure Mr. Hill is being accurate with that. I'm a little concerned about misleading things. I just want to make sure he's being accurate what the actual priority date really is as opposed to bar date.

THE COURT: I'll be handling that if there's any issue.

MR. HILL: Your Honor --

THE COURT: I'll also be giving instructions as to the burdens that they apply. I don't think I'll use a football field.

MR. HILL: And, again, Your Honor, on the date, if I'm inaccurate up here, it's -- it's not intentional because I --

THE COURT: I just thought I'd remind the jury that -- I probably said this a lot. What the attorneys say doesn't matter as much. What you're listening to is the evidence, and then you have to listen to me, too, I'm afraid.

Please proceed.

MR. HILL: Thank you.

Q. (By Mr. Hill) And, Dr. Wilson, I want you to know that, too. I'd never intentionally give you a date trying to trick you up here. That's not what I'm after.

I want us to talk about the substance of these things.

A. Thank you.

Q. Let's talk about the references that were before the Patent Office. First off, if we look at the second page of the patent, there is a list of the publications that were considered by the Patent Office, correct?

A. Correct.

Q. And if we look at the very first of those references, there's the Chan article; isn't that right?

A. That is the art -- article authored by Patrick Chan, yes.

Q. And that describes the room system that you discussed earlier and around which you built the simulation?

A. It provides one of the descriptions.

Q. But that's -- that's the man who came up with the room model, correct?

A. He was a graduate student with Malcolm. I can't guarantee he came up with the whole room -- whole room model. He is the one that wrote this paper that you're referring to.

Q. And you described that paper as being so thorough and dense that it was something you really had to read carefully?

A. I did describe that you had to read it carefully. I didn't use the words thorough and dense.

Q. I'm not trying to put those in your mouth.

So that's the Chan paper. Now, if we look further down that page, we have reference to the MacWrite manual, correct?

A. Yes, you do.

Q. And the MacWrite manual is the manual that describes the switcher function?

A. No, it does not.

Q. You don't think the switcher function was discussed in front of the Patent Office?

A. I said the statement you just made was wrong.

Q. Okay. Was the switcher function description and manual that you showed earlier before the Patent Office in the prosecution of these patents?

A. Yes, but it wasn't the MacWrite manual or the MacPaint manual.

Q. Okay. So we had the MacWrite manual, we had the MacPaint manual, and we also had the Switcher manual?

A. Correct.

Q. And those things were all before the Patent Office?

A. Correct.

Q. So the Patent Office had not just the benefit of one, but the benefit of all three?

A. Correct.

Q. And in fact if we look at the front of Plaintiffs No. No. 2 --

MR. HILL: If we can go to that.

Q. (By Mr. Hill) There on the right-hand side in the second -- in that second column, there's where we see reference to the Macintosh Switcher construction kit, don't we?

A. Yes, I guess we do.

Q. So those were all before the Patent Office when this patent issued?

A. They were.

Q. The patent was filed in 1987, correct?

A. Correct.

Q. And the patent issued then in 1991?

A. Well, I don't remember that.

Q. We'll look back at Exhibit 1. You'll see the date of the patent there at the very top, December 10, 1991?

A. Okay.

Q. So patent's filed. Patent Office has the material in front of it from '87 to '91, and then the Patent Office issues the first patent, correct?

A. Okay.
Q. You don't disagree with that, do you?
A. I have no reason to dispute that, no.
Q. And that's the '412 patent. We then have the next, which is the '521 patent.
A. Okay.
Q. And the '521 patent, which you are aware that these patents issued from a common specification --
A. Yes.
Q. -- correct?
And the Patent Office, again, from the same specification, issues a 1995, based on a 1993 filing date. See that?
A. Yes.
Q. They issue the '521 patent?
A. Yes.
Q. In 1995?
A. Yes.
Q. And then based on that same specification and disclosure, we have the '183 patent which is Exhibit 3, which was issued in 1996?
A. Okay.
Q. So with regard to the two systems, the Macintosh and the Chan Rooms article system --
A. Okay.

Q. -- it's your opinion that those invalidate the patents despite the fact that the Patent Office had that material in front of it from 1987 through 1996, and it's your testimony that the Patent Office during that time frame managed to get it wrong not once, not twice, but three times; is that right?

A. It is my testimony that had the Patent Office had the information from 1985 that I showed here today, the Patent Office would have made a different decision and invalidated those claims.

Q. So they got it wrong three times; that's your testimony?

A. I'm not saying the Patent Office made a mistake. I'm saying they didn't have the complete information.

Q. Let's talk about the information that they had.

First off, let's talk about in regard to the information they had, you understand nobody even claims in this case that the Patent Office wasn't given everything that the inventors were supposed to give them, do they?

A. I've never heard a discussion of misconduct.

Q. Correct.

A. I shouldn't use that word. I'm not a lawyer.

Q. Because that word's not even an issue in this

case, is it?

A. As far as I know, it's not.

Q. Well, let me ask you about one other thing. Well, we'll come back to that.

Let's go ahead and get into these systems. Let's look first at the Chan reference.

A. Okay.

Q. Now, the Chan reference was -- no question, Mr. Chan's work was before the Patent Office?

A. Yes.

Q. Correct?

A. Correct.

Q. And you didn't have an actual device or copy or physical computer that contained the Chan system that you could review in this case, did you?

A. No. The Chan system, Malcolm says ran on an IBM PC which I could have gotten, but I couldn't find the software.

Q. So you don't have the Chan software?

A. No, I don't have the Chan software.

Q. I just want to make clear, what we saw earlier on the screen that you were flipping through to discuss the Chan system, that was something that you made --

A. Yes --

Q. -- correct?

A. -- that was an artist's simulation, I guess you would say.

Q. So that was simulation --

A. Right.

Q. -- your -- your interpretation of what you read from those articles?

A. From both articles, yes, correct.

Q. Okay. From two articles?

A. Two articles, right.

Q. And what you're telling the jury is you reviewed the Chan article just like the Patent Office did and though the Patent Office says, yes, it is patentable, it is new and novel, you say no?

A. Correct.

Q. So you just have a difference of opinion based on the same material from what -- from the conclusion the Patent Office reached, right?

A. No. We just discussed it wasn't -- they didn't have the Malcolm paper. It wasn't the same material.

Q. So you think the Malcolm paper describing the exact same system would have been so significant that the Patent Office would have had a complete different understanding of the description in Mr. Chan's article?

A. I believe the Malcolm paper added additional information which would have led the Patent Office to

reach a different conclusion.

Q. And to reach that conclusion, you had to combine those two articles, didn't you?

A. Yes, I got information from both articles.

Q. Not just one?

A. Not just one.

Q. Are you saying that the Chan article would just be too hard for the PTO to get it?

A. The Chan article had a lot of information that was irrelevant to how the room system works, and so you kind of had to sift through it.

But one of the problems is the Chan article did not have the description of the file browser that automatically updated when you made changes to the file system. So it didn't show the continuity of using the file browser in one workspace, clicking to go to another room, and continuing to use the file browser which had updated information. I didn't -- it didn't have -- the Chan article didn't have a picture of that file browser. It was in the Malcolm paper. I found that to be an important fact.

Q. So you don't think the folks at the Patent Office would have been bright enough over nine years and three attempts to figure out the operation of the Chan system based on the Chan article alone?

A. No, I believe the Malcolm article contributed important information.

Q. All right. Now then, let's move on to some of the other systems that we've got here, okay?

A. But I -- I'm not agreeing with your conclusion they weren't smart enough. I'm just saying they didn't have enough information.

Q. Okay. That's a fair point.

Let's talk a little bit about the Macintosh. And before I do that, I want to talk generally about the claim language in something you said when you got started here. I wrote it down.

You were talking about the Macintosh has an application switcher, correct?

A. That's how it was described, I believe, in the documentation.

Q. And you'll agree with me that an application window -- in the phraseology of these patents, an application window is a display object, correct?

A. Well, first, I would not characterize each of -- either of these applications as just an application window. In particular, MacPaint had I believe five windows on the screen in the MacPaint application.

Q. But the bigger -- there's an outer window at

one point, and the window that it's contained in?

A. That's a desktop.

Q. That's a desktop?

A. Right.

Q. Well, let's talk about that. Let's look at -- do you think there's a difference between a workspace and a desktop?

A. A desktop -- for example, the Finder desktop is a workspace.

Q. And so you've heard witnesses in this trial, haven't you, who have used the words desktop and workspace interchangeably, correct?

A. Yes, but the claim construction does not restrict a workspace to being a desktop. And now we're talking in fact about two different meanings of the word desktop. When I talk about the desktop behind MacPaint, I'm talking about a particular piece of the Apple system software, and we can get into discussions of graph ports versus windows, but the desktop I believe has a graph port that -- that the -- you can draw into, but it doesn't have the window frame that the other windows have. The MacPaint program shows two different windows types, one with title bar, one that just encloses icons just with a box. There is no window outline around the graph port, and you don't have a window resource for the

desktop in your application like you do for the other windows.

When other people talk --

Q. And I don't mean to cut you off there, but I want to get a question in there.

A. Okay. Go ahead. Excuse me.

Q. When you're taking about an application, MacPaint is an application, is it not?

A. MacPaint is an application.

Q. And MacWrite is an application?

A. MacWrite is an application.

Q. And in fact, application switcher is an application?

A. It is, a special kind.

Q. And if we look specifically at the exhibit that you had up here when we were discussing --

MR. HILL: DX577.

Q. (By Mr. Hill) This is the application Switcher construction kit, right?

A. That's the user manual, yes.

Q. And if we go to the second page -- or I believe it's the fifth page of it actually. That's the page you were looking at earlier --

A. That is --

Q. -- with Mr. Lyon?

A. Right.

MR. HILL: Let's blow up it up so we can see some of that.

Q. (By Mr. Hill) We can focus on the left side where it says how switcher works?

A. Right.

Q. -- text below.

A. Which you can't read.

Q. We can blowout the -- the -- right below how switcher works, that first paragraph.

A. Yes. By the way, I want to clarify. You described Switcher as an application. It is not a normal application. It's an application that basically hacks into the operating system to intercept calls from the applications and do things that a normal application could never do.

The things I taught people to do could not be -- you could not build Switcher with them. It was not a normal application.

Q. Well, okay, then it's an abnormal application?

A. It's an abnormal application.

Q. All right. But it's an application nonetheless and it's an application switcher and what it enables you to do is switch between two different applications, correct?

A. Up to four.
Q. Up to four?
A. Up to four.
Q. And so you can switch from one application window to the next application window, correct?
A. You can switch from one application to another. They aren't necessarily defined by a single window. MacPaint has five windows.
Q. Okay. But we have -- we can switch from one application to the next application, correct?
A. Correct.
Q. And those applications are displayed on top of a workspace, aren't they?
A. The applications represent a workspace. Each application represent -- represents a workspace.
Q. And let's look, while we're at it, at the discussion that went on at the Patent Office regarding the application switcher.
A. Okay.
Q. Because, again, one of the items that you I think agree with me about is that the manuals for the switcher -- for MacWrite and for MacPaint all before the Patent Office?
A. Yes.
Q. Let's look at the prosecution history. I

believe it's Plaintiffs Exhibit 6.

MR. HILL: And I don't know how to give you a good order. It's the bottom of the page, Bates range is 3464. That's what I'm looking for.

Q. (By Mr. Hill) We look at the second paragraph there?

A. Okay.

Q. And let me explain first. Do you understand the significance of -- of the prosecution history?

A. Yes, it's a history of the applicant and the Patent Office communicating back and forth about which claims should be allowed or should the claims be modified to be allowed.

Q. So this is part of the give and take that goes on with the Patent Office and the person seeking the patent?

A. Correct.

Q. And we can learn what the Patent Office knew and didn't know oftentimes from that history, can't we?

A. You can provide valuable information.

Q. And you see here the Patent Office discusses the switcher where they talk about with the switcher a user can move back and forth between Macintosh programs and exchange information between them. See that?

A. Yes.

Q. That's what you demonstrated on the screen a little earlier with a Macintosh computer, wasn't it?

A. No. Actually --

Q. You didn't move back and forth between programs and exchange information between them?

A. No, I moved back and forth between programs. I opened up shared display objects in each space. Exchanging information is typically done through the clipboard where you do copy and paste. I didn't show copy and paste. I didn't discuss copy and paste.

Q. Well, the Patent Office was well aware of the capability to move back and forth between programs and to exchange information between programs offered by the MacSwitcher product, right?

A. I'm just saying the exchanging information is a different feature that I didn't show.

Q. Okay. But the Patent Office had a good idea of what's -- how the switcher functioned by reviewing the manual, didn't they?

A. No.

Q. They didn't? They couldn't read the manual that Apple used to describe the functionality of its own products and determine how it worked?

A. The -- Apple wrote this document to show people how to install Switcher, how to put applications in it,

and how to switch, then stopped. They weren't interested in explaining how these applications represent multiple workspaces with shared display objects. That wasn't their purpose.

Q. Now, Dr. Wilson, my question was a little different than that.

A. Okay, excuse me. Sorry.

Q. Let me see if I can get you focused on what I'm asking.

A. I'll try.

Q. What I'm asking you is the Patent Office had the MacSwitcher program manual before them?

A. Yes.

Q. And they were able to read it and understand from it the functionality of that program; isn't that right?

A. No, they were able to understand the particular functionality I just described, how to install it and how to switch.

Q. And so for nine years they were in the dark after reviewing all the product literature about how this program functioned. That's your belief?

A. Yes. They did not have the information I showed today.

Q. Well, I want to show the jury again what you

were doing with the program.

A. Okay.

Q. If we can come down and -- if I can get you to come down and help me as you were kind enough to help Mr. Lyon because I don't dare try to work this thing.

Let's start with the -- let's start with the Mac.

I'll try to stay out of the way over here.

Now, we're looking there at the MacPaint application, correct?

A. Yes, correct.

Q. And if you click the switcher, you can switch to another application?

A. Would you like me to do that?

Q. Please.

A. There -- for example, I'm in the Finder workspace now.

Q. So this is the Switcher application, correct?

A. No. This is the Finder. This is the desktop that start -- I had added that as the third workspace, you remember, at the end of my demo.

Q. So you have -- we have our open workspace and we can go to our open application?

A. I'm not sure. What are you asking me to do?

Q. Will you switch to one of the open

applications?

A. Okay. Well, this is one of the applications, by the way. It's called a finder. It's another application.

Q. So we've got that application?

A. There's MacPaint.

Q. MacPaint is the second application?

A. If I continue in the circle, there's MacWrite.

Q. The third application?

A. Yes, there's three applications.

Q. Can you open now the MacPaint application in this workspace?

A. No.

Q. Can't do it, can you?

A. No.

Q. Okay. That's all I needed with regard to the Mac.

A. Should I go back to the witness stand?

Q. Yeah. We'll come back to the Amiga here in just a moment. I'm sorry for making you run laps.

A. I need the exercise.

Q. Were you here in this courtroom during the discussion of some of the license agreements in this case?

A. Probably -- well, I -- I heard Dr. Cooper I

think discuss licensing discussions with Apple, if that's what you mean.

Q. Licensing discussions with Apple?

A. Yeah.

Q. People who make Macintosh?

A. Right.

Q. Does it strike you as odd that Apple would enter into a license agreement for these patents if they were the manufacturer of the very prior art system that -- that invalidates these patents?

A. It doesn't strike me as odd at all.

Q. Doesn't strike you as odd at all. They wouldn't look at these patents, look at the claimed invention, and say we're not taking a license, that's our Macintosh switcher function?

A. Dr. Cooper described negotiations --

Q. I'm asking you a question. Would they -- does that strike you as odd?

A. No, it doesn't strike me as odd. I answered that question.

Q. All right. Let's talk about the disks that you used to boot these programs. They were handwritten disks, right?

A. The labels were handwritten, yes.

Q. The labels are handwritten. Those aren't the

original disks with -- that came from Apple, are they?

A. No.

Q. So those aren't the original applications?

A. They are the original files for each of those, but they're not the original floppy disks.

Q. Well, they're the files that you were sold as the original files, correct?

A. I have so many different disks. All I can say is I have these various pieces. They were on different floppies. I assembled them into this one. I can't even say -- in one case, as I mentioned, I wasn't sold this version of Switcher. I got it from a former Apple vice-president, Dr. Patel.

Q. And let's talk a little bit, too, about what we saw on the screen here.

A. Okay.

Q. The titles on these bars when you were flipping between the applications where it says Workspace 1 and Workspace 2.

A. Right.

Q. You added that, didn't you?

A. Yes, I -- I named the documents so as to be helpful. I hope you found them helpful.

Q. And you never had access to the code -- the source code that's behind these programs, did you?

A. I had access to certain information about how they're structured through programming tools. I did not have the source code for any of these programs.

Q. And that was my question. You did not have the source code for these programs?

A. Correct.

Q. So when we were hearing analysis earlier today from -- or throughout the week from Dr. Zimmerman and then today from Dr. Gray where they're discussing source code as a way to determine whether a program actually contains the functionality described in the patents, you didn't have that opportunity with respect to the Apple system, did you?

A. No, I did not have the source code.

Q. Now, let's look at the Amiga system.

A. Okay.

Q. Now, the Amiga system, if I purchased that originally back in 1984, was it?

A. This one is a model from 1985, summer of '85, I believe.

Q. 1985. Okay. If I purchased it originally, it wouldn't come with these secondary disk drives that you have to the right of it, would it?

A. Well, actually I moved the Amiga disk drive that's -- there was an optional accessory. I had the

broken one as I remember.

Q. But the broken one was an optional accessory?

A. Yes, you didn't have to buy it.

Q. If you bought an Amiga desktop, it came without these items over here to my right?

A. Correct.

Q. It simply came with the disk drive that's on the front of the machine here, right?

A. Right.

Q. But you have to have two disk drives running to do what you're doing with that machine, don't you?

A. Well, no. It just makes it more convenient.

Q. So you've got one disk drive currently that's running one workspace --

A. Right.

Q. -- and you've got a second disk drive that's running a second workspace -- what you're calling a workspace, correct?

A. Yeah. Right now I have two floppies each running Workbench 1.1. I did not actually have to have two drives, but it prevents you having to swap a lot.

Q. So you're saying that you can get on this computer and you can load both those workspace applications through one drive --

A. I believe I can.

Q. -- and switch between the two?
A. I believe I can, but it would require a lot of swapping of the floppies back and forth.
Q. And these are -- each workspace that you're running on a floppy is a separate application, correct?
A. Yes, I probably -- each -- each is a copy of Workbench 1.1.
Q. And what you're saying is that each one of those copies of workspace is not just a window, not just a display object as defined in the claim construction, but you're saying that it is a workspace?
A. Right.
Q. Okay. Let's talk about that.
A. Okay.
Q. Can a display object also be a workspace?
A. By the definition of display object, yes, I believe it could.
Q. You believe it could?
A. Yeah.
Q. Have you looked at the Court's claim construction?
A. I have.
Q. And you understand that a workspace is defined as a display system entity that includes a collection of display objects?

A. Yes.
Q. And so a display object, it's defined differently than a workspace by the Court?
A. Would you put up the definition of display object?
Q. We'll get to it.
A. Okay.
Q. Let's put it up there. I believe we've got that as --
A. There it is.
Q. There it is. We've got a display object there at the top, and then at the bottom we've got workspace.
A. Right.
Q. There's workspace, and we can look at that. There's our definition of workspace.
A. Right.
Q. And then we've got a definition of display object above it.
A. I'd really like to see them both.
Q. Let's see if we can get them both.
A. Okay. Now, could you ask your question?
Q. Those are defined differently, aren't they?
A. They are defined differently.
Q. Usually when you define two things differently, it's because they mean different things, don't they?

A. That sounds philosophical. I'm not sure where you're going with that.

Q. We'll just accept it as philosophical then.

A. Okay.

Q. The -- and as you said earlier, you've heard witnesses throughout the trial, including Dr. Zimmerman, state that frequently -- including Defendants -- witnesses for the Defendants -- we heard from Mr. Tiemann, also Mr. Rex, say that a workspace and a desktop are often used interchangeably when you talk about what people understand in the industry, right?

A. Well, anybody discussing what people currently understand in the industry doesn't seem relevant to what the claim construction was relative to the technology in 1987 -- or 1985 in this case.

Q. Well, will you at least agree with me then, Dr. Wilson, that the Court has defined a display object as something different than a workspace?

A. The definitions are definitely different. I agree with you wholeheartedly.

Q. Let's go ahead and look at this Amiga system. If I can get you to come down and help me with it, too.

Okay. Have you got it up there?

A. I do.

Q. All right. I want you to do something for me.

A. Okay.
Q. I want you to close Workspace No. 1?
A. Okay. I'll click in the close box in the upper left, and that will -- it's -- it's closing the window associated with Workspace No. 1.
Q. So the application window that contains Workspace No. 1 has closed; is that right?
A. Yes.
Q. Okay.
A. I think that's right.
Q. Now then, if you'll close the application window that contains workspace -- Workspace No. 2.
A. Yes. Now they're just represented as disk icons.
Q. And so now those two display objects in windows --
A. Right.
Q. -- are gone?
A. They are.
Q. What remains?
A. The desktop and a calculator at this point.
Q. The desktop and the calculator?
A. Right. And the menu bar.
Q. Would you go so far as to call that desktop the workspace?

A. No, I'm calling it the desktop.
Q. It's not a workspace?
A. It does contain display objects, so you could call it a workspace.
Q. Okay. And that's my point, Dr. Wilson. All you had there were three windows open on a single desktop -- on a single workspace?
A. No.
Q. And you were switching between windows. You were switching from the window you had labeled -- you had labeled it. It didn't come this way? You had labeled it Workspace 1, right?
A. It didn't come that way. I labeled it.
Q. And then you switched to the next window which was Workspace 2; isn't that right?
A. Right. But they were workspaces.
Q. Did you switch between them?
A. I did.
Q. You had labeled them workspaces?
A. I did.
Q. They were application windows?
A. And also as in MacPaint and MacWrite, they were applications, but they were workspaces.
Q. So when we close the two windows that you mentioned earlier that were display objects, those

display objects went away and we're left with the last application that you have running which is the calculator?

A. Correct.

Q. So we had a single desktop -- a single workspace, excuse me, with two -- three windows open on top of it?

A. No.

Q. Two of them were workspace windows that you labeled Workspace 1 and 2, and then you had a calculator?

A. I'm not agreeing with you.

Q. Okay. You didn't just close two program windows to leave one remaining program window?

A. I did close the two windows, I agree to doing that part.

Q. Have you heard other witnesses in this case talk about --

THE COURT: Excuse me, one second.

MR. LYON: Are we done with the demonstration?

MR. HILL: Oh, we are. I'm sorry. I didn't mean to keep you there in the chair standing over you.

THE WITNESS: More exercise.

04:16 MR. HILL: Thank you, Mr. Lyon.
04:16 Q. (By Mr. Hill) Have you heard some of the
04:17 other -- throughout this trial we've had people talk
04:17 about the difference between Microsoft Windows and these
04:17 other Linux-based desktop environments. Have you heard
04:17 some of that?
04:17 A. I can't say I remember hearing that discussion.
04:17 Q. You haven't heard that? You didn't hear
04:17 Mr. Tiemann, for instance, talk about how his programs
04:17 were different than Windows, Windows is a different
04:17 environment?
04:17 A. No, I did -- I wasn't present for that.
04:17 Q. Did you see any of documents that we put on the
04:17 screen that talked about one of the big advantages that
04:17 a Linux environment had over Windows was Windows lacked
04:17 the virtual desktop switching function?
04:17 A. I don't remember seeing any of that discussion.
04:17 Q. You don't remember that either?
04:17 A. No.
04:17 Q. Windows ever -- articles put on this screen
04:17 that discussed the top features that weren't in Windows,
04:17 but were in other programs?
04:17 A. I'm telling you honestly, I don't remember
04:18 being here for that.
04:18 Q. Listen, I'm -- just asking if you recall. I

04:18 think the jury will recall.
04:18 Let's see if we can look at a few of
04:18 those.
04:18 MR. HILL: Let's look at PX 285. Here we
04:18 go.
04:18 Q. (By Mr. Hill) Perhaps one of the most
04:18 interesting and useful of the so-called Linux secrets is
04:18 the Linux virtual desktops. If there's no other reason
04:18 to switch from Microsoft Windows to DME Linux, it's the
04:18 virtual desktop.
04:18 THE COURT: Excuse me a second.
04:18 MR. LYON: I'm just wondering what the
04:18 relevance of this is to prior art and invalidity.
04:18 MR. HILL: I'm about to get there, Your
04:18 Honor.
04:18 Q. (By Mr. Hill) That was one -- we showed
04:18 several articles that made the point that Microsoft
04:18 Windows lacks a switching function.
04:18 A. I haven't seen that before. I'm pretty sure I
04:18 wasn't here for that.
04:18 Q. Okay. Well, that's one of -- that's
04:18 representative of several exhibits the jury saw.
04:18 A. Okay.
04:18 Q. Okay? And let me -- let me -- just so folks
04:19 understand, we, the Plaintiffs, had never seen your old

computers until about two days ago, had we?

A. These physical computers? I believe not.

Q. That's right. We came over to the building that you folks are using here in town and got the first chance to look at these about two nights ago?

A. No, no, that's not correct in terms of the first chance. I put this stuff in my report last fall.

Q. You put in your report that you had physical computers you were going to run these things on?

A. I provided a lot of screen shots from a Macintosh computer. It happened to be -- not be this physical one, but I did describe in my report the Amiga computer and I included screen shots from that, too.

Q. You included screen shots that you had gathered from a magazine article that had those screen shots; isn't that right?

A. I remember last fall connecting up a video display capture system to my Macintosh from the Amiga hardware.

Q. And I don't want to -- it's -- it's a side point, so I'm not going to waste a lot of the jury's time to prove it. But if I hand you your report, are you going to be able to point to me a spot in that report where you disclose that you had physical computers you planned to use in this courtroom?

A. I obviously did not say what I was planning to do in the courtroom.

Q. And in fact, you just -- you testified a little earlier that you just got the programming to even be able to run one of these things ten days ago; isn't that right?

A. I just got the version that I was satisfied was the correct 1985 version.

Q. Well, I bring all that up just to make the point that we just got to see these in the flesh a couple days ago; isn't that right?

A. Yes, but I think that was your decision.

Q. Okay. Well, we -- we'll let the jury decide that.

I want to show you something --

A. Okay.

Q. -- now that we've discussed. We've seen that Windows lacks the switching functionality.

A. Yes.

Q. The jury has seen evidence of that.

A. That's what that article says, yes.

Q. And you're telling me that you're not just toggling between application windows on one screen with this Amiga. You say you're doing something different, right?

A. I'm saying that according to the Court's definition of workspace, those windows have display objects inside and I can adjust the position and location of them. It meets the definition of a workspace.

MR. HILL: Are you running Windows on that system that we're hooking these things up to?

THE TECHNICIAN: Yes, sir.

MR. HILL: Will you put just your desktop on the screen?

Q. (By Mr. Hill) Now, this is -- this is a Windows desktop, isn't it?

A. It looks like it is.

Q. And that is a -- that is a web browser. It looks like it's open?

A. Is that internet -- no, that's Firefox. Yes, that's the Firefox web browser.

Q. Web browser open?

A. Yes.

MR. HILL: Christi, if you will now open a word processor or -- just another application, another program.

Q. (By Mr. Hill) So there we've got Microsoft Word, right?

A. Right.

Q. And if I maximize both of those application windows -- those are application windows, aren't they?

A. Well, they're more than that according -- now, first, of course, this is not technology from 1985.

Q. I'm not claiming it is.

A. But according to the Court's claim construction, each of those has display objects inside each of those as a workspace.

Q. So are you telling this jury that Microsoft Windows -- this looks like Vista, also would be covered by these patents?

A. I'm telling you that those are workspaces with display objects. Now, the patents cover more than that. They cover shared display objects that you can manipulate each workspace -- start your work in one workspace, continue on to another. And, of course, my job was not to analyze any technology from 2010. My job was to analyze technology before 1985. This Windows Vista did not exist then.

Q. Well, let me -- let me -- I'm not sure you're getting my point. My point is this: If all the witnesses in this courtroom have agreed that Microsoft Windows does not practice this invention, okay --

A. Okay.

Q. -- and the programs you have are doing nothing

more than Microsoft Windows, they -- reverse of the coin is they don't invalidate the patents?

A. Wait a minute. I didn't study Microsoft Windows. I made no claims for Microsoft Windows. It was not my task to study Microsoft Windows. Microsoft Windows did not exist in 1985.

Q. And I'm not claiming it does. Here's the whole reason I brought it up.

MR. HILL: Will you switch back and forth between these application windows using the task bar?

Q. (By Mr. Hill) See that?

A. Yes.

Q. What she's doing? She's switching between application windows, isn't she?

A. She's switching between workspaces by the Court's definition.

Q. Okay. So by the Court's definition, you think those are both workspaces?

A. Yes.

Q. So we have a workspace switcher in Microsoft Windows contrary to what every witness that has come in this courtroom has said?

A. First, I don't know what the witnesses said, but I'm talking about -- I'm not saying that those meet all the elements of the patent claims. I'm saying those

are two workspaces, and we're switching between them.

Q. And that's my point. You have read the claims in this patent in such a manner that they cover things that every other witness that came in here agreed they don't, haven't you?

A. No, that's -- you have given me no evidence that the other witnesses contradicted my opinion.

Q. You've read display object and workspace, as you said earlier, as potentially being the same thing?

A. No, that's not what I said.

Q. Did you not say they could in some circumstances be the same?

A. I said in some circumstances -- let's see, let me get this right. In some circumstances, a display object can be a workspace.

Q. And now then we're going to close these windows one at a time?

A. Okay.

Q. I tell you what, before we do, let's open a third. Let's keep it fair. Let's open a third application window.

MR. HILL: Whatever you want. A calculator, that's great.

Q. (By Mr. Hill) All right. There's our third application window.

A. Okay.

Q. And now then I'm going to shut the web browser. I'm going to shut the word processor. And what am I left with?

A. You're left with a calculator.

Q. I'm left with a calculator on a workspace, just like is shown on the screen of this Amiga right now; isn't that right?

A. That's right.

Q. Now, Dr. Wilson, the prior art that you testified about in this courtroom, these three references, those weren't the only three pieces of prior art that you identified in your report that you claimed originally invalidated -- anticipated our patents?

A. Correct.

Q. I want to show you a complete copy of your report with the exhibits.

MR. HILL: Your Honor, may I approach?

THE COURT: You may.

Q. (By Mr. Hill) I just want you to identify this for me.

A. Okay.

Q. Is this your report and the exhibits?

A. Well, let's see, there's 101 pages of the overview report, and then there are appendices.

THE COURT: Mr. Hill, would you step down here?

MR. HILL: Oh, I'm sorry, Your Honor, I sure will.

THE COURT: Just right there.

A. Appendices for the patents, and then there are appendices for the patent claims, as you say, a number of the prior art technologies. It looks likes my report. I haven't read every page.

Q. (By Mr. Hill) I sure wouldn't ask you to take that on.

Now, one of the references in your report -- and let me -- let me ask first. This is -- that's -- that's a chunk of paper right there.

What are you getting paid by the hour in this case?

A. As we discussed, $275 per hour.

Q. $275 per hour?

A. Yes.

Q. I've got in your report you're being paid $420 an hour?

A. No --

Q. No?

A. -- that's not what the report says.

Q. Okay. Well, let's --

A. Read it very carefully.

Q. All right. I'll make sure -- I may be -- I wouldn't want to misread it. I'm going to put it on the document camera, if I can.

A. Sounds good.

What it says is Silicon Valley Expert Witness Group, not my employer, but just an agency that I work with, gets paid $420 per hour, but they only give me 275. They keep the rest for their services.

Q. So what is Red Hat and Novell paying per hour for your time?

A. They are presumably paying $420 an hour. Unfortunately, I don't get it all.

Q. Can you tell me what Silicon Valley Expert Witness Group is?

A. It's an organization that works with attorneys to provide expert witness references. As I say, I'm not an employee of it. It acts like an agent for you.

Q. It's an expert witness marketing service?

A. Maybe you call it that, sure.

Q. If a lawyer for a lawsuit wants to find somebody to testify to something, they call them up and they send them an expert?

A. They -- they would call them up and propose an expert's CV, and then they interview experts to decide

whether they're the right people.

Q. And is that the same expert witness service that Mr. Gray also got retained through in this case?

A. I don't know. It may be, but I haven't talked to him about how he got in this case.

Q. Well, let's take a look at his report. When we look at his report -- when we look at the -- his curriculum vitae -- it's there on the very top.

A. Okay.

Q. Is that the same expert witness service?

A. It looks like it is, yes.

Q. So Silicon Valley Expert Witness Service was getting -- what does it say, 360, 365 an hour for several hundred hours for his time and they're getting 420 an hour for however much time we're fixing to talk about that you've spent on this report?

A. I don't actually know what they get in Mr. Gray's service. I only know what they get in mine.

Q. You didn't hear his testimony earlier?

A. I heard him say what he got paid. I didn't hear him discuss Silicon Valley Expert Witness Group.

Q. He said he got paid 360 -- I think it was 65?

A. Yeah, okay.

Q. So they would have gotten paid something more than that?

A. I guess. I wasn't part of that contract.
Q. Presumably because you get to keep 275 of your 420, right?
A. Right.
Q. How many hours have you recorded working on this case to date?
A. I have no idea. I send in a monthly invoice, and I've been working on this case on and off I know since last summer at least, but I -- I haven't kept track of the hours other than hours per month.
Q. Well, you're billing by the hour, aren't you?
A. Yeah, I keep track. Every month I send in an invoice. I've never totaled it.
Q. And -- well, let's talk about it then. Let's -- let's -- what are the estimates? What are some of the busy months, what was the hour total?
A. I don't remember. I remember some months when I essentially did no work on it which is when I got some of my iPhone apps written, but I don't remember the busiest month, other than I'm pretty sure this month will be the busiest month I've had.
Q. Well, how many hours do you think you'll bill this month?
A. Well, I've been working 14 hours a day on common days lately, but I, again, haven't looked at the

total hours. I just know that I'm tired at the end of the day.

Q. Okay. Well, let's -- let's think about that. 14 hours a day. How many days have you been in town?

A. I left last -- we came here Friday, I think. So it's been about -- this must be the seventh day I guess.

Q. Gosh, that's a hundred hours at least right there?

A. A good guess, yes.

Q. All right. And then before that -- that's just this week?

A. That's this week.

Q. You've been working on this case for how long?

A. Well, I remember talking to one of the -- one of the attorneys last June about the case, so I know I was on it then. I don't remember when I started.

Q. And you have no -- you can't give me any help, any ballpark estimate of how many hours you think you've billed in this case?

A. I don't have any idea whatsoever.

Q. Is it 500?

A. I don't know. I just -- I didn't add that up.

THE COURT: Let's move on, Mr. Hill.

Q. (By Mr. Hill) Can you tell me what percentage

of your total income for this year you'll make off this lawsuit?

A. Well, obviously I can make a wild estimate. For this year off this lawsuit?

Q. Uh-huh.

A. I'm guessing $70,000 say. I don't know. A wild guess. I shouldn't speculate when I don't have the numbers, but if I had to guess, I'll guess that.

Q. Well, let's get on to one of these other prior art systems that you originally said, based on your reading of this claim language, invalidated our patents?

A. Okay.

Q. I want to talk to you about the flight simulator.

A. The flight simulator, okay.

Q. Do you remember that?

A. Microsoft flight simulator?

Q. Yes, sir.

A. A very popular program.

Q. Let me find it in your expert report here. Okay. These flight simulator programs -- let's put it on the document camera.

All right. Do you see that screen shot at the bottom?

A. Yes, I do.

04:34 Q. That's a page out of your report?
04:34 A. Yes, it is.
04:34 Q. And if we look at the appendix to your report -- I believe it's Appendix E, if you'll bear with me. It's a big report. I apologize for having to shuffle through this paper.
04:35 This one will show it well enough. That's a screen shot from the flight simulator, correct?
04:35 A. Yeah, that's -- I'm sorry. I swallowed wrong. That's from the early -- one of the early PC versions, yes.
04:35 Q. And you said in your expert report that you signed and submitted in this case that that flight simulator invalidated our patents, didn't you?
04:35 A. Yes, I did.
04:35 Q. You said that that single piece of prior art met each and every claim limitation; isn't that right?
04:35 A. Yes, I did.
04:35 Q. And you said it because you can change the view, you can look out from the plane or you can switch to a view where you're looking out the back of the plane or another view where it's a tower view; isn't that right?
04:35 A. Well, specifically -- I'm sorry.
04:35 Q. Take you time.

A. Specifically I said that it has a work -- workspaces and multiple display objects. There are tools on the screen you can use to switch workspaces, and in some cases you'll see the same display objects in different workspaces even though there will be a different view of them from a different perspective.

You can see, for example, the airplane that you're simulating flying from different views. You can see the control tower from different views. I'm not saying that it --

Q. You said that --

A. I'm saying that it -- it -- according to the broad elements of the claim that the Plaintiffs are asserting, it meets the elements of the claim.

Q. So you have read these claims broadly enough that a flight simulator of this sort you say would invalidate the claims; is that right?

A. Yes, the claims were written that broadly.

Q. You didn't come into court today and testify to that though, did you?

A. No, I didn't.

Q. One last thing. You understand the significance of the Court's claim construction opinion, don't you?

A. Yes.

Q. It's the Court's job to decide the interpretation of the claims in the patent, right?
A. It's the Court's job to define those terms.
Q. Define the terms?
A. It's the experts' job partially to decide what the -- what to infer from the claims themselves and how to interpret them.
Q. But when we talk of claim construction, just for clarity so the jury knows what we're talking about, we're talking about the definitions that the Court has given that we all have to follow?
A. Correct.
Q. Same definitions that you heard Dr. Zimmerman talk about he applied as the Court had construed, correct?
A. Well, I actually believe Dr. Zimmerman --
Q. Did you hear my question? My question was the same definitions --
A. The answer is no.
Q. -- that he sat on that witness stand and said he had read and applied?
A. He did not use them in some cases.
MR. HILL: Thank you, Your Honor.
THE COURT: Thank you, Mr. Hill.
Let's take just a five-minute break here.

Give everyone a chance to stretch their legs before we finish up today.

(Recess.)

(Jury in.)

THE COURT: Be seated.

Mr. Lyon?

MR. LYON: Thank you, Your Honor.

Q. (By Mr. Lyon) Dr. Wilson, I just have a few questions, and I'll be done.

Now, would you agree with me that the definitions of box and item aren't the same, correct?

A. Box and item?

Q. Yeah, the word box and the word item, they have different definitions?

A. They do.

Q. And -- but a box is an item, isn't it?

A. It can be, yes.

Q. And a box could contain an item, couldn't it?

A. It can, yes.

MR. LYON: Now, let's look a little bit at the words again. Can we get the claim -- Court's claim construction up? Just highlight the same words that Mr. Hill was highlighting about display object and workspace, if possible.

THE COURT: Take it and show it to

Mr. Hill, too.

Q. (By Mr. Lyon) If you'll just answer the question.

A. Sure. Okay. I think there was a question. The answer is, is there a definition of application from the Court? And the answer is no, there is not.

Q. So, now, looking at those two terms, we all agree, I think, that a window is a display object, correct?

A. Yes.

Q. Now, windows and an icon is a display object, correct?

A. Yes.

Q. So you can have a window that's full of a bunch of different icons; is that right?

A. You can.

Q. And that would be a window that's containing a whole bunch of display objects?

A. It is.

Q. And if we look at the definition of work supplies, display system entity that includes a collection of display objects together with spatial display -- display relations between them, that would fit a window, wouldn't it?

A. It certainly could.

Q. A window full of icons?

A. If you had a window full of icons, it would fit it.

Q. And a window with a display object could also be a workspace, right?

A. Yes.

MR. LYON: If we could look at your slide, and I think -- I'm sorry, Jason, I'll try to read this, but I think it's 40, Slide 40, the application slide.

Q. (By Mr. Lyon) So how is it -- again, just to emphasize, why is it that you believe that this is a workspace?

A. Well, I've outlined or circled simple display objects, which one display feature such as the Apple symbol on the Apple menu, or a set of features, such as the window on the lower left that contains a number of different icons describing line widths for when you're drawing lines, those are display features. Some of them are single display features, some of them are sets of display features that are coherent in the sense they stick together.

The window is a collection of display objects. Well, there is a large collection, and I've only circled a few of them that are display objects. The switcher symbol on the right-hand end of the menu

bar is another display object, for example. It's all part of that same workspace.

Q. But as Mr. Hill has said, we have to follow the Court's definitions of these terms, right?

A. We do.

Q. And so if we find those definitions and you find that each of the claim terms are met based on those definitions, that results in anticipation, correct?

A. Yes.

MR. LYON: No further questions.

THE COURT: Thank you.

Mr. Hill?

MR. HILL: Thank you, Your Honor.

RECROSS-EXAMINATION

BY MR. HILL:

Q. Dr. Wilson, I just want to make sure I have one thing straight. You say -- or let me -- let me -- let me back up.

Dr. Gray says that the current products made by these defendants can't, and we heard in opening statements, can't do what's described in these patent claims. But you say these computers from 25 years ago can?

A. I don't know anything about the current products. That wasn't part of what I analyzed. All I

can tell you is what I told you about these products from 25 years ago.

Q. But were you --

A. Yes, they do meet the patent claims.

Q. Were you here for opening statements?

A. I was.

Q. And did you hear Mr. Krevitt tell the jury not only did the products not infringe the patents because they didn't perform the functionality, they were incapable? So the position of the defendants in this case is that their modern, new product cannot perform the functions described in our patents, but these 25-year-old dinosaurs can?

A. I'm not speaking for the position of the defendant. I'm speaking for my opinions regarding these 25-year-old products that would have hurt feelings if you called them dinosaurs.

Q. Well, you understand that that conundrum is the position that the Defendants in this lawsuit have taken, don't you?

A. I understand what my opinions are regarding prior art. That was my only task.

MR. HILL: Thank you.

MR. LYON: No further questions.

THE COURT: You may step down.

04:54 THE WITNESS: Thank you.
04:54 MR. REITER: Your Honor, Defendants will call its damages expert next, Dr. Putnam.
04:54 THE COURT: All right, good.
04:54 THE CLERK: Good afternoon. Please raise your right hand.
04:54 (Witness sworn)
04:54 MR. REITER: Thank you, Your Honor.
04:54 JONATHAN D. PUTMAN, DEFENDANTS' WITNESS, SWORN
04:54 DIRECT EXAMINATION
04:55 BY MR. REITER:
04:55 Q. State your name?
04:55 A. Yes, my name is Jonathan, middle initial D, Putnam.
04:55 Q. And why are you here, Dr. Putnam?
04:55 A. I'm here to speak about the estimation of damages in the event that the jury finds the Plaintiffs' patents valid and infringed.
04:56 Q. Okay. I want to make something clear right from the get-go. Do you believe that the patents are infringed? Do you know if the patents are infringed?
04:56 A. No, I have no opinion about that.
04:56 Q. And by you testifying today, are you indicating in any way that the Defendants think that the patents are infringed?

A. No, I understand that they contend that the patents are not infringed, but for my purposes, I have to assume the patents are infringed so I can compute the damages.

Q. And that has something to do with I think something we're going to talk about later, hypothetical negotiation; is that right?

A. Yes, that's right.

Q. Okay. Well, before we get into all of that, I want to talk about your qualifications, who you are and where you come from. So tell us a little bit about your -- yourself and your experience in this area.

A. Well, I was -- went to Yale University. I received a bachelor's degree in economics. I worked for the Yale faculty for several years and then enrolled in graduate school. I received a master's degree in economics in 1985 and them came to Yale Law School and Columbia Law School, and finally finished my Ph.D. in economics in 1986.

Q. A lot of school.

A. My parents thought so, too.

Q. What did you do after you got your Ph.D.?

A. I joined Charles River Associates, and I also received a grant from the National Science Foundation to use some of my graduate research to value the patent

portfolios of firms.

Q. What is Charles River Associates?

A. Charles River Associates is a management and litigation consulting firm. They're headquartered in Boston, Massachusetts.

THE COURT: Mr. Reiter, let me speak to two people here.

(Bench conference.)

THE COURT: As you know, I have real concerns of the damages area.

MR. REITER: Yes, sir.

THE COURT: And I want this to go as long as we can here given we've got our jury. Before we hit any numbers, I need you to kind of give a sign to say we're going to hit some numbers here, and I may want to excuse the jury at that time --

MR. REITER: Okay.

THE COURT: -- and spend a little time with -- with Dr. Putnam.

MR. REITER: Okay.

THE COURT: But let's go as long as we can before we hit that, all right?

MR. REITER: Okay.

THE COURT: The preliminaries and then -- okay. Thank you.

(Bench conference concluded.)

Q. (By Mr. Reiter) We were, what is Charles Rivers & Associates, I think.

A. Yes. That's the firm that I work for. I'm vice-president there. We do management consulting, litigation support, and they're headquartered in Boston.

Q. Okay. What do you mean by litigation support?

A. Well, for example, cases like this, when you need to estimate the value of a piece of intellectual property, that's my particular specialty. We provide help to -- we're economists, and we provide help to lawyers whenever they need to value something, intellectual property or some other claim that a plaintiff has against a defendant.

Q. And have you valued intellectual property in the past?

A. Yes, many times.

Q. How many times?

A. Over 50 times, actually, in court.

Q. In court?

A. Well, I'm sorry. In litigation and in court about -- between 12 and 15 times.

Q. And what is that process -- or how did you get into -- I'm sorry, how did you get into doing this litigation support and damages analysis?

A. I was once asked by a lawyer when I was in graduate school at a party if I could work on his case. He knew I was working on patent research. I wrote my dissertation on the valuation of patent rights, actually, and he said, oh, I've got a case you might be interested in. Could you help me? And so he hired me that way, and the rest is history. I've done it about 50 times since then.

Q. Okay. Have you ever done any cases here in East Texas?

A. Yes, I actually testified in Tyler before Judge Davis, and I had, I think, around five other cases that have been in either Marshall or Tyler that didn't actually make it into the courtroom.

Q. Have you ever testified on computer-related technology?

A. Yes, several times, several times.

Q. Anything related to software or open-source software?

A. Yes. Actually, there's a large case about the control of the copyrights related to the Linux operating system. It was entitled SCO versus IBM, and I represented IBM in that case.

Q. Who are some of your other clients you've -- you worked for?

A. I've worked for Apple. You've heard about them. I've worked for Hewlett-Packard. They were also mentioned in this case. In non-computer cases, I've worked for Gore. They make Gore-Tex, like jackets and boots and things like that. Eli Lilly, it's a big pharmaceutical company, companies like that.

Q. And this is all in valuating intellectual property; is that right?

A. Yes, that's correct.

Q. Judges always agree with your opinion?

A. Not always, no.

Q. Any specific instances?

A. Well, a couple times. I worked on a copyright case once where the lawyers actually wanted to offer a particular theory of defense for why they hadn't done what they said they did. And I authored a report for them. And then the judge said that the lawyers couldn't offer that theory. And so, therefore, they didn't need my report. So the judge said I wasn't needed.

And I guess there's one other case where the judge disagreed with some of my findings and said so, and then the defendants appealed the case, and she was reversed by the Court of Appeals, and her findings were vacated. So, you know, it happens.

Q. Yeah. So have you taught -- I think I might

have asked you that before. Have you taught in this area?

A. I have taught, actually, yes.

Q. And where have you taught?

A. I taught at Yale while I was a graduate student. I taught the economics of technology while I was that. I taught at Columbia University in the School of Law. And I taught at Vassar College in Poughkeepsie, New York. I taught industrial organization and finance at Boston University Graduate School of Management. I taught the management of intellectual property. And I hold a chair at the University of Toronto and taught intellectual property law and property law there.

Q. Have you published any papers or books?

A. Yes.

Q. What were those about?

A. I entered a book recently called intellectual property rights and innovation in a knowledge-based economy. I recently authored a chapter in a book on globalization called International Intellectual Property Rights, Primer. And if you look, there's something called the New Palgrave Dictionary of Economics. If you look up -- it's like an encyclopedia for all fields of economics. If you look up patent valuation and how to do that, then I authored the entry on patent valuation.

Q. For your work here, is your firm being compensated?

A. Yes.

Q. How much is that?

A. At the rate of $675 an hour.

Q. And about how much time have you put into this case?

A. About 250 hours.

MR. REITER: Your Honor, I'd like to offer Dr. Putnam as an expert.

MR. VICKREY: No objection, Your Honor.

Q. (By Mr. Reiter) I'm going to ask you a question about intellectual property generally. What exactly is intellectual property, at least as far as an economists and what you do? What does that cover?

A. Intellectual property is a series of rights, patents, copyrights, trademarks by which a person seeks to prevent other people from using something that belongs to them, but it's not a tangible thing like a cup or laser pointer. It's a -- it's an invention, or in the case of copyright, it's a novel. So you can't copy my invention if I have a patent on it. You can't copy my novel if I've got a copyright on it. You can't copy my brand if I've got a trademark on my brand name. So it's things like that that you can't touch but you

still have legal rights on.

Q. So patents are a type of intellectual property?

A. That's right.

Q. Okay. Now, let's talk about your work in this case. What were you asked to do?

A. I was asked to do two things. I was asked to value the Plaintiffs' patents, and I was asked to respond to the expert report and opinions that were expressed by Mr. Gemini that the jury heard earlier this week in court.

Q. Okay. Did you review any materials in forming your opinion?

A. Sure.

MR. REITER: Can we put up DX801, please?

Q. (By Mr. Reiter) What is this?

A. Well, these are -- it doesn't look very informative, but in litigation, all the documents in the case have their own special number on them, and so this is a list of some of the documents according to their number that I reviewed.

It's things like financial reports and marketing documents and descriptions of the products and their features and the feature at issue in this case, in particular. And so you have to list everything that you studied, and that's, I guess, the first page of a long

list.

Q. And then I think you -- you said you made some assumptions in doing your opinion. What were those assumptions again?

A. Yeah, there's -- there's basically two types of assumptions. The first assumption is I have to assume that you folks, the jury find that the patents are valid and infringed. So that's the first assumption. You've got to find the patent valid, and you've got to find it infringed. If you do that, if you do that, then -- then my opinion becomes relevant because we need to decide how much damages are to be paid.

And then the second set of assumption is that the parties, had they sat down at the time that infringement began, would have been willing to negotiate a deal with each other, and the question then is what is the deal they would have reached?

Q. Okay. But, again, you're not saying today that the patents are, in fact, infringed or, in fact, valid, are you?

A. No. It's sort of like appraising a car. I can tell you what your car is worth even if you're not selling it to me. In the same way, I can tell you what a patent is worth even if it's not valid and infringed.

Q. Do you have any understanding about what the

patents are about?

A. Generally speaking as an economist would, sure.

Q. Okay. And what's your understanding?

A. They -- they cover a user interface the way you look at a -- you deal with a computer, a graphical user interface, that has common display objects in multiple workspaces. Those are the features as I understand them.

Q. Now --

A. I'm sorry, I just want to say, and I -- I'll refer to that as an enhanced workspace switching feature. Okay. They didn't invent workspace switching, but it's an enhancement of workspace switching. So I'll call it an enhanced workspace switching feature.

Q. Now, for those of us that who don't have a Ph.D. in economics, how does one compute royalty or damages?

A. Well, I think the jury has heard the basics of this. There's a case from about -- it's now, like, 40 years ago called Georgia-Pacific. In that case, the judge said, here are the types of things you should look at if you're going to value a patent if you want to do a reasonable royalty, compute a reasonable royalty.

And so ever since then, going forward, experts have had to go back and say, well, how does the

evidence stack up against the Georgia-Pacific factors? And so I've listed them here. I've grouped them a little bit because it's hard to keep track of all 15. And it's really mostly common sense.

If you were asking yourself what's a patent worth, you'd say, what did people pay for it in licenses. That makes sense. How much money does the company make from selling their product or its profits, in other words? That's the second category.

The third category is what does the invention do for you? What are its advantages, and how often is it used? And then the fourth category is what's the relationship between the parties? How do they bargain with each other. And what's the deal they would arrive at if they were sitting across the bargaining table from each other?

Q. And how does your analysis compare with Mr. Gemini's analysis?

A. Well, I certainly disagree with Mr. Gemini. We -- we agree that the measure of damages, the way you ought to compute this is there ought to be a reasonable royalty. Nobody lost any profits in this case. There ought to be a reasonable royalty. But we disagree about three fundamental conclusions regarding how to calculate that royalty.

Q. And what are those conclusions?

A. Well, the first is Mr. Gemini says that the structure of the license the parties would have agreed to is a running royalty. That's a pay-as-you-go royalty. That's -- I've never been to the State Fair either, but I understand that's how they compute rides at the State Fair. You pay for each ride as you go.

And I just think that's the wrong royalty structure based on all the evidence. It doesn't support a running royalty. The evidence doesn't support that. It supports a lump sum. You should pay for this all-in, upfront, one at a time. The --

Q. What about -- what about rate or base? I talked -- did you hear me talk to -- were you here when I -- I talked to Mr. Gemini?

A. I certainly was, yes.

Q. Okay. And when Mr. Vickrey spoke with Mr. Gemini, as well?

A. That's right, yes.

Q. And we talked about royalty rate and base; do you recall that?

A. Yes.

Q. Do you agree with the way he did that?

A. No. I think that -- that both Mr. Gemini's royalty base, which is the number of units that the

Plaintiffs have accused of infringement, and the royalty rate, which is the amount that should be paid per unit, are both highly inflated, and so, therefore, the number that he comes up with is way too big.

I don't think there ought to be a royalty rate or a royalty base because I don't think it ought to be pay-as-you-go. But if you were going to structure that agreement as pay-as-you-go, then you shouldn't count that many units and you shouldn't have that high a royalty rate.

Q. Okay. Now, I think we were going to talk about each of those this afternoon with the jury, the structure of the license, rates, the bases, and then also Mr. Gemini; is that right?

A. Yes, that's right.

Q. Okay. So let's start with the license structure. You said there were two types, lump sum and running royalty; is that right?

A. Yes, that's right.

Q. Okay. And did you prepare a slide for determining whether a running royalty would be applicable?

A. Yes. The first thing that -- if you had a mother or you ever were a mother, you probably heard your mother say, it's not just what you say, it's how

you say it, okay?

And so in this case, we're talking about money. You can sort of adapt that expression to the structure of the contract, whether it should be a lump sum or a running royalty. In this case, the question is, it's not just what you pay, it's how you pay it. And so the first thing you need to decide is how would the parties have agreed to pay the money that the Defendants owe the Plaintiffs if the Plaintiffs are right?

And so I've put together a nine-part test here to see if there -- if you would structure the agreement as a running royalty or if you would structure it as a lump sum.

Q. Okay. Well, let's take each step as we go.

A. Sure.

Q. And try and quickly go through them.

If you have liability, does each unit infringe, what -- what does that mean?

MR. VICKREY: Your Honor, I -- I object to this. How could he be opining on whether certain units infringe or don't infringe?

THE COURT: Let's see what Mr. Putnam says, and then I'll keep in mind your objection.

Go ahead.

MR. VICKREY: Thank you, Your Honor.

Q. (By Mr. Reiter) All right. How does this part of the analysis in determining whether a running royalty should apply, the -- the issue of infringement, how does that come up?

A. Well, the -- the question is -- and maybe it could be worded more artfully. Obviously, I'm assuming that the products infringe, but the question is, does each of those particular units infringe? And so one of the things -- my understanding is that an infringing unit must have is a display, for example. If there isn't a display, then there can't be infringement. I don't think anybody can test that.

And so the question is, if you were counting the units, would you be able to verify that each of those units have all of the elements that are necessary in order to infringe? And the answer to that question is, no. We've already heard the technical experts, who actually do know something about this, discuss those instances where a computer running the accused operating systems doesn't have a display and so, therefore, can't be infringing, like in those server farms.

Q. So here, can the Defendants determine their percentage of what has or doesn't have, for example, a

display?

A. Well, again, that's part of the problem is that they sell operating systems, they don't sell entire units. And so when somebody downloads their software from the internet, the Defendants don't know whether that software is being used on a computer that has a display or doesn't have a display, so they can't determine this.

Q. Okay. Does that go to observability?

A. Yes. In other words, you can't -- you can't -- if you can't -- if the Defendants can't tell whether a unit is infringing or not, then they can't count it. So -- and that obviously means you can't count it, then you can't tell the Plaintiffs how many of those units they should get a royalty on.

Q. What about administrative burden, what does that mean?

A. Well, this just means -- we've heard a lot about this in the -- in court, talking about whether Red Hat and Novell actually count the units for their businesses, okay?

When you sell cars, you count the number of cars you sell. General Motors knows how many cars it sells, but Red Hat and Novell don't know how many copies of the software they've sold. So, again, it's

impossible to determine the royalty that ought to be paid under those circumstances.

Q. And how is that different from contract administration?

A. Well, for the first three reasons, you ask yourself if the parties are sitting down across the table and they know that they can't count the number of units that are actually infringing, then it's going to be impossible to agree on a contract between them that actually allows the number of units to get paid for because they're going to disagree about the -- about what actually constitutes the -- in effect, the number of rides that people are going on.

Q. And the next thing, I think, is revenue. Does each unit generate revenue?

A. Well, as we've heard, the -- the Defendants give away their software, and so the answer to that question is no. Again, unlike a car where if you sell another car, you make more dollars, if you give away another piece of software, you don't make any more money.

Q. So --

A. If you don't make any more money, then you wouldn't pay a royalty because you're not making any more money.

Q. So are you saying that because the software is free, the Defendants shouldn't pay any money?

A. No, no, absolutely not. The Defendants should pay the fair market value for the intellectual property for these patents. There's no question the Defendants should pay the fair market value if they infringe and the patents are valid.

But the question -- but -- but they wouldn't pay that fair market value on a pay-as-you-go basis. They would pay for it all upfront.

Q. What about the cost or the profit of the units, how does that part of the analysis affect --

A. Well, if you can imagine that sometimes you have an invention that lowers the cost of production. Maybe you use less gasoline in your tractor or something like that, and so it's -- it's cheaper to produce -- to produce, and so, therefore, the patentee wants a part of that savings that he's provided.

In this case, the accused feature doesn't lower the cost of production because software doesn't cost anything to produce, and so you aren't making any more money; you aren't saving any costs, and so, therefore, you aren't making any more profit every time somebody down -- downloads this.

Q. You've got upstream market, downstream market.

What does that mean?

A. Well, the -- now, the other thing you can look at is the competition, what happens in the -- in the marketplace. And so the answer is -- the -- the thing to ask yourself is does anybody actually pay for this technology on a per-unit basis right now?

The answer is no. None of the Defendants' competitors pay for this technology per unit, and so -- and, in turn, downstream, when they sell their operating systems, they don't charge their customers per unit, and so since there's not money changing hands on a per-unit basis, you wouldn't structure a royalty on a per-unit basis to try to compensate for each time the invention gets used.

Q. Is Microsoft a competitor of the Defendants?

A. Yes.

Q. Do they have this feature?

A. Not in Windows itself, no.

Q. Do they make it available?

A. They make it available for free, yes, that's right. You can download it as an option. But, again, you don't pay for it.

Q. Have you tried to download it?

A. I actually did it myself. Yes, it took about -- I went to the Microsoft website. It's in a

section called Power Toys. So if you want workspace switching, you go to Power Toys, and you get your Power Toy. It takes about two minutes, and you can install it on your computer, and so now I have a -- I still don't use it, but I -- I did it. I've got my own Power Toy.

Q. So does any operating system seller that competes with the Defendants pay for these patents on a per-unit basis?

A. Not that I'm aware of, no.

Q. What about any operating system seller that does not compete with the Defendants, do they pay on a per-unit basis?

A. Well, for example, Apple, we -- we see that Apple is not a major competitor of the Defendants, but we also have seen that they license this technology, but they pay for it upfront. They don't pay for it on a pay-as-you-go basis. They just got all their obligation out of the way upfront, pay fair market value when they were done.

Q. So what does all of this tell you about per-unit royalty or running royalty in your analysis?

A. Well, you see the conclusion right there, you get nine nos, and the answer then is should the agreement be structured as a per-unit royalty, and the answer is no, it shouldn't.

05:18 Q. Okay. Now, do you look at the actual patents, and does that come into play on whether it should be a running royalty or lump sum?

05:18 A. Sure.

05:18 Q. Okay. And how does that affect your -- your analysis? Prior licenses affect it?

05:18 A. Yes. Well, obviously, one of the things you're concerned about is how the -- what people do in the real world, and I can be an economist and hypothesize, but what I really care about is what people do in the real world.

05:18 And so in the real world, people have actually sat down and negotiated these agreements already, and I want to see how they've done that.

05:18 Q. Okay. And there are four licenses --

05:18 A. That's right.

05:18 Q. -- associated with these specific patents; is that right?

05:18 A. Yes, that's right.

05:18 Q. And if I get them right, there was Hewlett-Packard; is that right?

05:18 A. Yes, yes.

05:18 Q. And Central Point?

05:18 A. Yes.

05:18 Q. And Silicon Graphics, SGI?

A. That's right.
Q. And Apple?
A. That's right.
Q. So let's start with the SGI license. How was that structured?
A. That's a lump-sum payment. You pay once, and for $95,000, Silicon Graphics obtained the right to sell as many copies of an operating system that contained the enhanced workspace feature as they wanted to.
Q. Do you recall Mr. Geminis' testimony where he said that Silicon Graphics was willing to take the product out?
A. Yes.
Q. Does that affect your analysis at all of what he talked about?
A. Well, yes, they were willing to take it out, but what that means is that they were willing -- they were willing to pay $95,000 to put it back in.

So in the grand scheme of things, this feature couldn't make that much difference one way or the other because they only got $95,000 worth of benefit by adding it back into their system. So that's, you know, an indication of the fair market value of the technology, at least with Silicon Graphics.

Q. And how about Apple, how does that come into

play?

A. Well, it's the same thing. They -- they structured as a lump-sum payment, in this case for $1.25 million, covering a period of about seven years in total, and granting worldwide rights, again, to sell as many units as they wanted that incorporated the enhanced workspace feature.

Q. Did you recall hearing Mr. Gemini say that he wasn't aware of a way that the Apple license could go back in time --

A. Yes.

Q. -- and last for seven years?

A. Yes.

Q. Do you agree with that?

A. No, I think that's incorrect.

Q. Why is that?

A. Well, when -- when the Plaintiffs, IPI, sued Apple -- you can actually go back and look at the complaint. They complained about the infringement of one particular claim of one of their patents. That claim is called a method claim. It's a way of doing the enhanced workspace switching feature.

With a method claim, my understanding of the law is -- and certainly the Judge will instruct you on that -- but my understanding of the law is that you

are able to go back six years prior to the date you filed the lawsuit for the purposes of obtaining damages.

And under those circumstances, the -- the scope of the license, the time period covered would be six years prior to the filing of the license. And then the license went through the end of the patents, which was another year and a half. You put it together, it's about a seven-and-a-half-year period that Apple was covered for selling any operating system that had the enhanced feature.

Q. Now, you also mentioned the Central Point and the HP agreements. How did those come into play?

A. Well, these are -- these are different licenses. It's also important to look at them, but they are not two operating systems.

So the first thing to notice is that the first two licenses we discussed, SGI and Apple, are for operating systems. That's like what the Defendants sell. The Central Point and the HP agreements are for add-ons to the operating systems. They're options. So we know when a person wants this particular set of features, like if they want to rearrange their desktop or become more efficient, then they buy an add-on to the operating system.

That's not what the Defendants sell. So

it's important to look at those licenses. I put a little bit less weight on them, but -- but we have them as data points.

Q. Okay. Now there was something about HP selling its license or its business to another company. Do you recall that?

A. Yes.

Q. What happened there?

A. So HP decided to get out of the software business, and as part of sort of the cleaning house, there was this question of whether these patents should be licensed or not. HP was selling their whole business. This is the whole business.

Let's just play. I'm selling it to you, and as part of selling it to you, I need to transfer to you everything, and they will give you clean title so that you can go on -- so that the new company, Borland, can begin selling the products that HP was previously selling. Okay. It's called Dashboard.

So on the day that they licensed -- the day they sold Dashboard off to Borland, they also entered into this license agreement, and that would mean that Borland could also -- could also sell Dashboard and not have to worry about any claims of infringement.

So the license covered all of HP's sales

backwards in time, and then going forward into the future, the next $10 million of sales that Borland made, and if Borland made more than $10 million of sales, then there was a different provision.

Q. Okay. Did you do anything to determine how much HP sold prior to giving the license to Borland?

A. Yes. Based on what I could find out -- of course, this is now going back to 1995, and it's a little hard to keep track of this, but based on what I can find out, Borland said that HP has sold about 125,000 units of Dashboard before the sale of the business that Borland was buying, and at -- at HP's list price, which is about $99, that works out to about $12.4 million in sales in the past that this license took care of that became licensed as a result.

Q. And it had some kind of future component?

A. Yes. And so as I said, not only were the past $12 million licensed, but the next $10 million going forward were licensed. So a total -- the total license covered about $22.4 million worth of sales.

Q. For $110,000?

A. Yes. And what HP paid for that was 110,000, that's right.

Q. Okay. Now, do you have any evidence or did you see any evidence as to whether or not that $10 million

amount was ever reached?

A. No, I'm not aware of anything.

Q. Did Mr. Gemini identify any evidence as to whether or not that $10 million sum had been reached?

A. No, Mr. Gemini said the same thing, he wasn't aware of any reason to believe that they ever actually exhausted that 10 million dollar cap.

Q. Okay. Now, can you substitute or -- or convert a lump-sum license into a running royalty license? Is that possible?

A. No. That's one of the things you shouldn't do. In my expert report that I prepared in this case, I cited a text by a fellow named Jean Tirole who is a professor at MIT, an economist. And he explained that as a matter of theory, running royalty licenses and lump sum licenses are not economically equivalent. And the reason is, you know, it doesn't take a Ph.D. in economics to understand this.

If it turns out that you're raising the cost of producing every unit, then that means that people are going to charge a higher price. When you raise their costs, they raise their prices in general. If you don't raise the cost of every single unit with a lump-sum license, then people don't have to raise their prices.

And so getting back to what your mother would have told you, it's not just what you pay, it's how you pay it. The structure of the license is actually really important.

THE COURT: Mr. Reiter, this is a good time for us to -- because I need a little time to talk to my jury.

MR. REITER: Okay.

THE COURT: Can I speak to Counsel here for a second?

(Bench conference.)

THE COURT: Now, I'm going to tell the jury what we discussed earlier, which is that I may need them on Saturday. I'm not going to tell them that Judge Everingham will be substituting for me in that event, but I'm going to go through the schedule.

What I'm going to tell them is that we expect to finish with the last witness, Mr. Putnam, early tomorrow morning.

MR. REITER: Yes.

THE COUR: That we expect to start very quickly thereafter the closing arguments, and that if they don't get the case for --

MR. REITER: Sur-rebuttal case.

THE COURT: Oh, that's an interesting

question.

MR. HILL: We're not going to --

MR. REITER: You're not putting rebuttal on.

MR. HILL: No.

THE COURT: Okay. So then I would say I expect they will be deliberating soon, maybe before lunch but probably after lunch, and -- and these things aren't hard and fast, but that's what I'm going to give them an estimate on.

MR. HILL: If it helps with the scheduling, if we push into the lunch hour to finish closing, I'm sure the parties would be willing to split the cost to have lunch brought in for them if they wanted to start work.

THE COURT: Doesn't the Court take that anyway?

MR. HILL: I don't...

MR. REITER: We'll split it.

THE COURT: They'll be happy to hear that. All right. Let's -- let me talk to them.

MR. REITER: Okay.

MR. HILL: Thank you.

(Bench conference concluded.)

MR. REITER: May Dr. Putnam step down?

05:27 THE COURT: Step down -- step down for a minute, but don't go anywhere, please.

05:27 Ladies and Gentlemen, you need some guidance for your scheduling. So I thought after discussions with the parties, I would tell you what the rest of the trial looks like and our potential schedule.

05:27 We expect Dr. Putnam is the last witness in the Plaintiffs' case, and thus we expect him to be the last witness in the trial. Shortly after that, the Court would offer you its instructions on the law that you will apply in the case, and shortly after that, the parties would each have a period of time where they will give you their argument on how the case should be decided.

05:28 We expect that entire procedure will finish sometime perhaps in the morning but more likely in the early afternoon tomorrow. At that point, you will be released to deliberate the case.

05:28 I will give you instructions on that deliberation when you begin it, but you will have time to decide each of the issues the parties will present to you. You can deliberate as long as you wish, keeping the Court in mind as to how your schedule is proceeding.

05:28 You could deliberate even into the evening Friday, but assuming you do not finish Friday, the Court

would inform you that you are to return Saturday morning at 9:00 and continue your deliberation. And you would deliberate until you finish. You could finish -- whenever you finish is when you finish.

This Court will not tell you when you finish; you will tell the Court when you finish. And so there is a potential that you would need to return on Saturday, and I want you to be aware of that so you can clear your schedule to do that.

The parties have made a generous offer, both of them, and they've said that in the event that you wish to deliberate over the lunch hour, they will bring lunch in for you, and, therefore, you could gain a little bit more time on Friday for your deliberations.

We would go potentially until the trial phase is over, breaking for lunch probably a little later than we usually do, but you'd have lunch then waiting for you that the parties have jointly brought to you, and you could begin your deliberations over lunch.

That's the way the schedule sounds. You deliberate until you finish. If you don't finish Friday night, you would come back Saturday and you would deliberate until you finish. Okay.

JUROR: Then what happens after that? When we come back in, is there anything else?

THE COURT: No. Once you have reached your verdict, the Court will accept your verdict. The parties will receive your verdict with you present, and then you will be released, and that will be the end of your service, and we will all thank you very sincerely and vociferously.

I think that gives you the instructions you need to plan for the rest -- for the rest of this trial.

And with that, we've reached our closing time for today. So we'll see you tomorrow morning at 8:30.

(Jury out.)

THE COURT: All right. The Plaintiffs have used 9 hours, 54 minutes -- essentially 10 hours. The Defendants have used 11 hours, 37 minutes -- 11 and a half.

We have several things -- sit down. Several things this evening. I propose we take a five-minute break, and then I'd like to spend a little time with Dr. Putnam. He ought to hang around. It will be interesting. We're going to talk about a horse and the House of Lords. And now he's starting to worry. He's taught at Columbia, but he doesn't know about a horse and the House of Lords.

But -- then we're going to deal with jury instructions. My clerks have looked over your efforts for which I'm very grateful. You have tried lots of cases. You got guys closer than anybody I've had to work with, and I'm saying that as a pretty sincere compliment because I've worked with some pretty fine attorneys.

And we'll deal with the Inventorship issue and the damages on which there's still a split in the parties. I've taken a look at that already myself, and I think I'll have some language that we will all be happy to embrace.

And then we also have our admission of documents to deal with. Give me five minutes, and we'll start with the documents. Then we'll do Dr. Putnam, and then we'll do jury instructions.

Anything else?

MR. REITER: Your Honor, just one question on the jury instructions. Is this going to be the formal charge conference where we make our objections?

THE COURT: Yes -- well, no. No, this will be where we come up with the -- with the document I'm going to read. And then I think you should make those objections -- I'm going to send our reporter home, and we'll make those reject -- those objections when

she's present and make sure that they're all handled for the record.

MR. REITER: Thank you, Your Honor.

THE COURT: Any questions of what we're doing for this evening?

MR. VICKREY: No. Your Honor, although the parties have yet to come up with a structure for closings --

THE COURT: By the way, I'm a little offended. You didn't offer to bring me any lunch.

MR. GASEY: It was implied, Your Honor.

THE COURT: Actually it's not. I don't think you can, but I can be offended anyway.

Excuse me, Mr. Vickrey.

MR. VICKREY: Yeah, in light of the time pressures, we were just going to suggest an hour for each side and we -- we go 45 minutes with 15 in rebuttal.

THE COURT: How does that sound to you?

MR. KREVITT: Give me two minutes. That's the first I'm hearing of the proposal, Your Honor. If I can have a few minutes to talk to my colleagues, and then we'll -- by the time you get back from your break --

THE COURT: By the way, that's --

Mr. Vickrey, that's sounding very much like what I would propose.

MR. KREVITT: That gives me some sense of our position, Your Honor.

THE COURT: But you can -- you can discuss it with your colleagues if you'd like. I'll be back in five minutes.

(Recess.)

THE COURT: I think we're ready to put the documents for today in the record.

Ms. Dickman, are you first? We always start with you first.

MR. KREVITT: Your Honor, I'm sorry to interrupt. Just following up on the closing, I would accept Your Honor's suggestion with one request which is possibly some cushion on my time so if I can -- definitely not more than an hour and 15. I'll do my best efforts to complete it by an hour, I assure you of that. But there's so much to cover. If I could have just an hour and 15 to be sure, I can -- I can assure the Court I will not go over that.

MR. GASEY: As long as we get a little bit of bump up in our time.

THE COURT: Yeah, sure.

MR. KREVITT: I'll do my best.

05:44 THE COURT: I like the hour target.
05:44 MR. KREVITT: Yeah, I will use that as a target.
05:44 THE COURT: And I just won't get too excited if you go a few minutes over.
05:44 MR. KREVITT: Yeah, it certainly won't be more than 15 minutes, Your Honor.
05:44 THE COURT: 15 is more than a few. Work on it.
05:44 MR. KREVITT: Okay. I've got to go start. I'll see you later.
05:44 THE COURT: That will be fine.
05:44 Ms. Dickman.
05:44 MS. DICKMAN: The Plaintiffs would like to offer the following exhibits to be admitted: PX1, PX2, PX3, PX6, PX91, PX05, PX285, PX290, PX308, PX309, PX310, PX314, PX315.
05:44 MR. STEWART: We have an objection with that one.
05:45 THE COURT: 315?
05:45 MS. DICKMAN: PX326 and DX819.
05:45 THE COURT: Okay, Mr. Stewart. Let's take care of the 315, and then we'll get your entries.
05:45 MR. KREVITT: We would object, Your Honor. They didn't -- there's no foundation.

THE COURT: What's the 315?
MR. KREVITT: That was the video of the --
MR. GASEY: The video off the better desktop.
MS. DICKMAN: The woman --
MR. GASEY: -- woman dragging the -- the window from one workspace.
THE COURT: Oh, yes, yes, yes.
MR. KREVITT: There was just no foundation at all as to this witness's knowledge about it.
THE COURT: I'm trying to recall.
MR. GASEY: Your Honor, Mr. Rex admitted there's 1500 hours of video made by Novell. That's -- that's the video compilation.
MR. KREVITT: There wasn't evidence of the second part. There was certainly evidence that there had been many, many hours of video. There was no evidence at all as to where that video came from or what it was. They just recrossed, went up and showed a video.
MS. DICKMAN: It was downloaded directly from the website.
MR. KREVITT: I take your word for it, but that's just the point. No one said what we just heard.
THE COURT: Thank you, Mr. Krevitt. I'm

going to overrule the objection and allow it in on the basis that there was testimony that there was available this information about studies that were done. There was some discussion of the studies, and this was presented as an example of the studies.

MR. GASEY: Thank you, Your Honor.

THE COURT: So I'm going to allow that in. This is one of those instances where my -- my own peculiar style of doing this later could cause them prejudice is all -- is also -- they would have certainly supplied all of that on the spot if I hadn't delayed the presentation of documents until the end of trial, which Ms. Dickman and Mr. Stewart have caught the idea of it very quickly. I think it generally works quite well to do it this way and moves things along.

Mr. Stewart, you were going to offer some --

MR. STEWART: The Defendants offer DX98, DX342.

MS. DICKMAN: We're objecting to that.

THE COURT: DX -- what is it?

MR. GASEY: 342, Your Honor.

THE COURT: We'll come back. Go ahead.

MR. STEWART: DX455.

MS. DICKMAN: We're objecting to that.

THE COURT: 455, uh-huh.
MR. STEWART: DX535.
MS. DICKMAN: We're objecting to that.
MR. STEWART: DX577.
MS. DICKMAN: We're objecting to that.
THE COURT: 577?
MR. GASEY: Yes, Your Honor.
MR. STEWART: DX601.
MS. DICKMAN: We're objecting to that.
THE COURT: Okay.
MR. STEWART: DX679.
MS. DICKMAN: We're objecting to that.
MR. STEWART: DX714.
MS. DICKMAN: We're objecting to that.
MR. STEWART: DX721.
MS. DICKMAN: We're objecting to that.
MR. STEWART: DX727, DX817, DX818.
MS. DICKMAN: We're objecting to that.
MR. STEWART: I'm sorry. I missed DX801.
THE COURT: Yeah, that's okay.
MS. DICKMAN: Fine with us.
MR. STEWART: Okay. And you objected to 818 --
MS. DICKMAN: Yes.
MR. STEWART: -- is that right? But 817

was fine?

MS. DICKMAN: Correct.

MR. STEWART: We have PX091, that's Plaintiff's Exhibit. Then we have Plaintiff's Exhibit 290, Plaintiff's Exhibit 308, Plaintiff's Exhibit 309, Plaintiff's Exhibit 310, Plaintiff's Exhibit 314, and that's it.

THE COURT: Okay. So we have one, two, three, four, five, six, seven, eight, nine to deal with. Three or two?

MR. GASEY: This -- I mean, frankly, Your Honor, these can largely be dealt with as a group. The is largely the condition of the authenticity question, things such as the diskettes that we talked with Your Honor tonight -- last night as part of the demonstration we had.

THE COURT: So this is the disks -- is there anything other than what we saw with the prior art demonstrations?

MS. DICKMAN: There is Mr. Gray's documents considered, were not offered.

MR. GASEY: That's 818. That's the only other one that --

THE COURT: Let's deal with these all first.

MR. GASEY: Right.

THE COURT: Then if you want to clarify your objection for the record.

MR. GASEY: Our objection for the record, Your Honor, is there's a lack of indicia of reliability as to these exhibits. Dr. Wilson testified at least as to one of the pieces of software, I believe it was the Apple software, that it was assembled from components and was -- there is no chain of custody to go ahead and verify the reliability of the underlying information. Obviously, we're not -- we're not disputing that, you know, when a screen shot shows 1985, it shows 1985, but we have no way of verifying that it is, in fact, the original item was in commerce as of that date.

THE COURT: Dr. Wilson, I questioned him a few times on this. And he -- one of the ways that he made it clear that there was some reliability was the copyrights and the dates that he saw. He also said another reason was that they were all compatible and they were runable on the same system -- the same machine at the same time --

MR. LYON: And also just that he also testified extensively about the various characteristics of the program relative in the manuals and things you can do to verify that they operate in the way you would

expect.

THE COURT: And then of course, there's Dr. Wilson himself who -- I don't want to defend him, but I think he was around.

MR. LYON: And the Plaintiffs had the opportunity to cross-examine.

THE COURT: He struck me as someone who recognized a fraud pretty quickly himself.

MR. GASEY: Yeah, the other -- the other one that deviates from this group somewhat and I think Your Honor heard from that was the --

THE COURT: Let's finish this ruling.

MR. GASEY: I'm sorry.

THE COURT: I'm going to allow those. We did do a pretty careful inquiry as to authenticity. We looked at them last night, as well as during the Court proceeding here, and I'm confident that they were reliable.

MR. LYON: Thank you.

MR. GASEY: I understand the floppy disk, Your Honor.

The one that I guess I want to make sure I point out a different -- a related but different objection to is DX601, the experience designing the Waterloo port user interface. That's one that he

constructed. It's not -- it isn't an actual software source. It was like his interpretation was of what the Waterloo-Chan article told him. It's a combination of other references.

THE COURT: Yes, I think he made that clear. I think he made it clear that he had constructed it based on his reading of the article and he said that -- remember he had Chan's handwritten or graphic presentations and then he had his senior professors -- Malcolm, wasn't it?

MR. LYON: Yes, sir.

THE COURT: -- Malcolm's screen shots. And I think he put them up and compared them side by side. And --

MR. GASEY: If it's admitted as a demonstrative, Your Honor, as long as it's clear that it's that, it's not admitted for the substance of the matter that it intends to prove, that's fine. We just -- there's a difference between creating a demonstrative in 2009 weaving together two articles versus, you know, trying to -- trying to imply to the jury that it's an actual prior art reference unto itself.

MR. LYON: That was not the intention. The intention was to demonstrate what the Chan system

had.

THE COURT: It was a demonstrative. That's what I perceived, as well, and for that purpose, it's admitted. And I think that gets us to 818; am I correct?

MS. DICKMAN: Yes, Your Honor.

MR. GASEY: That was not offered.

MS. DICKMAN: I reviewed the transcript.

MR. LYON: If you've got it --

THE COURT: What is 818?

MS. DICKMAN: It's like the beginning of the end.

THE COURT: What's 818?

MS. DICKMAN: It is Mr. Gray's documents reviewed. The documents he considered for his report.

MR. GASEY: His CV was published, but not -- not the exhibits considered.

THE COURT: I'm not recalling this. Can some -- can you help me, Mr. Lyon?

MR. LYON: Maybe.

MR. KREVITT: Our technical expert on infringement --

THE COURT: I remember --

MR. KREVITT: -- and the question evidently is whether from his report the list of

materials he considered in connection with preparing his report should be admitted into evidence.

MR. LYON: I don't actually have a big concern about it, Your Honor. I thought I brought it in, but apparently I don't see it in the transcript so I can't say I did.

THE COURT: Okay. Then 818 is not admitted for the record, but everything else is?

MR. LYON: Your Honor, what would you like me to do with these disks we're going to substitute in for the DVD?

MR. GASEY: We agreed we had no problem. We maintained our authenticity objection, but we had no problem swapping them in for DVDs that were originally submitted.

THE COURT: Okay. Fine.

MR. LYON: So should we just put those in envelopes?

THE COURT: Yes, I think that's the best way to do it, some way that --

MR. HILL: Do we want to wait to do that until after we have a verdict? That way if the jury wants to see something, they'll get that.

MR. LYON: That's fine. We can leave them here with the --

MR. GIBBONS: Put them in your --

MS. DICKMAN: And we would need to pull all our materials out anyway, so...

MR. KREVITT: We can put all those in the jury room, can't we? So they can play with them and break them.

THE COURT: They've got to be somewhere with the case.

Thank you.

Have we finished with documents?

MR. GASEY: I think we have.

THE COURT: Thank you, Ms. Dickman and Mr. Stewart. Once again my compliments; you grasped very quickly how I envisioned it happening. Thank you.

Now, we're -- I think I want to speak to Dr. Putnam.

Please be seated.

MR. REITER: Your Honor, where do you want me?

THE COURT: Just sit down and let me talk to Dr. Putnam for a minute.

MR. REITER: Okay.

THE COURT: We'll do it the way we did it with Mr. Gemini, which was -- I think it's pretty open. If you feel you can assist me or Dr. Putnam at any time,

you can -- either party can stand up and just help me and help Dr. Putnam.

MR. REITER: Thank you, Your Honor.

THE COURT: Just for starters, at the end, you said no running royalty and lump-sum payment can be rendered equivalent. And you told me -- you told my jury that was an economic principle.

I haven't studied economics as long as you have, but I'm under the impression you can do time value of money and vice versa, and you can almost equate anything, if you use the right principles and formulas.

So why can't you do this?

THE WITNESS: It's an excellent question, Your Honor.

THE COURT: You were careful in how you said it. You said, in theory, you cannot render one in the terms of the other. But I'm not sure I agree with that theory. Tell me why.

THE WITNESS: Well, it's an excellent question. I mean it in a very precise sense. I wasn't trying to be careful or cagey. I was trying to be precise.

And what I mean is this: A license has, in general, one of two effects: Either it increases the licensee's cost of production or it doesn't. And by

cost of production, I mean marginal cost of production.

So in other words, either a license increases the cost of producing an additional unit or it doesn't. And so if it does, then it raises marginal costs, and basically every Econ 101 textbook will tell you that when marginal price goes up, then prices adjust accordingly.

So the fact that two licenses yield the same revenue in expectation doesn't mean that the licensee would behave the same way under each of those two license structures. So, for example --

THE COURT: But -- I mean, you're making kind of my point, that whether it's a per-unit basis or a lump sum, it's going to be part of the cost. And I could figure that into my margin and somehow render a lump sum in terms of the marginal per-unit cost, or vice versa, I could tell you the lump-sum value of a per-unit application, couldn't I?

THE WITNESS: There are two issues I don't want to confuse, okay? So, first of all, if you're thinking about --

THE COURT: This is a matter of mathematics.

THE WITNESS: Yes, I understand.

First of all, let me agree with you and

distinguish two cases.

THE COURT: All right, fine.

THE WITNESS: It's perfectly possible to take a cash flow that occurs over time to discount that back to present value and figure out the equivalent lump-sum payment, okay? So --

THE COURT: There you go. That's what I'm talking about.

THE WITNESS: And there's no question you can do that. And those two things are equivalent. So if I give you the right to a dollar a year forever, okay, at 10-percent interest, then the question is what would you pay for that right, and the answer is you would pay $10. And so that asset, that lump, that $10 is the same as a dollar a year forever, if the interest rate is 10 percent. We don't disagree about that.

THE COURT: So why did you tell the jury, in theory, you can't do that?

THE WITNESS: Well, because -- because the right to an asset stream or the right to a cash flow and the ability to convert a cash flow into a fixed asset is not the same thing as the operation of a running royalty, which actually changes the cost structure of a firm.

So, for example, just to take an everyday

example --

THE COURT: So you're saying that the firm is going to treat it differently even if the economist can equate it?

THE WITNESS: Yes, that's right. An economist can compute -- if you had to report what you expect on the cost of your royalty to be -- suppose you sign an agreement and the patent's got ten years of life left, and for financial purposes, you need to report that on your balance sheet. I've got this obligation and here's what I think it's going to cost today.

And so it's going to cost me -- the present value is a billion dollars over the next ten years. You can compute that, but it makes a difference in your behavior whether it's a billion dollars that you've paid today or whether it's a running royalty that you're going to pay over time.

If you pay it over time, then you will build it into your pricing structure. If you pay it as a lump sum, then you're -- as circumstances change and as facts change, you can adjust your price differently when you're burdened by that -- you would adjust your price differently when you're burdened by that running royalty.

THE COURT: Why would it be different? As

you say, it's the same amount whether it's the $10 or $1 over 10 years, I'm going to adjust my prices on my products to account for that cost, right?

THE WITNESS: Well, let me give you an intuitive example. Maybe we can move the ball down the field a little bit.

THE COURT: Sure.

THE WITNESS: Suppose that you're taking a cab to the airport, okay, and you can imagine two license structures, two taxi fare structures, okay? In one taxi fare structure, you pay a certain amount per mile, and the other taxi fare structure, you pay a certain amount upfront, and that's the cost of going to the airport, okay?

And so depending on which of those contracts you're operating under, that might affect the way you approached the trip to the airport.

THE COURT: It might affect the taxicab's driver's route.

THE WITNESS: And that's --

THE COURT: How often has that happened to you in New York City?

THE WITNESS: Well, as a matter of fact, we were discussing a slide trying to explain exactly that problem. In fact, truthfully, I Googled the

distance from La Guardia to Grand Central Station for the purposes of trying to illustrate to the jury that this is a problem that you face in New York.

I don't want to be taken for a ride by a New York cab driver who decides the best way to get from La Guardia to Grand Central is via New Jersey, if I don't know the area.

But if we agree upfront that I'm going to pay you 50 bucks to take me to Grand Central Station, I don't care how you get me there, then that's not going to happen. In that case, the guy has got an incentive to drive you there directly because he wants to get on to his next fare.

And that is simply my point, is that the structure of the agreement influences behavior, both the buyer's behavior and the seller's behavior. And you can't say -- since in one case the driver has an incentive to deceive you, in the other case, he doesn't, you can't regard those as equivalent contracts.

THE COURT: Why do you think the buyer in this case -- that's our Defendants -- would want a lump sum?

THE WITNESS: Well --

THE COURT: If they know their way to Grand Central Station, they might do better under 50

bucks. It isn't 50 bucks to Grand Central; it's about 30, and so why would they take a 50-buck guarantee that you don't go via New Jersey, if they know that on the meter it's going to be about -- about 27, 28?

THE WITNESS: Right. So I think as the Court actually pointed out in Lucent, if I'm not mistaken, one of the -- and just to bring it to this case, but also illustrating with taxis, you're allocating risks differently under those two contracts.

So, for example, one party or the other might have private information about traffic conditions, and so -- and in more complex contracts, you're not simply looking at the distance to Grand Central, but you're also looking at time, waiting time.

THE COURT: You are.

THE WITNESS: And so, for example, let's suppose that I am the buyer and I can get on my iPhone and see that there's a traffic jam, and so I'm either going to have to take -- I'm either going to have to go via the Triborough Bridge or I'm going to spend a long time sitting in traffic in the Midtown Tunnel.

And so I say to the cab driver, you know, let's just call it 30 bucks, okay? And so I've got private information, and so, therefore, we've shared our risks differently about travel and time than we would if

we were doing it on the meter.

And so -- and the real point, the fundamentally common point is that those two contracts will result in different actual payments and different behavior. And even though in advance you might say, on average, whether you pay by the meter or whether you pay upfront, it's about 30 bucks. That's true on average.

In this particular case, it's going to be either better than average or worse than average, and depending on the parties' preferences, they may --

THE COURT: So tell me now why --

THE WITNESS: -- enter into a different contract.

THE COURT: -- they are going to do $30 when they think they can get there --

THE WITNESS: They're not going to use it that much.

THE COURT: Their whole case all the way along is we don't use this thing at all.

THE WITNESS: Yes.

THE COURT: And so why are they going to pay 30 bucks? Why wouldn't they say let's go per unit? This is the hypothetical negotiation in advance now. Why wouldn't they say we don't think this is used much; let's go per unit, because it's not going to be

downloaded much?

THE WITNESS: Right. Well, the --

THE COURT: Mr. Reiter wants to help us out.

MR. REITER: I thought I might just try. Dr. Putnam had a slide with nine factors.

THE COURT: Yeah, I remember those. Those were good, and I've got them in mind.

MR. REITER: Okay.

THE COURT: So I don't need to see that again. Do you need to see it?

THE WITNESS: No, no. I wrote it, so I'm good with it.

But so now we're speaking about this case.

THE COURT: Yes, we are a little bit.

THE WITNESS: So the -- my understanding -- so, first of all, the answer to, I think, the question, Your Honor, is that they could do that. But, in general, it's -- going back to the taxi example, would you want to get into a taxi if the guy said, you know, my odometer is broken, and so it's $2 a mile. I live in New York. You know, I drive to Grand Central all the time. I know about how far it is. When we get there, I'll tell you how far it was.

You would say, no, if we're doing this on

the meter, you'd better have a meter that actually keeps track of mileage.

And the problem that we face in this case is that there's no meter, so you don't know how many units are out there. They don't track that, and you don't know of the units that are out there how many are installed on a machine that actually can be configured to infringe.

So, in effect, you're getting into a taxi where you can't keep track of mileage and time, and it doesn't -- the expression has now become, it doesn't take a Ph.D. in economics to realize that the driver and the passenger are going to get into a lot of arguments about how long it took and how far they traveled, if there's nothing to measure those two contractual terms with. And that's really the situation that we're facing here.

MR. REITER: Your Honor?

THE COURT: Go ahead and help me out.

MR. REITER: Well, I don't know if I'm helping or hurting. This is way above my education level.

But Dr. Putnam has explained to me about demand curves as the price goes to zero and that sort of affects the analysis here, and I thought that I might

invite him to talk about that, because I always blanked when he talked about it.

THE WITNESS: Should I accept Mr. Reiter's invitation?

THE COURT: Please. But I'm not smarter than Mr. Reiter.

MR. KREVITT: Then we're all in trouble.

THE COURT: So you're going to have to -- but I do understand demand.

THE WITNESS: Yeah, okay. So -- and I heard you actually begging for one.

THE COURT: I do, because I really think it would bring some discipline to the process.

THE WITNESS: I couldn't agree more. I prepared two of them for you, and, unfortunately, they didn't make the director's cut.

THE COURT: I want to see it, because it will help me with my horse in the House of Lords here in a minute.

THE WITNESS: All right. So --

THE COURT: Okay. That I understand. That's elemental.

THE WITNESS: So the reason for putting this up is just to get to the next slide, actually. So as the price goes down, the quantity and demand

increase.

THE COURT: I got that.

THE WITNESS: So the next slide is the important one.

In this particular case, the price of the product is essentially zero. They give away software for free. The whole goal of the business model is to get the software into the hands of as many people as possible. They call it ubiquity, I guess, is the marketing term.

And there's lots of reason that don't have much to do with pricing for this. For example, you want to create as large a community of developers as possible, because they're the ones who actually improve the product. So there's some synergy with your consumers.

So the point of it is, you want to have a price of zero. And the question is, what happens if you increase that zero price to something greater than zero when the demand curve has a shallow slope, which it does.

And so if you take the price up from zero to something above zero, for example, Mr. Gemini's royalty, even like at 62 cents which he says, you're going to drastically reduce the number of units from

Point A to Point B. And that violates the whole concept of the business model, reduces the size of the community, and imposes all kinds of inefficiencies on the Defendants' production process, even if it weren't the case that -- even if it were the case that they can track the number of units.

So we're assuming we actually know what A is or B is. We don't know that. But even if we did, it would mean such a big change in the number of units, it would be inefficient.

THE COURT: But I have a feeling that somebody from -- probably Mr. Vickrey is going to jump up in a minute and say but the price isn't really zero, because we are --

MR. VICKREY: Your Honor made an excellent point, but I think ultimately --

THE COURT: You can stay there where you're comfortable.

MR. VICKREY: We are going to be arguing about the -- his -- what he believes to be the appropriate measure, but I don't -- I can't tell you that this should just be completely excluded.

We have a difference of opinion as to whether it works, whether he's right, whether Mr. Gemini is right. I understand what he's saying, but...

THE COURT: I need you to tell me why he isn't right here.

MR. VICKREY: Well, I've never seen this before, so I don't understand where he's coming from with the price.

THE COURT: Well, he is saying that the price of your -- the price that you are asking for the claimed invention is zero, because you give it away for free. That's true, but you generate income by giving it away for free, and so you will have to come back and tell me that the price actually isn't zero, because the price to you is the income you generate from giving it away for zero.

MR. VICKREY: That's the missing component. They said that their business model is making profits by --

THE COURT: How do you deal with the missing component, what I just said. I'm making Mr. Vickrey's argument, but they're making money, because they give it away for free.

Where does that factor into your demand curve?

THE WITNESS: Well, Your Honor, the -- if you recall from basic economics, a demand curve reflects the -- a particular good, one good.

THE COURT: Yes.

THE WITNESS: And the problem that we have here is that there are multiple goods.

THE COURT: We're trying to find the marginal cost.

THE WITNESS: So the marginal cost is zero in this case, and, in general, a marginal cost and price are equal equilibrium.

Now, it turns out that -- I mean, the point has to be acknowledged. The absolute price is not zero. It does take time to actually download the software onto your computer. There are -- you incur costs when you download the software, but for practical purpose, we can keep the price at zero.

THE COURT: I think this is the time for my horse, because I think it's going to help us.

THE WITNESS: Sure.

THE COURT: I'm trying to remember who it is. I think it's Lord Diplock handling a patent case, talks about damage theories and says, of course, one theory is restoration. He put them back in the place they would have been.

Your argument is if they're giving it away for free, they'll be in the same position anyway. But then he says, no, there's another principle. It's the

principle of the horse. And he explains that if I own a horse and I keep it in the stable, it's a mangy old -- I'm embellishing a bit, but it helps. It's a mangy, old horse kept in the stable.

Along comes a delivery boy. He takes the horse and uses it, rides the horse around making deliveries. Interestingly, he feeds the horse; he brushes the horse; and he brings the horse back in better condition than it was just sitting in the stable.

Now, in fact, I've since profited, because my horse is now in better condition, but Lord Diplock says, no, I'm going to charge you for the rent of that horse. There's going to be a rental value on that horse.

I think we're talking reasonable royalty in our American legal terms.

THE WITNESS: Yes.

THE COURT: So I'm going to charge you a rental on that horse. Now, what I need you to explain to me, because I think it's very relevant to this, is the delivery boy takes the horse for one day or he takes the horse for ten days, how do I calculate the difference in rental value?

Remember, I wasn't using the horse anyway, and I'm getting back a better horse than I had. In a

sense, you could say there's no damages. That's pretty close to what Mr. Reiter is saying. It's pretty close to no damages, but we have to charge, assuming the kid took the horse without permission, infringement. We've got to charge him for the horse.

How am I going to make that charge?

THE WITNESS: I think we have competing people who want to speak. I certainly have an opinion, but I want to make sure that --

MR. VICKREY: Well, I want to hear yours first. Then we can hear from them. They're lawyers.

THE WITNESS: All right. The first thing I want to make clear, Your Honor, is that the fact the Defendants give software away for free, in my opinion, has absolutely nothing to do with the compensation amount that should be due to the Defendants, okay?

The Defendants should receive the fair market value of the use of their horse, regardless of whether the person who took it is an open-source provider or a proprietary software provider.

THE COURT: That's a good -- you answered that one, I think, right. Go on.

THE WITNESS: And so I don't want that to be an issue.

THE COURT: Good.

THE WITNESS: The second question, then, becomes, what's the rental value of the horse?

THE COURT: Exactly.

THE WITNESS: And the horse in this case is being played by the part of the Plaintiffs' patents. As the Court knows, obviously from Property Law 101, the difference between the horse example and the example in the case of patents is that in the case of intangible property or information, the plaintiff is not necessarily deprived of something when a defendant uses it.

And so one of the examples of using real -- one of the problems of using real property examples is that they don't, from an economic perspective, apply to intangible property, because both parties can actually possess the same thing at the same time.

THE COURT: But I like the horse because I wasn't using it either, so it's got that component built into it.

THE WITNESS: Yes. And so then the question becomes --

THE COURT: So you're not depriving me of use; I wasn't using it.

THE WITNESS: Yes. And so when you --

then the question -- leaving aside sort of the criminal issues and the trespass issues and everything like that, what you come down to is saying, what would the owner of the horse and the boy bargain for --

THE COURT: There you go.

THE WITNESS: -- in order to -- for the use of the horse? And one might very well think that they would bargain for the use of the horse based on the time period involved. That would be a natural way to think of the amount of compensation that was due.

And for many pieces of tangible property, particularly when the variable in question is the amount of time that it's being used for, you pay for per unit of time.

In this case obviously, we can all measure a time and so you pay per unit of something that you can measure. If for some reason -- let's just suppose, to alter the example, time were not measurable in this example, so it was going to be a subject of contract dispute.

The boy says I took it for a day, and the man says, no, you took it for ten days, and the boy says I took it for one day. And you couldn't establish that fact, and the parties couldn't agree to a contract that was enforceable because one of the terms is inherently

vague.

And so in this case, all I'm really saying is -- there's lots of economic reasons for this, but as a matter of law, my understanding of law, the -- you wouldn't agree to a contract where you can't agree upon and define an essential term of the contract, which is the units that are actually being -- that actually use the accused feature.

That's an inherently vague term, and so, therefore, for that reason alone you wouldn't agree to that.

THE COURT: But when there's an argument between one day or ten, why wouldn't they compromise at five or three even or two?

THE WITNESS: Well, that's -- and, Your Honor, that's actually -- just to bring it back to this case, I think that's exactly right. There's got to be some way of saying let's find a reference point that we can agree to. We don't know -- you say ten, I say one; we don't know what it is, but let's look at -- and so Billy --

THE COURT: Rode the horse and didn't pay for it.

THE WITNESS: You rode the horse, you know, but now when Tommy rode the horse last week, I

couldn't tell how long he rode either. And, in fact, I said to him, you know, you can ride as much as you want, but you've got to pay me $50. And when Susie rode it two weeks ago, the circumstances were different. She had to feed it, blah, blah, blah. I charged her 60, and she could ride it as long as she wanted.

In fact, every time I've rented out my horse to people, I haven't charged them by the day. I haven't charged them by how far they rode the horse or anything like that. I've charged them a lump sum.

And so now in the instant negotiation, when we say what should Billy get charged for his use of the horse when we can't measure how much time he's taken it, an important set of reference points is all the other prices that have been charged when the horse has been rented, and not only the prices that have charged, but the form of those contracts.

And if we don't observe per-day charges in those contracts, it's unlikely that Billy and the horse owner would have agreed to a per-day contract between them, because nobody can measure days in this example.

THE COURT: How am I to be sure that you're not going to undervalue -- I haven't heard your number yet. What's your number going to be, by the way? We don't have a jury. Just tell me close.

THE WITNESS: The final number is $172,000 for Red Hat, Your Honor.

THE COURT: One-time shot?

THE WITNESS: Yes.

THE COURT: How do I know that you aren't undercharging for the horse that your guys rode?

THE WITNESS: Well, it's an excellent question, and I'm happy to be examined on it thoroughly both by Mr. Vickrey and by you.

So what I've done is look -- just take this example -- is to look at what other people have paid in similar circumstances for the use of the horse when they couldn't measure the instances of use.

And so we have the Silicon Graphics license, okay, a lump-sum payment of about $100,000, 95,000. And they could sell as many copies of the operating system as they wanted. They struck a deal.

We have the Apple agreement, which is also an operating system agreement. It's about a million and a quarter.

You might think -- and we obviously investigated this and intend to present it to the jury -- that that's a pretty big range at 95,000 to a million and a quarter, but it turns out that if you look at the scale of Apple's operations relative to the scale

of the Defendants' operations as measured by the number of units, because in Apple's case, they do count units. You actually can count units.

And so if we pretend that you can count units, which you can't, but if we pretend that, the Apple contract on a per-unit basis implies a payment by the Defendants of somewhere between 75,000 and $200,000. I actually think it's closer to 75,000.

And then we have the HP license finally, which is not an operating system license, where you can actually count the number of times the software is consumed, and that was a lump-sum payment, it looked like, for the life of the product of $110,000 with this kicker that you examined Mr. Gemini on, which apparently never actually went into effect, the 1 percent.

And so we have 95; we have 110; we have a million and a quarter that when adjusted for the relative sizes of the organization looks like something like a hundred. And so I've tried to do the best that I could without being artificially precise and say I think it's about a hundred, the only adjustment being, unlike those deals -- I don't know if there's a good analogy to the horse case.

But unlike those deals, which were bargained -- where the patent hadn't been litigated, in

this case by assumption, the jury has found it valid and infringed, and so we should increase the value, because, in effect, the property that the Defendants have used is a more valuable piece of property, because it's not encumbered by a cloud regarding its validity and infringement.

The Defendants have used a valid and infringed patent. They should, therefore, pay more, and there's an adjustment that occurs at the end to reflect that.

THE COURT: Misters Reiter and Vickrey, do you want to participate here before I give my final statement?

MR. VICKREY: Your Honor, obviously we disagree on units, on some of the factors.

THE COURT: No, we know the disagreements.

MR. VICKREY: But, conceptually, I think it's a matter of argument, as opposed to whether he should be excluded.

MR. REITER: I don't think he should be excluded, so --

MR. VICKREY: I'm not saying he should be.

MR. REITER: I understand that. I don't mean to be flip.

I think if I understand correctly

Dr. Putnam -- and this is not my area, and that's why I've enjoyed working with him.

What he is talking about is looking at how can a business like Red Hat, like Novell, who are not concerned with the number of units that are out there, how can they conduct their business in a way that respects intellectual property, because -- and I did ask this already.

Are you saying because the products are free, they shouldn't have to pay, and he said absolutely not.

THE COURT: You've got to rent the horse.

MR. REITER: Right, exactly.

So how would a company like Red Hat or Novell respect that intellectual property, taking into account their business model where they don't count units?

They're not going to create an infrastructure that suddenly allows them or causes them to count units that increases their costs such that they're going to agree on a lump-sum payment that allows them to have that technology based on what the market has paid for it. And the market in this case has been, as Dr. Putnam said, those licenses.

THE COURT: Okay. The parties, I think,

have made an excellent effort to tie this to the kinds of reliable sources that the federal circuit is credited in both Lucent and ResQNet, maybe even more ResQNet where the Court really did focus in on what types of licenses were relevant.

And, of course, the parties differ and are going to argue a little bit on which licenses and how those licenses should be interpreted, and that decision will ultimately be made by the jury.

But I think that we are looking at the right things. Mr. Putnam will be allowed to proceed and give his numbers and give his reasons, and I'm happy to allow that to proceed tomorrow.

MR. KREVITT: I just wanted to note for the record, now seems like a good time, given the evidence that the court has heard and that the jury has heard from the witnesses most knowledgeable about units and whether the companies track units or not, it is our view that Mr. Gemini -- for the jury to accept Mr. Gemini's analysis based on IP addresses for which there's unequivocal testimony that those do not track units, will render, should the jury rely on that information, a jury verdict for which there is not sufficient basis.

We want to -- given the evidence on

units --

THE COURT: That sounds to me like that's a JMOL.

MR. KREVITT: I just want to bring it to the Court's attention that it's an objection we have, and the Court is in a position to deal with it now in terms of instructions or on an evidentiary ruling.

It's our view that the jury should not be considering unit information when the evidence has been unequivocal from the people that know, as opposed to Mr. Gemini, that the companies do not track IP addresses, and so we have an expert and a party that's suggesting that a jury base a damages award on information we know to be inaccurate.

THE COURT: So are you making some kind of motion at this point?

MR. KREVITT: Well, we would ask Your Honor that they not be permitted to submit that to the jury, because of the -- I mean, we plan to establish with Mr. Putnam the extent to which that information would be irrelevant and inappropriate to be considered, given the extent to which the information is not reliable.

We also heard, Your Honor, that if you do base it on IP addresses, we know to a 99.8-percent

06:30 certainty what percent of those are in the United
06:30 States. That ranges from 13.8 to 15 and change.
06:30 Mr. Gemini, using revenue -- as Your Honor
06:30 knows, revenue for a different product is trying to say,
06:30 even though we know for certain what percent is in the
06:30 United States and it's in the teens, is going to ask the
06:30 jury -- the Plaintiffs are going to ask the jury to
06:30 apportion 55 percent of the IP addresses to the United
06:30 States.
06:30 That will result -- if the jury were to
06:30 accept that, that will result as a matter of certainty
06:30 in the jury basing a damages award on IP addresses from
06:30 outside the United States. A lot of them -- let me
06:31 finish, please, Mr. Vickrey.
06:31 That will result in the jury -- even if
06:31 you were to accept some correlation, and all the
06:31 evidence is to the contrary, between IP addresses and
06:31 users, we know that, because they're only taking large
06:31 IP address numbers and ignoring the information we know
06:31 with certainty how many are in the United States.
06:31 As a matter of certainty, that will result
06:31 in a damages award being based on a substantial number
06:31 of units outside the united states. And Your Honor
06:31 addressed this very question the Monday before trial,
06:31 when we discussed 271(f).

As Your Honor may recall in that video teleconference that we had, there is no 271(f) in this case. It would be improper as a matter of law to base a damages award on units outside the United States. And based on the arguments that will be presented by Plaintiffs, if they're accepted, we know with certainty that's what would happen.

MR. VICKREY: Your Honor, two points.

First of all, we believe the record shows that what Mr. Gemini used was a conservative estimate of the -- of something that's not even the highest base. In other words, let's say it's 10 million units.

We looked at Defendants' own explanation as to what the 10 million means. They say two things. First, the location of the IP addresses is going to be skewed, because there are dynamic IP addresses. Just as you heard the testimony, if you go from place to place, it's going to double-count you, triple-count you, quadruple-count you.

But Red Hat also said something else. They said when -- it doesn't -- when you look at the whole scheme of things, that 10 million number is low because something else is going on. When something hits a single IP address, it's going to fan out to the rest of the people in my law firm at various corporations,

and we're not going to capture those IP addresses.

So they quarrel with the methodology, but it was a reasonable methodology, because, first of all, they're admitting that the actual distributions are much higher because the second category is significantly higher according to Red Hat's own words.

The second point is, all of the licenses in these -- in this case, all the licenses of these very patents are worldwide licenses. Dr. Putnam admitted that people do that because in cases such as this where there's mixed-up issues of foreign use, something's going overseas, maybe is created here, something -- maybe there's a mix-and-match-type thing going on, we don't want to mess with it. We're not going to mess with it.

We don't want to be burdened with the task of figuring out what's an infringing sale under the U.S. patent laws. We're going to make it worldwide. That's another issue.

But Mr. Gemini, nonetheless, tried to account for -- under methodology that he had available, he came up with a conservative base. He came up with a conservative user estimate. They quarrel with the methodology, but there's evidence supporting it, Red Hat's own statements.

And not only that, Your Honor, there's been evidence that you may have heard yesterday. Novell has two per-unit licenses. Why don't we get -- they never gave us any per-unit enterprise numbers.

So -- anyway, the record supports Mr. Gemini's methodology. They don't like it. They're going to argue with it. Dr. Putnam is not going to like it. We're going to argue about that as well. But it's not a basis for exclusion.

MR. KREVITT: Your Honor, may I respond briefly? May I use the flip chart?

THE COURT: Sure.

MR. KREVITT: Okay. And I'm terrible at this, but let me just take a shot.

There's actually two different issues that in my view will affect this jury verdict. And I just want Your Honor to be aware and Your Honor will make whatever ruling Your Honor makes. But everything is being a little concluded, if you will.

So the first is, we have a glued-on cap. That's the first thing we have.

[Laughter.]

MR. KREVITT: We have IP addresses. The first thing we have, Your Honor, is IP addresses, okay? And those are estimated at, give or take, 9 million,

06:35 1 okay?
06:35 2 So the first error, we believe -- and,
06:35 3 again, we can talk about it. I want Your Honor to
06:35 4 understand there are two fundamental errors here.
06:35 5 The first error is they say that because
06:35 6 there are 9 million IP addresses, there are 9 million
06:36 7 users. That's their estimate. They're going to
06:36 8 estimate 9 million. It might be more, it might be less;
06:36 9 it's reasonable to start and say 9 million.
06:36 10 Mr. Tiemann and Mr. Rex testified
06:36 11 unequivocally on this subject. This is as speculative
06:36 12 as it comes. We might as well say 2 million or 15
06:36 13 million, 30 million. We might as well count the cars in
06:36 14 the parking lot.
06:36 15 They have said this bears no relationship
06:36 16 at all to the number of users. So that's the first
06:36 17 error. I want to come back to that. So that's the
06:36 18 first thing we're sending to the jury. A number of
06:36 19 units, and Your Honor's jury verdict will say units. So
06:36 20 the jury will be asked to write a number in a box for
06:36 21 units.
06:36 22 There is no evidence. The evidence is
06:36 23 unequivocal there is no evidence of that. That's the
06:36 24 first error.
06:36 25 But it gets worse, much worse, because

what do they do?

They say, well, the 9 million we're going to start with, we want the jury to hear the 9 million, because that's a big number. So the 9 million we're going to start with, but we know -- even though we took our 271(f) shot at the last minute, we know the Court didn't let us do that, so we've got to find a way to only use U.S. numbers. We can only rely on U.S. numbers. So how do we do that?

This is what they do. We now know, if you start with this number, as a certainty -- the testimony is unequivocal, unchallenged on this question -- with 99.8 certainty, fraud protection software, we know exactly how many of these, whatever this represents -- users might be higher, users might be lower, but let's just call it 9 million.

Whatever this number is, we know with certainty that 15 percent are in the United States. On this question, this question, there is no -- there is no ambiguity. Mr. Tiemann and Mr. Rex testified to that fact, that 15 percent are in the United States.

So think about the compounding error that the Plaintiffs will want to send to the jury. First, there's 9 million users. False. We don't know that. That's a guess. There is no evidence. Mr. Vickrey

won't tell you there is.

Second, they don't want to use the 15 percent, because if you use 15 percent, you wind up at 1-1/2, and at 16 cents a unit, you get something not good. You get a million bucks or something. Whatever you get -- you get not good. You get not happy.

So what do you do? We've got to come up with a way to get more of the 9 million, because that's not good. Why are we here in Marshall for that amount of money? So we've got to come up with a way to get more.

So here's what they do. They say, well, why don't we look at the revenue for a totally different product. Keep in mind, Your Honor, this is Fedora. Again, everything I am saying to you is not gray. There's no dispute on this. These numbers are Fedora.

So that's the open-source project. Okay, so these numbers are Fedora. What do they do, because that doesn't work?

They say, well, why don't we look at the revenue numbers from the products, the RHEL products you heard about. Those are the ones they charge subscription on. And what do we find?

Well, because most of the affluent businesses or given the affluence of this country,

there's such a greater proportion of companies that are willing to pay money for subscriptions in the United States, not surprisingly, we find a different number. Remember the 14 percent worldwide internet usage. This number makes sense. It's exactly the same as Novell's. They make perfect sense.

But what do we find when we look at people that have actually got to shell out cash? We find that they're predominantly in the United States, 55 percent of them.

So think about this apples and oranges. We'll take the 9 million from Fedora, which is speculative by definition. We then will take the 55 percent from RHEL, totally irrelevant, and we'll multiply these two and we'll wind up with an estimate of U.S. usage.

Even if you accept this as an approximation of U.S. usage, even if you're willing to do that, to suspend all disbelief and accept that, we know as a matter of certainty, 99.8 certainty that this is wrong. This will capture the difference between 55 and 15 percent of IP addresses that are outside the United States.

And as a matter of law, under 271(a) -- I need not tell Your Honor -- and under 271(b), they are

not entitled to capture any damages based on usage outside the United States. That's 271(f). They took their last-minute shot and weren't able to put that in the case.

This is why, Your Honor -- and I know how much Your Honor craves economic justification. Dr. Putnam may be the first person ever that actually looked forward to a voir dire. He was looking forward to this discussion with you. It was actually scary to us.

Mr. Reiter passed me a note, Judge Rader doesn't know what he got into. He'll stay with you as long as you want.

But the most important thing is this: We could argue about whether it should be lump sum. We could argue about whether it should be a reasonable royalty. We could argue about the relevance of SGI versus HP versus Apple versus Central Point. That's what litigation is about.

We have a strong view. The Plaintiffs will make their case. This can't go to the jury, because there is no evidence in the record that could possibly support it. And what's more, the evidence in the record demonstrates as a matter of indisputable fact that this would be capturing usage outside the United

States.

So that's why, Your Honor, this can't be sent to the jury. Your Honor craves economic justification. Your Honor craves economic principles. We understand that. This is as basic as it comes. To send 9 million, which we've been told does not relate to usage, does not accomplish it, to then -- not even to take this, but ignore what we know with certainty the percent in the United States is, and instead use an arbitrary number is, as a matter of law and fact, in our view, objectionable.

MR. VICKREY: Your Honor, a couple of points.

THE COURT: You get equal time, Mr. Vickrey.

MR. VICKREY: Regardless of 271(f), we believe that the evidence will show and the evidence in the record does show that this license would be a worldwide license, even though they're U.S. patents. All the others were worldwide licenses. And, in fact, Mr. Gemini had a calculation for all --

THE COURT: You don't want to push me back into the 271(f) category, do you?

MR. KREVITT: That's wrong as a matter of law.

THE COURT: It's Mr. Vickrey's time.

MR. KREVITT: I'm sorry.

MR. VICKREY: In fact, in Mr. Gemini's supplemental report, which survived a motion to strike, he had a damage estimate based on total use. He's come back to try -- within a good-faith basis to try to estimate this.

And what do we know about the IP -- getting to the IP addresses at 9 million? This is what Red Hat says: There are two flaws in the methodology. One of the flaws not only cancels out the other flaw, but actually suggests that the 9 million is much higher. The two flaws are, when you have dynamic IP addresses, as many people do, it's going to double, triple, quadruple count the number of users.

So IP addresses as such, the location is not going to signify the proper usage of the software.

We know something else, though. We know that many times for a corporate or an NAT account, it's going to hit one single IP address and fan out from there. And we don't know the IP addresses, the locations, whatever.

THE COURT: You've made that point.

MR. VICKREY: And so we believe that there's a foundation in the record to support what

Mr. Gemini tried to do. It's a fact issue. He's not trying to overreach. And we've explained why the mere IP addresses don't tell the whole story.

They disagree with it, and I've heard it loud and clear, and they're throwing statistics around and everything else.

MR. KREVITT: What would be the record evidence for the 55 percent?

MR. VICKREY: The 55 percent is based on their own financial performance, as announced during the damage period, which was 55 percent of the revenue was U.S. revenue. And it also doesn't account for the fact that Mr. --

THE COURT: But their revenue is not generated by the claimed invention. Their revenue is generated by their service contracts and the other things that they provide to their clients. And we only get to compensate here for the claimed invention.

MR. VICKREY: That is true, Your Honor, but the --

THE COURT: The rental of the horse.

MR. VICKREY: But the evidence also shows that even on those enterprise products where you have all this U.S. activity, U.S. big corporate activity -- we saw all the big U.S. corporate logos there. We heard

Mr. Riveros say today -- or yesterday -- that one of their business models is to sell the proxy model.

So it's going to hit a single IP address and fan out such as my law firm. So there is a basis in the record for looking at activity that generates revenue and trying to correlate that.

So -- and we also have evidence from Mr. Fields' statements to the press, this is our user base. Mr. Tiemann didn't agree with it. He said it's wrong, he's overstating, et cetera, but there's nonetheless information in the record as to --

MR. KREVITT: Your Honor, may I respond very briefly?

THE COURT: Just a second. I want to make sure. Mr. Vickrey, did you get everything you wanted to say said?

MR. VICKREY: I did, Your Honor.

THE COURT: Just a second.

Mr. Gasey might want to add something.

Okay. You can have a quick response.

MR. KREVITT: Very briefly, Your Honor, a few things.

First, Mr. Vickrey just explained the problem. He said that Mr. Gemini assumed that this would be a worldwide license. Again, I always am a

little reluctant to mention what the law is to Your Honor, but the law is clear that in a patent case --

THE COURT: That's your job.

MR. KREVITT: -- damages are set based on the infringement. That's it. We don't assume that there will be another horse thrown in or a stable or a weekend away. We are only looking at what the infringement was.

In this case, the infringement is the United States. So for Mr. Vickrey to say that what Mr. Gemini did is assume a worldwide license, that's precisely the problem. That's number one.

Number two -- and this is -- I just want this point to be very clear. If you're going to accept this number -- and Mr. Vickrey said that's a question of fact. You know my view; I don't think it is. I don't think there's any evidence to support it.

But here's the point: If you're going to start with this number, you cannot not use this number. You can't take the big number and ignore the one thing that we know with certainty how many of this, whatever these constitute, are in the United States.

You can't take this number and ignore the fact -- we can have a dispute about this -- that we know what this is, and instead choose a much bigger number.

THE COURT: I've got the point.

Mr. Vickrey, you get the last word here.

MR. VICKREY: Well, Your Honor, Mr. Gemini explained, and I think Red Hat's own literature explains, that looking at the location of an IP address is not going to signify the degree of use, because those IP addresses are very much overstated.

And instead -- but they're more than canceled out and the number goes significantly higher when you look at these corporate NAT address-type issues where it hits a single corporate address and fans out.

They disagree with it. I mean, it's a fact dispute, but he attempted to account for that to come down to the number where he was, and he explained at every level why his number was conservative.

THE COURT: Okay. Thank you, Mr. Vickrey.

MR. KREVITT: I would just note that again he's only at this number.

THE COURT: I gave Mr. Vickrey the final word.

MR. KREVITT: I understand.

THE COURT: We can shorten the amount of time we need to argue JMOL, because I think that's what we've been doing here. And so we'll see if the jury gives us a -- see what the jury gives us in damages, and

then we will review the record to see if the record supports that. That's the way courts work, and that's the way courts ought to work.

And I think I should facetiously ask Mr. Putnam to send me his resume in a month. I want to see if it has a little tag line, I survived Judge Rader.

THE WITNESS: That's right. That's right. Well, have I survived you?

THE COURT: Not yet, but we'll see.

I think we're about ready to go to jury instructions now. Did you want to say something, Mr. Reiter?

MR. REITER: No, Your Honor.

THE COURT: Give me five minutes again. I'm going to take off my robe and come back and talk about the instructions.

(Court adjourned.)

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

_____ _____
DONNA COLLINS, CSR Date
Deputy Official Court Reporter
State of Texas No. 1086
Expiration Date: 12/31/10

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