IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF UTAH

CENTRAL DIVISION

In re:	)	
	)	
NOVELL,	)	
	)	
	)	
Plaintiff,	)	
	)	
vs.	)	Case No.
	)	2:04-CV-01045JFM
MICROSOFT,	)	
	)	
Defendant.	)	
	)	
________________________	)	

BEFORE THE HONORABLE J. FREDERICK MOTZ

November 16, 2011

Daily Transcript of Jury Trial

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I N D E X

Salt Lake City, Utah, November 16, 2011

(Whereupon, the following was held in chambers
out of the presence of the jury.)

THE COURT: Good morning everybody. My contact lens got lost in my eye. Yes, sir.

MR. SCHMIDTLEIN: Um, good morning, Your Honor. Just a -- this is just for the record and we don't know who is out there in the court and who is not. Um, you know in a number of instance you have questioned -- examined some of the witnesses during the course of the case which obviously the Court has every right to do. Um, in some instances you have examined the witnesses in the presence of the jury.

THE COURT: Last time I did.

MR. SCHMIDTLEIN: I think there has been a couple of those. And obviously that took place with Dr. Noll. So we're making our record here. We do object to Your Honor questioning the witnesses in front of the jury. Um, we will bring the witnesses back. We know you were trying for efficiency sake.

THE COURT: Last time was. But that last one, of all of the others, I strongly agree with you. I would prefer not to do it in front of the jury.

MR. SCHMIDTLEIN: So we have obviously got another witness here today. If Your Honor has questions, we would just respectfully ask that you either dismiss the jury or if it is at a time when in the middle of cross-examination --

THE COURT: I will either dismiss the jury or if it is a particularly sensitive question so that it may get reported, I'll bring him back here.

MR. SCHMIDTLEIN: That would be our request.

THE COURT: That is perfectly reasonable.

MR. SCHMIDTLEIN: Okay. That is all we had. Thank you very much.

MR. JOHNSON: Thank you.

THE COURT: Sure. Sure.

(Whereupon, end of chamber conference.)

THE COURT: Let's get the jury and get a live witness. And if the live witness will come up to the stand, please.

THE CLERK: Please rise for the jury.

(Whereupon, the jury returned to the courtroom.)

THE COURT: Good morning, everybody. Excuse me. I'll turn on my mike. Good morning everybody. The next witness. I was afraid that we lost you, Mr. Taskier. Good to see you again.

MR. TASKIER: Thank you, Your Honor. The plaintiff Novell calls Dr. Frederick Warren-Boulton as its next witness.

THE COURT: Please come forward, Doctor.

THE CLERK: Raise your right hand, please.

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FREDERICK R. WARREN-BOULTON,
called as a witness at the request of the Plaintiff,
having been first duly sworn, was examined
and testified as follows:

THE WITNESS: I do.

THE CLERK: Please be seated. Please state your full name and spell it for the record.

THE WITNESS: My full name is Frederick Reginald Warren-Boulton. That is F-R-E-D-E-R-I-C-K R-E-G-I-N-A-L-D W-A-R-R-E-N hyphen B-O-U-L-T-O-N.

THE CLERK: Thank you.

DIRECT EXAMINATION

BY MR. TASKIER:

Q. That is a double-barrel name; isn't it.

A. Yes, it is a hyphenated name. My father was a British Army Officer during World War II and my mother was American so I inherited this enormously long name. As a result, everybody just calls me Rick. It is a lot shorter and saves a lot of time.

Q. So Dr. Warren-Boulton, could you tell us where you work?

A. I am an economist at MiCRA. MiCRA stands for Microeconomic Consulting and Research Associates. It is a Washington based consulting and research firm.

Q. And by whom was it founded?

A. MiCRA was founded by myself and four friends. All of us are -- used to be in the antitrust division with the U.S. Department of Justice as economists. We basically think of ourselves as an alumni organization for the Department of Justice.

Q. Now where did you go to college?

A. I was an undergraduate at Yale University. And I got my bachelor's degree -- I'm sorry, I should slow down. I got my bachelor's degree in economics from Yale.

Q. Can you tell us where you did your graduate work?

A. From Yale I went to Princeton. I went to the Woodrow Wilson School of Public and International Affairs, a master's degree in public affairs, and then went through the economics program and --

(Whereupon, the reporters slowed the witness down.)

THE WITNESS: Where were we?

Q. (By Mr. Taskier) We were at the Woodrow Wilson School at Princeton.

A. Sure. I got my masters of public affairs from Woodrow Wilson School, and then into the economics program. My PhD in economics from Princeton.

Q. Did you prepare a slide to show the jury what you did after graduate school?

A. Yes, I did.

Q. All right. Can you tell us what you did after graduate school?

A. Well, like most PhDs I went and taught for about 11 years. I was an assistant and then associate professor of economics at Washington University in St. Louis. And then got tenure. And after ten years of teaching, I decided to do something a little more interesting.

So like all economists I came to Washington which is our natural home and I became originally the chief economist at the Department of Justice in the antitrust division and wound up staying for about six years. First as the chief economist and then as what is called the Deputy Assistant Attorney General for Economics in the Department of Justice.

Q. But you're not a lawyer?

A. No, no, I'm not a lawyer. And oddly enough in all my years at the Department of Justice nobody ever noticed that I wasn't a lawyer. It seems fairly easy to fake it. I'm sorry I shouldn't be saying that. That was an extemporaneous comment.

Q. How many economists were working for you at the antitrust division?

A. The division has about the largest or the next largest group of professional economists, there were 50 PhD economists there, a total staff of about 100.

Q. What did the economists at the Department of Justice do?

A. Well, the antitrust division shares with the Federal Trade Commission, those are the two organizations that enforce the antitrust laws. Um, the antitrust division is part of the Justice Department and so it is the only one that is allowed to do criminal work. And so as a result, the Department of Justice, the antitrust division, does things like criminal work like price fixing, but it also does a great deal of mergers, monopolization cases, similar to this one, um, and it also particularly economists had a very wide range of programs of what is called competition advocacy which was we were kind of let loose on the rest of the government to sort of file statements and try to encourage them to behave more competitively and more pro-consumer. So we ran almost like a consulting firm within the Department of Justice for all of the agencies.

Q. During which presidential administration were you the chief economist for the Department of Justice?

A. I was the entire Reagan Administration guy.

Q. So when the Reagan Administration ended, what did you do?

A. Well, I had been in government for quite some time and I taught and so I did what most people in that situation do is I found myself in a think tank, and I parked myself at a think tank in Washington called the American Enterprise Institute where you're supposed to think deep thoughts and write a book or something. And I also went back to teaching for a while at Princeton but it wasn't nearly as much fun as it used to be. And so in 1991, we formed MiCRA which is a research and consulting organization and I have been doing that ever since.

Q. So you have been testifying in legal proceedings since 1991?

A. And indeed before, yes.

Q. Good point. In what kind of legal proceedings have you testified?

A. Well, I have testified both in private proceedings between private parties like this one, but I have also testified a fair amount in proceedings that involve government agencies like Department of Justice or the Federal Trade Commission. And those tend to be the better known because more people have noticed that.

Q. Did you prepare a slide listing some examples of cases in which you have testified?

A. Sure. These are all cases involving the government. Back -- in fact, when I was at Washington University, I testified for the Department of Justice in its monopolization case against AT&T. Some of us at least will remember the days when there was only one phone company and it was AT&T and just Ma Bell and that was it. And this was the case that broke up AT&T into bits, long distance and local, and broke it up into all of the local operating companies that we now know. And it is a bit of ancient history and I was, of course, a child at the time when I testified, but since -- since leaving the Justice Department, I have testified on behalf of the Federal Trade Commission, which is the sister organization, which enforces the antitrust laws in the merger of -- the attempted merger of Staples and Office Depot. The judge blocked that merger. As a result, I guess there is both Staples and an Office Depot store in Salt Lake and I hope what that means is that you can buy your office supply cheaper than if the merger had gone through. That certainly was our argument.

Most perhaps relevant to this case I testified on behalf of the Department of Justice in its monopolization case against Microsoft. Um, and then I just finished testifying for the Department of Justice in a merger case involving H&R Block and the Tax Act, involving tax -- at home tax software. And the judge in fact just enjoined that merger and I guess the result will be that for those of you who do your own taxes at home, and do your own software, you'll still have a choice between three major types of software and you can do H&R Block or you can do Turbo Tax or you can do something called Tax Act. So it will still be three instead of two. We hope that will benefit consumers.

Q. So did those courts and all of the other courts in which you have testified, admit you as an expert in those cases?

A. Yes.

Q. And have you reviewed the damages report submitted by Microsoft's expert, Dr. Hubbard, in this case?

A. Yes.

Q. And are you prepared to offer your own opinions in this case?

A. I am.

MR. TASKIER: Your Honor, I would move to admit Dr. Warren-Boulton as an expert in the subject of antitrust economics.

MR. JARDINE: No objection, Your Honor.

THE COURT: You may give your opinion.

MR. TASKIER: Thank you, Your Honor.

Q. (By Mr. Taskier) Can you tell the jury how MiCRA is compensated for the work performed by you and your team in this case?

A. MiCRA is compensated on the case by the time that I put in and the time my staff puts in and any expenses on its behalf.

Q. Is the compensation to MiCRA contingent in any way on the outcome of this case?

A. No, it is not.

Q. Is your compensation contingent in any way upon the outcome of this case?

A. My personal, no.

Q. Now, Dr. Warren-Boulton, there are, I think, 150 pages of expert reports in this case, and I think three or four times this volume of backup material. Um, that is pretty dense reading; isn't it?

A. That is pretty long and most of it is my fault.

Q. Well, I really don't want to burden the jury with 10,000 pages of graphs and calculations. So is it possible for us without going through all of that intense detail and having to get an advanced degree in economics to get your sum and substance of your opinions in a way that is, you know, I understand it is a going to be pretty complicated, but can we streamline it for the jury and let it all come in so that everyone will understand it?

A. I will give it my best shot and it may still be long and at times tedious, but I will do the best I can.

Q. All right, that is all we can ask. First of all can you please tell the jury when you were retained by Novell and what you were asked to do in this case?

A. Um, I was asked to assume liability. That is, to assume that the jury has found for Novell on the issue of whether or not Microsoft has in fact engaged in anticompetitive acts. And then given that, to ask the question what is the financial harm that has resulted from those anticompetitive acts to Novell.

Q. When you say financial harm, you were asked to calculate the damages and the financial harm. What does -- what precisely do those damages represent?

A. Well, the important thing is that it is -- I am charged with assessing just the harm to Novell that results only from the bad actions of whatever the jury finds to be the bad acts of Microsoft. Other things might have affected Novell's wellbeing or affected these applications, but my charge is simply to determine what was the effect of the acts that the jury determines to be anticompetitive and illegal.

Q. As an overall conclusion, do you have an opinion about whether Novell was damaged as a result of Microsoft's anticompetitive conduct?

A. Yes, I do.

Q. What is that opinion?

A. And that is that it was in fact damaged substantially.

Q. Have you prepared a set of slides to help the jury follow your testimony?

A. Yes.

Q. As part of the slides you have prepared, have you prepared a slide that summarizes your view of how Microsoft anticompetitive conduct damaged Novell?

A. Yes.

Q. Could you explain your understanding of harm to Novell?

A. Well, there is two -- two types of harm here. The primary one is that what Microsoft did by pulling the namespace extensions, which is something I am sure by now you have heard a great deal about, it delayed the release of PerfectOffice until around May of 1996, far past the date of release of Windows 95 in August of 1995. So the first is the delay of the release. And the second is that even when that application was eventually released, the functionality of that application was seriously reduced.

Q. Why, if at all, would it be important to have a new Novell application for Windows 95 come out at or around the time that Windows 95 was released to the general public?

A. Well, I don't mean to repeat an awful lot that you may or may not have heard, but Windows 95 or the release of Windows 95 was a really big event. Everybody thought that it was going to be to massive sales and, in fact, it was an extraordinarily successful release. And when you release a new operating system like that, and it has all kinds of new and interesting functionality, it creates the opportunity for applications also to be released at the same time that it takes advantage of all of that new and exciting, you know, functionality.

So if you can release an application at about the same time as the release of the operating system, you can in fact do -- you can make a lot of sales. And Novell was in a position in which it had a large install base, very devoted WordPerfect users, and this was really an opportunity for Novell to be able to make really significant sales of what we would call WordPerfect for Windows 95.

Q. What happens, if anything, if Novell application comes down too late?

A. If the application comes out too late, what I mean by too late it really depends on how late people are willing to wait. Um, if you are a loyal WordPerfect user, to be honest myself, um, you are willing to wait for at least some time period. But the problem is that if -- if the release is too delayed and you really want to have a word processor, an application with suite that takes advantage of Windows 95, you know, eventually you get to the point where you say I'm just not going to wait any more. And at that point you say heck, I will just switch and you go with whatever it is that is the most popular alternative which in this case would clearly be Word AO or Office Suite.

And so this appears to be a time frame in which if you could have some delay but if you have too much of a delay it is kind of like a spring, it just kind of saps, and people don't wait any more and then they switch. And once they switch, it is very, very difficult to get people to switch back because, you know, once you switch to say Office paid the money for the software and you bought it, I think more important for most of us, we have invested the time and the effort in learning how to use the new applications. You know, we're gone. And it is extraordinarily difficult once you lose that install base of your guys, once you lose your fans, you kind of have like lost them forever. So it is a real, real problem.

Q. The jury has heard some testimony about something called network effects. Can you explain, if at all, how network effects are part of your analysis?

A. Sure. Network effects being said the more other people are using a product, the more valuable it is to you. Um, my favorite example of a network effect is I guess it is a telephone. If there is just one of you on the telephone, it is really not much use to you, I guess, unless you're schizophrenic. So the more people who are hooked up to your phone system, the more people you can talk to. And so the larger number of people -- sorry the larger number of people in the network, the more valuable it is to you. And the same is true for a lot of software. In particular, in things like word processing, um, I don't just write documents by myself, I send my documents to my partner, I may send my documents to my friends. And it is really important to me that we can both go back and forth with the same documents. And so, um, there is a real advantage to -- to having a large market share. The larger market share you have, you know, the more people each individual person is willing to pay to have that application. So the problem with network effects in this -- in this market, it leads to something called tipping which is when you -- when you get up to a certain market size, you start, you know, you start winning more and more. It gets better and better. And sometimes I think you may have heard of it as feedback effects. So when you -- when you start losing market share, it is harder and harder and harder to get it back again. That is the networks effect problem.

Q. Now turning to the second item on your slide, can you explain your views on that to the jury?

A. Oh, um, yes. Well, that is -- that is fairly straightforward which is that the lower the functionality, the less the bells and whistles, the fewer the neat things, what happens is your reviews aren't as good, and the quality of your product isn't as good, and you sell less. So both of these, both the delay and the reduction of functionality are going to effect your sales and your profits and your revenues. And the result is, by the way, and when you -- if you fall behind, you know, a head start is absolutely terrific. But it is also true that once you fall behind, it becomes like a permanent disadvantage.

Q. So having determined that Microsoft's conduct damaged Novell in these fashions, how do you go about calculating money damages to address that, the effect of those actions?

A. Well, what a damage process is a process of taking what actually happened with the real world and you have to compare it with what economists call a but for world. And that is the world that would have existed but for the actions that whatever the jury decides are anticompetitive and illegal.

So in that sense, you're constructing that but for world as it is exactly the same except for whatever it is that the jury decides is illegal. If any of you are sci fi fans, it is kind of like constructing an alternative universe. Only one thing has changed and you have to see what happens.

Now, that -- that can, in many cases, be very difficult. It is actually a little easier here than normal. But constructing a but for world involves a lot of -- a lot of judgment, a lot of possibilities. And as a result, you know, you can never be exactly sure, okay, about what would have happened in that but for world. And so what I like to do in doing damages, and I think I hope this is standard practice, is that I try to ask myself what is the best and most accurate way to go about estimating damages. What is the methodology here. That is going to be my primary methodology. What do I think is best.

Then what I like to do is I like to go out and see if I can look at that problem from several other completely different directions, and see what kind of results I get if I have, you know, several different methodologies. And it is basically as a kind of -- I think of it as a reality check on my primary methodology. It would be -- it would be as if you were trying to figure out what the height of Mount Everest or a mountain was, and maybe the best view of Mount Everest is from the south and so you measure the mountain from the south. But you probably also want to go around and look at it from the east and then the north and the west just to make sure that, you know, that the measurement that you made from the south looks pretty realistic. And so these are basically reality checks. And so part of what is going to go on here, is that I'm going to talk mainly about my primary methodology, but then I'm also going to go through a couple of the other alternative ways of getting at them.

Q. So this but for world that you construct, this alternative universe, is an alternative universe that assumes what change?

A. Well, I think -- I am not a liability expert, but the thing to me that has changed is it would be a world in which Microsoft did not pull the -- did not deduct the namespace extensions and therefore it would be a world in which Novell would have released PerfectOffice for 95 you know at or close to the release date of Windows 7 -- or Windows 95. So that is -- that is basically the one change that we're making in our -- in our history here. That they would have been able to come out at or close to the release date of Windows 95.

Q. And you prepared damages based on a variety of different approaches that approximate looking at the mountain from the south and the north and the east and the west?

A. Yes.

Q. And have you prepared a chart for the jury and a hard board chart that show the various ways that you can calculate that damages?

A. Yes. But I don't see it.

Q. All right. That is the one on the screen and we will bring up the hard board one so we can refer back to it.

Okay. Can you tell us what this chart is supposed to tell the jury?

A. Sure. As I said before, I like to look at several different approaches to estimate the damages here. Um, the primary one that I am going to use is something we call the purchase versus sale methodology and those are the first two there. Um, the purchase versus sale financial market methodology is going to be a methodology that looks at purchase price and the sale price, but then makes a number of adjustments. But those adjustments are going to heavily depend upon the information gleaned from looking at the financial market reactions to -- reactions to the events.

In effect, we're going to look and see how the financial market evaluated certain outcomes. And that leads to a damage estimation of about 976,000,000. In addition, I am offering an alternative of purchase versus sale methodology that doesn't rely so heavily on the ability of the financial markets to immediately understand the long run effects of certain actions. And so I am using a bid from Lotus to -- instead of reactions of the financial markets. And that generates a significantly higher number.

And then in addition to the two purchase versus sale methodologies, I guess my east and west methodologies, we are going to look at what happened on October 6th, 1995 when there was an announcement by Novell that -- that Windows 90 -- their product PerfectOffice for Windows 95 was going to be seriously delayed. Now that is -- that is at the core of what the anticompetitive acts are because pulling the namespace extension resulted in the delay. And it was

October 6th, 1995, that the market really learned there was going to be a really serious delay or significant delay in -- in that. And the market's reactions was to drop the value of Novell stock by a very large amount. And so you have a kind of like an immediate estimate of the financial markets thought was the effects of pulling the namespace extension.

And then finally the last methodology is to try and to look to do a forecast methodology in which we look at where Novell's product was before the release of Windows 95, and based on its history, if you like, we then take that, then we use the experience of other similar companies that weren't affected by pulling the namespace extension and then we try to ask the question how would we have expected Novell's sales and revenue and profits to have been if it had followed the similar path to other companies that weren't affected by Microsoft's bad actions. And that leads us into an estimate of damages of also about a little over a billion. That is a preview of things to come.

Q. So let's just talk about purchase and sale for a second. Essentially you're saying that your primary method is to take the price at which Novell sold the applications?

A. Yes.

Q. And subtracts it from the price at which Novell purchased the applications to get --

A. Yes.

Q. -- a basic damages number?

A. That is right. And as you can see, I have sort of added those numbers at the bottom both for you and to help me to be honest.

Q. That is a pretty straightforward approach?

A. That is a very straightforward approach.

Q. Why do we need an economist honestly?

A. Well --

Q. To add and subtract?

A. You always need an economist. We do all sorts of things, we cut your lawn and things like that. But I guess in this particular case, um, I would suggest that an economist, perhaps an expensive economist, might be useful to you for two things. The first is that if you -- if you just look at the difference between the purchase and the sale which I have down at the bottom, we're going to see these numbers a lot so after a while you will recognize some of them, but they purchased -- Novell purchased these two products in March of 1994 for a total of a little over one and a half billion dollars. It is a lot of money. Less than two years later, they sold those applications to Corel for $146 million. Now, if you just take a look at the difference between the two, it looks like -- like Novell is out about $1.4 billion. And so that is basically where you start. You have a purchase and you have a sale number. But I think as an economist, the first thing that I would do is say not all of that is damages to Novell. So we can't just take the purchase price and the sale price and subtract and say and sorry you know we have to make clearly a number of adjustments because it is going to be a little complicated.

And the second thing I think what as I say an economist can do for you is given that the nature of those adjustments, and there will be professional disagreement, there will be a lot of professional disagreement as to what those adjustments should be, I think it is really important that you also look at the problem different ways and come up with other ways to estimate damages because our real concern is do we have a number that is in the right ballpark. Nobody can give you a number here that is -- that is right to, you know, and 48 cents.

So our real concern here is we want to get like the right order magnitude. We want to get a feeling for just about what is the right number. And I think it is important to look at alternative ways of going about it so that you have some reasonable confidence that you're not way off in the estimate you have come up with.

Q. So these sets of numbers that you have come up with, do they give you that sense of confidence?

A. Yes. Yes, I have got -- I have got one, two, three, four -- four ways of going about this. Um, I come up with numbers which I know that it looks like quite a range, but since, you know, my view is that given that I have some faith in financial markets, um, and methodology, first one of 976,000,000, that is basically what I offered here as -- as my choice of what I would choose as damages. And I would use the others as basically a confidence that I'm not too far off. I'm trying to be conservative here.

Q. Dr. Warren-Boulton, in the world of normal people, this is not exactly money that we carry around in our pockets?

A. It is a lot of money to me, too.

Q. These are very large significant numbers. Can you explain to the jury why and how it is that it can be that damages are quite this large, are quite this large.

(Whereupon, the reporter asked Mr. Taskier to speak louder.)

THE WITNESS: I'm having problems, too. I think you have to put it in a little bit of context in the industry and the revenues in the industry and that is what I have apparently done.

Um, these graphics get fancier and fancier after a while and sometimes they make me seasick. This is -- this is a plot of revenue for business productivity applications. This is basically Office and things like this. This does not include the operating systems. This is the stuff that sits on top of the operating system. And this is revenue for Microsoft and revenue for Novell. And just looking at it from 1994 to 2002 what you -- what you see is that there is -- Microsoft is the revenue in blue, um, Novell/Corel is the revenue in red. Some of that blue revenue is more revenue than Office, but most of that revenue is Office. There is a quote up there from Jeff Raikes in an e-mail to Warren Buffett which says, we even in 1997 if you look at that 1997 blue line, what he is saying is Office in 1997 was about five billion. So most of this revenue was Office and he is saying it is an enormously profitable industry market, it has 85 percent margin on this and a 90 percent share. So we are talking about a very, very large amount of revenue over this time period.

Q. Did you look at revenue beyond the 2002 time period?

A. Yes, just -- well fantastic. Well, we have just seen from '94 to 2002. This is just Microsoft's revenue, I just ran it out to 2010. And the amount of money here is simply enormous. But the total over this entire period is about $175,000,000,000. So I think what you want to do is when we say 978 billion or over a billion dollars, the context of it is an industry in which if Novell had stayed and remained active in this industry, we're talking about an industry revenue of about 175 billion dollars. So a billion dollars is less than one percent of the revenue over this time period.

Q. So you have found that damages have ranged from your primary estimate of $976,000,000 to 1.1 billion and 1.3 billion. How do your damage estimates compare to Dr. Hubbard's damages estimates on behalf of Microsoft?

A. Well, I said that what you're going to see at some significant disagreement between professional economists in this particular case. Dr. Hubbard's estimates, actual estimates of damages, are actually negative when he calculates his numbers.

Now I don't think that what Dr. Hubbard is saying is that Novell owes Microsoft money. I think what Dr. Hubbard is saying is that when he looked at it, he can't find any significant damages whatsoever. Now throughout I should paraphrase Dr. Hubbard will be here and he will have his chance to talk to you and I really don't want to put words in his mouth. But we have been swapping reports. But Dr. Hubbard will have his chance to explain his position when he gets here.

Q. So let me just ask. In his report, does his report assume that there -- that the jury finds liability and that nonetheless there is zero damages?

A. Yes, that is correct. So he assumes the same I do that there is liability in terms of pulling the namespace extensions and the effects but his conclusion is that there are no damages.

Q. So that in his view Novell was not harmed at all?

A. That is correct.

Q. All right. Let's look, if we can, a little more closely at how you calculated damages under the purchase versus sale approach. Can you explain in a little more detail how this approach works?

A. Well, we're going to build it up slowly, okay. And this is -- this is basically our beginning point which is just the subtracting to get to the difference in purchase and sales. And it is sort of a little to ground everybody, um, in March '94, Novell bought WordPerfect for 1.4 billion and Quattro Pro for 1,555 billion. Now, we are all familiar with the 1.555 billion number. Now that is a transaction between, you know, a willing buyer and willing seller which is, to economists, the best way to arrive at what we think something is worth.

If there is no pressure, nobody is forced to buy, nobody is forced to sell, when we look at an asset when we say what is the value of the asset, what is the best value of that asset, we say it is what a willing buyer is willing to pay to a willing seller. Whatever that is. Now similarly in January of '96, we had a sale to Corel of 146 and again under the same principle, um, you know, an economist looks at this and says 146 is -- is the best estimate that we are ever likely to come up with as to what those assets are worth in January of 1996. And I know Dr. Hubbard and I disagree with this.

So if we take a look at simply the difference between the purchase and the sale price, 1.555 and the 146, that is where we get this very large number that Novell lost, okay, 1.409 billion. And that is where we're going to begin this process.

Q. So it is fair to say that as an economist that is just where you would start?

A. That is where you have to start because you now have to ask the question is there something else, are there other factors that affected these values, is there some other reason for why these numbers went the way they did. So we're going to have to unfortunately spend some time trying to unpack this and adjusting this number to get it down to what we actually think is the right damages number.

Q. Have you come up with a way to present it to the jury in a nongraduate degree of economics approach to explain how you unpack these numbers?

A. Yes. I thought I would talk about it as houses in the hope that a fair number of you have bought a house or sold a house or plan on buying or selling a house, that that might be a nice way to do it and I think it is powerful and is really quite close.

Let's suppose we're back in 1994 and you bought a house -- you paid 100,000 for a house which is really low but you have to take yourself back before the great housing boom and you just bought yourself a house in 1994 and you have laid out 100,000 bucks in cash for this thing. And you're happily living in your house for about a year and a half until 1996 and then you have a dispute with someone and an arsonist burns your house down, okay. So there you are in 1996, your house is burned down. And so what you have to do is you sell the remains of your house and the lot that it sits on and you sell it for $20,000 in 1996. And if somebody said to you, well, you know, what is the harm to you because of the -- if you were suing the arsonist, you would probably sue them for $80,000. So that is kind of like our first step here.

Q. How does that relate to the purchase versus sale approach of the applications in this case?

A. Well, that is what we have just seen which is that is the parallel to they bought it for 1.555 and sold it for 146 and then the adjusted damages are 1.409. That is where we begin our story.

Q. Now, I noticed that this says unadjusted. Did you make adjustments to take into account a portion of lost value that is not due to Microsoft's actions?

A. Yes. I made three, basically three separate adjustments to this number. And let me -- let me use my house example. And so I am going to keep changing the story a little bit here. Let's suppose that when -- when you bought the house it turned out that you bought not only the house and the lot that it was on, but you also bought the lot next door. So you actually have two lots. And when your house burned down, um, you wound up selling the house and the lot that it sat on, but you kept the second lot, okay.

And let's suppose that in 1994 that lot was worth $10,000. Well then you can't really include that in damages because you kept that lot, right. So what we really have to do is we have to start with looking at damages. We have to start by asking what is the value of the stuff that was damaged and that you actually sold. So we're going to subtract off value of the second lot, and now the value of our total purchase has fallen by $10,000 to 90,000 and, of course, our damages will have fallen by $10,000 as well.

Q. You said you make three adjustments. Do you make another adjustment?

A. I certainly did. Let me get another one. Um, okay, continuing with our story let's suppose that your company just transferred you into Salt Lake suddenly. Um, you were looking for a house for your family. Um, you didn't have a great deal of time to search and perhaps as a result you overpaid someone for the house that you bought. You know, perhaps you didn't inspect the house as well as you could. You didn't notice that there was water in the basement. And as a result, a reasonable person coming along would have said gee, you know, you could have gotten this house for $5,000 less so you overpaid for the house by $5,000. Now that is a harm to you, but it is not -- it is not the arsonist's fault. And so we have to take that away, too, because we have to come to a fair market value of what was damaged. So let's take out the $5,000 for the overpayment and now we're down to $85,000.

Q. And did you have another adjustment?

A. I do.

Q. Amazing.

A. And the third adjustment is that, you know, you bought the house in 1994 and you lived it in a couple of years and again, this is -- this is back before the big housing boom but houses were appreciating in '94 and '96. And so between '94 and '96, say housing prices were going up at five percent a year. So, um, over that time period your house would have gone up by 10 percent, okay.

So over really that time what is the value of the house at the time it was burnt down. Well, at the time it was burnt down, your house has appreciated by 10 percent, which is the 8,500, and so we have to add that back in again. So what our third adjustment takes us to, as close as I can get, is you know what was the value of the house, you know, at the exact moment that that arsonist, you know, threw that bottle of gasoline in through your front door, okay, and here is $93,500. And now what I can do is I can say all right, I went and I sold that house on that lot and just that lot for $20,000, my damages are 73 -- $73,000.

Q. So that is a house. How does that relate to the damages in this case and what you did?

A. Well, what we're going to find is that Novell's case is exactly the same kind of analysis. All three adjustments need to be made for our -- in our Novell case. And there they are. Okay. Some of this, I hope, is familiar after all of this testimony that you have heard. But let's begin with our 1.555 billion and let's do our first problem which is the second lot that you kept.

Now, as I understand that you have heard I think in particular from Mr. Frankenberg there was an application that Novell purchased as part of WordPerfect called GroupWise. And Mr. Frankenberg thought very highly of this application and Novell kept this application when it sold the rest of the applications to Corel.

So we have to come up with a valuation of GroupWise because they didn't sell GroupWise, they kept GroupWise. So GroupWise is like my second lot, right. We can't include the value of GroupWise in damages because Novell kept it. So the trick here is to try to come up with a valuation for GroupWise in 1994. So in our mental process we sort of imagine this -- suppose that the subtracted off value of GroupWise back in 1994 just like we subtract off the value of the second lot back in 1994, and, um, we'll spend some time on this, but I came up with a valuation of what I think is a conservative valuation for GroupWise in 1994 of about 117 million. And I know sometimes it is millions, sometimes it is billions. It is like Karl Saigon I don't know if any of you remember he would look up at the sky and say billions and billions. So we are now down from the 117 million, so we're now down to about 1.4 billion as the cost of the applications in the actions sold.

So my next step is overpayment and that is where I think most of this discussion is going to be. It has been argued that Novell paid, overpaid for the WordPerfect assets, and I tried to come up with a number which is frankly as large as possible, as conservative as possible, for the amount of the overpayment. And this particular number 421 million is my estimate of the overpayment in the first methodology. It is little complicated. It is used in how the financial market reacted to a series of events. So if you -- if you believe the way that the financial market reacted to those events, and you thought that their evaluations were quite good, you can get an overpayment estimate as high as 421 million. I take that out, too, because that is -- that is an overpayment that is really not Microsoft's fault at all and so now I'm all the way down to just a little over $1,000,000.

The third adjustment is almost exactly the same which we're talking about two years. And we have to put in some idea of how those applications, WordPerfect applications and Quattro Pro applications, would have appreciated over a two year time period to get us to 1996. And that is adding about 10 percent to 105. That gets us to our value in 1996. Okay. We held on to it until 1996, sell it for 146 in 1996, and that is the 976 damages, excuse me, that is over on the top right over there (indicating).

Q. What kind of approach did Dr. Hubbard, Microsoft's expert, use to assess damages?

A. Well, we both in fact in this sense we all -- we both used the purchase sale methodology.

Q. Did you and he come to the same conclusions about damages?

A. No. We used the same methodology but we have come to extremely different conclusions, very.

Q. Now, are there areas in the purchase sale approach where you and Dr. Hubbard actually agree?

A. Yes, there are a number of them. And the reason why I would like to do this, and again I don't want to prejudge or I don't want to tell you what Dr. Hubbard is going to say, but rather than just talk about everything, what I would really like to focus on is our areas of disagreement. And in order to do that, you know, I have got to say where I think we probably agree. And so to say I think we basically agree on certain things and so what we really need to focus on are the areas where we disagree. And I think if I -- if I look through the areas of agreement of Dr. Hubbard, and again my apologies if I don't have his position correct, um, I think we both agree that a purchase versus sale methodology is, in fact, the appropriate way or an appropriate way to calculate damages in this case.

I think we also both agree on the amount of both the purchase and the sale price. That is not going to be an issue here. The 1.555 billion that they bought it for and the 146 that they sold it for, there is no sign of any disagreement there.

Dr. Hubbard and I, I believe, also -- or Dr. Hubbard agrees with me, I think, that it is appropriate to make all of the three kinds of adjustments that we have talked our way through. It is important to make an adjustment for the valuation of GroupWise as they kept it. He feels very strongly and I have agreed that it is important to make an adjustment for the possibility that Novell may have overpaid for these assets. And we also agree that we need to make some kind of adjustment for the appreciation in the asset value from '94 to '96.

So in principle, um, we are -- we are in agreement in all of that. The other is a little more subtle which I think we are also in agreement on is if we are looking at the amount of the potential overpayment, that second one there, we can't look just to the fall in the value of Novell's share price at the time that the announcement of the purchase was made. I think we both agree that we have to look at what happened to Novell's share price both when the announcement was made that they were going to buy those assets, and then later on when they decided to sell those assets. We also need to look at what the financial market's reaction was to the announcement and the sale of those assets. So we have to look at both the purchase and the sale end, you can't just look at the purchase side.

Q. Did you prepare a slide that illustrates on your damages analysis what you and Dr. Hubbard agree and disagree about?

A. Sure. And I think we have done it here, but we agreed on two numbers, the 1.555 and 146. We agree on the methodology and we agree in principle that GroupWise overpayment and the apps appreciation should be included. Where we are going to disagree, of course, is on the numbers. There will be some very slight disagreement on the issue of valuation of GroupWise, and a similar little or no disagreement about the APPS appreciation. Where Dr. Hubbard and I are going to be poles apart is on our estimate of the overpayment here. His estimate is just going to be far, far larger than mine. So he is going to have an overpayment estimate which is much bigger than 421. And as a result, sort of a mirror image of that is that if we're asking the question what is the value of the applications that were sold in 1996, I have a valuation of about $1 billion. He is going to have a valuation which is far, far lower, about $200,000,000. And those two are really the same issue because the more you think is overpayment the lower you think is the valuation sold as. So we can think of our disagreement is a disagreement of overpayment or a disagreement over what is the value of what they finally sold to Corel in 1996.

Q. Did you prepare for the jury a graphical slide to illustrate that problem?

A. Yes. Yes, I thought this would be useful to give you a feeling of just how dramatic the difference is that we're talking about here. We all agree on the 1.555 million that that was the purchase price. The question that we have got is how much of this is an overpayment and how much of this is actually real value when it was sold. Um, and by analysis what I have tried to do is estimate the overpayment and I get a number up to about a $421,000,000. And I have a little -- somebody gave me one of these things, I don't know if this is really going to help, if is annoying, if some somebody could kind of wave at me, I find it terribly annoying. Um, okay, um, I calculate overpayment up here of 421 million which is about 27 percent of the total price that was paid. And that really leaves me with a true valuation at the time of the sale of a little over a million dollars. So 73 percent of what was paid was true value and 27 percent is overpayment.

Dr. Hubbard is, I believe, going to in his testimony, based on his reports, um, I think Dr. Hubbard is going to argue that in fact Novell really, really, really overpaid, they overpaid by over $1.3 million and as a result, or counsel is going to argue, that the value of the assets that Novell purchased the value of them was only $207,000,000.

So in his world the overpayment is 87 percent; my world and opinion is it is only about 27 percent. It is sort of as if I bought my house for 100,000. I'm sorry, I bought a house that was worth $100,000 and I paid $140,000; Dr. Hubbard bought a house for $140,000 and paid $750,000. So that is -- I'm trying to give you an idea of how stark the difference is likely to be.

Q. Did you prepare a slide to address why you thought your results were more accurate than Dr. Hubbard's results in calculating the overpayment?

A. Yes. There are two -- there are two reasons why I like my number or why I argue to you at any rate my number is better than his number. Um, the first is that we -- we differ a great deal in how to account for the financial market's reactions of Novell's purchase and sale. And this is going to be unfortunately a fairly -- I would regard this as a complex disagreement between professional economists. And I hope to persuade you that my way is better. But you obviously want to hold judgment until you hear Dr. Hubbard.

Um, but I'll do my best to try to explain why I think I have the right to -- I have the right number here. And that really goes to the overpayment issue. We have said that those are two of the same issues, overpayment and valuation.

But the second reason that I would offer for why I think you should accept my number over Dr. Hubbard's is that I have gone to great lengths to check the estimate of the asset value and that is the 1.134 billion against Hubbard's 207 million and the way I have done that, excuse me --

Q. Would it help you if I gave you a cough drop?

A. No, I think I just need to keep drinking.

Q. All right.

A. Maybe slow down. Slow down.

Q. Slow down, give your vocal cords a rest.

A. Um, what I have done is I have tried to check my estimate of asset value in three ways. I have tried to use a large standard finance techniques in valuation, say can we look at how somebody would go about valuing this asset using the normal finance and economics technique. And I come up with a number which is close to my number. Sorry, I come up with a number which is close to my number of 1.134 billion and of course much higher than 207. The next thing I do is look at what other investors or investment banks thought these assets were worth in 1994 and I look at their judgment as to what they thought they were worth.

And the third thing is, um, I look at what another company, Lotus, was willing to pay to acquire those assets. As you may have heard, Novell wasn't the only person interested in these assets and there was a bit of a bidding war going on at the time. And Lotus made a bid for those assets. Essentially I have three ways of asking the question, you know, what is a reasonable way to come to an idea of what those assets were worth at the time that Novell purchased them. Were they worth as much as I think they are or were they worth much, much less.

Q. Okay. So I think that the battle field is clear?

A. Yes.

Q. We're talking about a $421,000,000 overpayment versus a 1.348 billion dollar overpayment that Dr. Hubbard calculated. So I think we need in the first instance to explain to the jury, and I hope in as simple a way as possible, how you calculated your overpayment number?

A. Okay.

Q. How did you do it?

A. Well, I used the same technique that Dr. Hubbard used called an event study. We're both looking at the financial market's reaction to news. And what an event study does is it -- it looks at the day or the period around the day when news hits the market. And it asks what is -- what is the impact of that news. And the way it does it is by saying let's look at what happened to the market value of the stock in a company like Novell when a particular piece of news hit. For example, news that they were going to be delayed in getting out a -- their product from Windows 95, okay. That is -- that is big news in the market. And the question is, you know, how do we -- how do we estimate that value. And what we do is we look at the change in the value of the company when that announcement was made, but then as economists we have to adjust it because the market itself may have moved in one direction or another. And so what we're trying to do with an event study is we're trying to isolate the effects of the announcement and separate that out from the effects of what happens if the market as a whole is moving up and down.

Q. Did you do that?

A. Yes, I have done that on all of the events but we're going to be looking at a number of events. And so whenever I show the market's reactions to an event, what I have done is I have gone through that process of looking at the simple difference, the simple change in the market value, and I have adjusted it for the change in the market as a whole so that the numbers we're going to be looking at are a best estimate of what the effect of the announcement was netting out what happened to the market as a whole.

Q. Now is this a standard economic technique?

A. Yes. Thousands of event studies have been done by economists. I haven't counted them all, but I'm sure there are thousands.

Q. Have you used event studies in your own testimony in other cases?

A. Yes. In the Staples-Office Depot merger, one part of my testimony was an event study that showed that wasn't just economists but also the financial market believed that this merger was going to result in higher prices for office supplies, stores, products, and was going to harm consumers. And so we actually used an event study to corroborate the financial market's thought that this was anticompetitive merger.

Q. And what measure of the stock market do you use in your analysis?

A. I use the S&P 500. Most of you are probably familiar with the S&P 500. It is a broad gauge of the market as a whole. And the S&P 500 is overwhelmingly the index that is used in event studies by economists to net out the effects of the -- of movements in the market.

Q. Did you prepare a slide showing what happened to the value of Novell stock in the S&P 500 over the period 1990 through 1999?

A. Um, yes. This extraordinary graph shows just simply what happens to the share price of Novell, you know, over this 10 year period. And as you can see, it has been a rocky road. Um, dramatic increases, dramatic falls, ups, downs, there is a lot of variation over this time period in the share price of Novell. And we are fortunately only going to look at a tiny little bit of this. We're going to look at three events.

Um, the first is the March 21st, 1994, when WordPerfect -- when Novell bought WordPerfect. And what I have -- what I have asked our crack demo team to do is to color it in I guess it is an orange there, what happened to the share price at the time of that announcement. So that fall right in there (indicating) is the reduction in the share price of Novell when the announcement was made they were getting into the applications business.

And then we are going to look at two other events, um, which I think we have to do in order to get to the overpayment. We're not just going to look at when they bought it, we're going to look at what happened when they sold it and the two events there. The first is in October 1995 where Novell announced that they intended to sell. So this was an announcement of, you know, we're going to be getting out of the business, we're going to be selling this, but not to whom or for how much. And so I have also added a second event there which is January 31st, 1996, and that is when the sale was made and people said it is to Corel and it is for a certain amount.

So I take the news here (indicating), the first event, as the market's reaction to the news they were getting into the -- they bought Novell, bought WordPerfect, and then I take the other two events as the market's reaction to what happens when they announce they're getting out of this business.

Q. So let's do this step by step and methodically. Let's look at the first event in March of 1994. Is this the event that was described in a chart that was shown to the jury and to Mr. Frankenberg by Microsoft's lawyer in his opening statement and in his examination of Mr. Frankenberg?

A. Yes. This is not my chart, this is Mr. Tulchin's chart. And what it shows is that after the close of trading, Novell announces the deal. What you can see is a significant fall in the price of Novell's stock over -- over a fairly short window. Maybe I can do this.

Q. Do you have any problems with what is portrayed on this chart, Dr. Warren-Boulton?

A. Well, um, to the extent that what this chart is supposed to do is it is to supposed to imply that Novell grossly overpaid for WordPerfect, you know, I would basically have two problems. The first, um, is really simple and that is that the numbers are wrong. What this chart uses is it uses the wrong number of shares. And it is calculating this fall from the price and then multiplies it times the number of shares, and it multiplies the times of number of shares it doesn't include the number of shares issued at the time of the purchase. So it is -- it is missing 50,000,000 shares. Now, the -- I should also make full disclosure that I should say it was Dr. Hubbard who picked this up and I made the same mistake. So we can't totally blame Mr. Tulchin. But nevertheless, Mr. Hubbard and I, Dr. Hubbard and I both now agree that the number of shares is 50,000,000 larger and so if you were just following this methodology, just looking at this time period, and you looked at the change in those values and you multiplied it times the true number of shares, you get a number that is now up to 1.7 billion. I'm amazed how I made this number bigger but I'll certainly explain why.

Q. Why is that significant?

A. Well, the bigger you make this number, the lower the damages. That is what is going to come out. And so, um, don't give up on me yet. Um, the other thing is that what I do when I do my analysis is I like to include in my event window, I like to include a day or two days before the announcement of the event because in my experience, information leaks into the market. You know, it is not necessarily the kind of insider trading that gets everybody in jail, but, you know, information gets out there and you know I have looked at a lot of mergers over my life, and a very large number of them, you know, what we start getting is we start getting market movements before official announcements are out yet.

And I know that the SEC monitors for this sort of things, but it happens. And so I like to include a couple of days before the announcement, um, as what is going on, and so, you know, I'm going to include this fall as well. And so if I include that fall as well, you know what I'm getting out of this I would say that the fall is actually closer to 1.9 billion than 1.4 billion.

Q. And why is that significant?

A. Well, it is kind of odd here because what it says is there is a loss in value which is so large that it is actually greater than the cost of the acquisitions. So what that market appears to be saying, if you think this is overpayment, is that these acquisitions had actually negative value in the hands of Novell. Novell would have been better off I guess buying the acquisitions and just blowing them up or something like this.

So the first thing you realize out of this is this number is just too good of a story, this number is just too big, okay. And it is even bigger than here. It looks here as if -- as if they were just overpaid but not catastrophically. But if you actually look at the real numbers, they're actually even bigger. So you -- the first clue is this, it can't just be overpayment something else is going on here.

Q. So how did you go about determining what else was going on?

A. Well, I think that you have to look at alternative explanations for why the price fell when Novell purchased these assets. And there are a number of alternative explanations.

Q. Did you look at other events that are relevant?

A. Yes, I looked at -- I looked at a number of them.

And the way you go about or economists go about looking at what was happening during this time period I think we're back to our friend, don't point this in an eye, when you do this we ask the question, you know, what seemed to be going on in the market, what are the explanations that would be given for why this price fall occurred. And in order to do that, what you do is you look at analysts reports and, you know, analysts are people who this is their business. They often specialize in particular areas like hot tech and maybe even specialize in Novell. And it is their business to try to get as much information about the company as possible and then use that to advise their clients on whether they buy or sell.

So, you know, if you're trying to find out what people thought was going on at the time, the best place to turn to is, you know, look at the analyst's reports. And so we looked at the analyst's reports to try to see what kind of explanations were being offered, what did the analyst think was going on during this time period. And if they just think it was overpayment, they think it was something else.

Q. What did you discover when you looked at the analyst reports?

A. Well, analysts are like all the rest of us, we all disagree. And some analysts seemed to believe this was a great opportunity, that it was a terrific fit, that it would really help in coming up with a new Suite to be able to put Quattro Pro and WordPerfect together under the same house and so you improve the integration. So we had a group of analysts who say this was a good thing. We had a lot of analysts who said this is not a good idea. And the analysts who said this was not a good idea also had conflicting explanations for why it is not a good idea. One possibility which was stressed a lot was a real concern that this signaled that the management of WordPerfect was getting into this new area and wasn't so much a concern about what would happen with that applications, more was a concern they would lose the focus on their core competency.

Remember, Novell at this time was the leading -- leading provider of networking software, and it had the leading product here, NetWare, and it was doing very well at what it did very well. And I think that there was a real concern that what this merger signaled was a lack of focus and that -- and that the rest of Novell's operations would suffer. Not so much that these applications was the problem, the real problem was that there would be a lack of focus on NetWare, a really profitable product that was an alternative.

THE COURT: I think you may have just used a word --

MR. TASKIER: I was about to correct him.

THE COURT: Not correct him, you used networking before in one context, I think you're using it in a different context now. But I could be wrong.

THE WITNESS: Oh, you're probably right.

MR. TASKIER: I was going to go to another.

THE COURT: We'll something else about I was just helping the jury. I think, maybe I'm wrong, when he talked about network before the general effect as opposed to what Novell's specialty was which I think -- I think the jury understands, but I think they are slightly different concepts.

Q. (By Mr. Taskier) Network effects and the networking business of NetWare, is it that what you're trying to say?

A. Yes. Yes, and that is a term different from your telephone network or your network of friends and one of the problems of the English language is there are too many meanings of the same word. German is much better by the way.

Q. Let's not go there. The other thing I wanted to see if I could get you to be a little more clear on was I think you may have misspoken and said that WordPerfect's management would lose its focus on --

A. Oh, my apologies.

Q. One at a time, on its core competency. I think you meant to say that Novell's management would lose its focus on its core competency?

A. That is correct.

Q. So this loss of focus, were there other reasons that were articulated by analysts as to why this might not be a good idea to buy Novell?

A. Well, the other reason when analysts looked at what happened is they said the other possibility is that Novell simply paid too much, perhaps got into a little bidding war with Lotus, and as a result, um, you know they just -- they just simply overpaid for the assets.

And so if we -- if we take apart the analysts who said we think this is a really good idea, just looked at the analysts who say it is a bad idea, it really breaks down, I think, in to two camps. It is the -- it is the analysts who were simply concerned that they paid too much for these assets, that is the overpayment question; and then the analysts who thought that the real concern here was it was going to be a lack of focus. Novell was going to get away from what it really did well which was make NetWare products, and that this was just a bad strategic decision. This was a bad move on their part as a matter of strategy.

Q. So as a matter of financial analysis of market movements and what analysts say, can you, as an economist, figure out how much of the fall in Novell's share price at the time of the acquisition was due to the financial market's concern that Novell overpaid versus other reasons such as loss of focus?

A. Yes, that is -- that is sort of the neat trick here because, you know, I believe and I think Dr. Hubbard would agree, that you can, in fact, separate out the overpayment from the lack of focus. And the way that you essentially do it is by looking at what happened to the share price of Novell when they decided to sell it and when they decided actually to sell it. And the reason is because if all we're talking about is overpayment here, then when you overpay for your house or if you overpaid for Novell, that is irreversible. That is done. That is you're never going to get that money back, okay. You're sunk. I guess the only way you are going to get the money back is I guess on the house example is if you find somebody who wouldn't go into the basement and notice your basement was leaking. But these are very sophisticated people. And so if Novell simply overpaid back in here (indicating), then when they decided to get out of the business, there is not going to be any gain, they can't recover, it is spilt milk, water under the bridge.

So since there is no recovery, no reversibility, you could probably say this looks like overpayment. But on the other hand that is suppose we have the other explanation which is that the market is really concerned about isn't the applications business, this isn't a fall into value applications, this is their concern about the form value of NetWare, okay, because they're not going to focus on NetWare where they're making a lot of money. If you look at the total value of this company, it is overwhelming in NetWare, you know. So even a small effect on the NetWare business is going to generate a rather large effect here. Now if indeed what is going on here is the market is saying we have some managers that are getting out of the business that they're good at, which is NetWare, they are going to get involved in something else, but let's suppose that within a relatively short time period the management says you're right, we shouldn't have gotten into this business, you know perhaps, or, you know, now we're going refocus back on our core competency and I -- I think, in fact, Mr. Frankenberg testified about that when he was talking about the sale. He said what is the purpose of the sale here. He said we want to get back to what we're good at okay. Now, what is going to happen is when that news gets released to the market, then this is a relief, okay, that is reversible. Now we're going to get back to what we're good at and therefore our share prices are going to go back up again.

So what this lets you do, admittedly somewhat roughly, it lets you say we're going to take that total percentage decrease there, (indicating), and then we're going to ask well, you know, if that failed by, you know, pick a number that failed by 20 percent and then if we look at the -- at the up increases down in here and say well back up by 15 percent there, then we're basically saying is, well, 15 percent loss and regain is the loss and regain of focus. But the fact that this is bigger than these, means that this overpayment in there, so we're going to basically subtract off that percentage gained from the total percentage fall to get our best estimate or at least financial market's best estimate how much of this fall is overpayment and therefore can't be recovered, and how much of it is because of a strategic decision that got reversed and therefore couldn't be recovered. So that is the fundamental methodology that we're using that really separates these two.

Q. And have you prepared some slides that focus in on the particular events that will help the jury understand this a little better?

A. Yes. We're going to look, okay, we're going to look at all three of -- we have already seen the first event that was the slide that Mr. Tulchin showed. This shows you the first of the two sale events. This is the date when -- when they announced that they were going to sell WordPerfect and Quattro Pro. And as you can see, it had a pretty nice effect on the -- on the sale price. This is the I'm getting out of business and refocussing story. You have the value of Novell went from about 14.85 to about 16.75. So we don't know at this point who they're selling it to, we don't know how much they're selling it for. What we're saying to the market is we're going to refocus, we're going to get back to our core NetWare business, um, and we're not going to give you details of how we're going to get out of here yet but we're getting out of town right. So that is the first step. And then, um, and then time goes by, okay.

Q. Next slide, is that right?

A. Right. And this is at the time of -- now we're here in January. Remember the first one is about October 30th. So, you know, time goes by. And during that time period some news comes out, one way or the other, okay. There is a lot of speculation who they're going sell it to, who they might sell it to. But basically nobody really knows anything for sure, you know, right up until whoops, let's go back. Nobody knows anything for sure until we actually get the financial announcement of the sale. So that is why what I have used is I have used this event and I have used this event to combine.

All right, this is our second event. This is when everybody knows or thinks they're probably going to sell. But now what we have is we have a definitely selling, we're selling to Corel, and also we have an announcement of the amount of the sale which is $146 million. Up until this moment, nothing is really certain. Now we know it is for certain and now we get another increase in the share price of Novell. So I take this and the previous one as my combination for what is the recovery.

Q. And you have a combined set of slides which show the entire event study for the jury?

A. Not surprisingly I do. Okay, these are my three events. Here is my first event which is the March 1994 purchase which you have seen as a regular slide of the price going down. Now what I have done here is I have all these in percentages on the left hand side, so I have transformed them from dollar amounts to percentage amounts because I have to add up the percentages. So my first event is March of 1994. As you can see, we get a real decline.

The next is October 1995, our intent to sell. As you can see, we get an increase. And finally in January of '96 we get another increase. I'm basically going to combine these two and net those effects out from here.

Q. All right. So what was the first event and what did you think happened?

A. Well, March 1994 event I got a little star next to the day that the news was released. And not surprisingly, that is the day that we get the big bang on Novell's stock that we can see is a fall around 17 percent in value of Novell. Now, what I try to do when I do these things, and I think I mentioned before, I always try to have, you know, a day at least before and a day after. I try to have a day before because in my experience, you know, better or worse, the stuff gets out. And so my concern is that by the time the event occurred, some of the market reaction may already be in there in which case you have to really count it.

Now this particular case, this really does look like Novell was pretty good about this. Um, this looks like a real surprise, okay. These are a little bit negative. So if you look at it you thought well maybe there is a -- the market is sort of soft, something was coming up in the day, couple days before, but it is -- it is very little pre-announcement that is going on here. But I include it any way, just in case. So I'm going to include that as part of my form. This is where we talked about before the difference of my side and Mr. Tulchin's. I added on those extra two days up in there (indicating). I'm trying to make this thing as big as possible, okay.

Now, in addition to that, I also had a pretty nice fall, pretty bad, I guess, fall in the price of Novell's stock the day after. And I interpreted that this is all a matter of interpretation. You know, at some point your guess is as good as mine. But I think that a reasonable approach and reasonable person could say, if we see a fall, you know, real movement the day after, we're probably picking up here is the, you know, there may have been some disagreement as we have discussed before, was this a good idea, was this a bad idea. And you need to give the market at least another day to kind of, you know, digest this, get it under their belt. So I combined all these three, okay.

Now, the next one, the October 1995 intent to sell is a little more complicated in a couple of directions. First is this announcement came out on October 30th. That was a Monday. Now as it turned out, the previous trading day was a Friday. And on that day, the price of Novell stock bumped up by about seven percent. Now, you know, without bringing a criminal case or doing anything, I look at that and I say, it looks to me like this information leaked out of the market. But there was -- there was pre-announcement information out there. And so I am going to count that as part of the increase, okay. I'm going to combine it.

Now the other complicating factor is this little green bit here. On October the 30th, the announcement that Novell made wasn't just an intent to sell, it also at the same time announced it was trying to do a stock repurchase. Now, a stock repurchase when a firm announces a stock repurchase they're basically saying I'm going to take some of that money that I have stashed away and instead of my using it, I'm actually going to give it back to shareholders. And shareholders tend to react more positively towards that. They would rather have the money in the bank with Novell. And so when you get share repurchases often you get some increase in the prices of the shares, okay. It is a bit all over the map and it is -- it is very hard to actually to determine how much the increase in the price of those shares might have been because of the share repurchase. And so what I did is I looked at what the average increase in share price was for firms when share repurchases were announced. And on average, it is about two percent. So what I did is I took the two percent off of the top of here (indicating), okay and so that is not included in my bounce back. Um, but I also included these -- these two days afterwards.

And then finally we have the January 1996 sale. Again, there is my event. And when I -- when I see a negative and then a positive, I think to me that is clearly information that information did not leak to the market. If the information that leaked to the market as you know this case you would expect to see them at the same time but this is information that is good about Novell. So since the price of the share actually fell a little bit the day before, I assume that can't be this information, okay. Um, but nevertheless you know I have a four day window, and so I'm trying to sort of be conservative here, keep the same four days. So I include this negative as an offset to the increase. So essentially I'm going to take this and I'm going to net it out over these two.

Q. So what we have done here is you have looked, as a percentage matter, at the drop in price upon the purchase. And then you have netted it against the increase because in your testimony, in your testimony the increase undoes whatever negative effects there would be with respect to loss of focus?

A. That is right. This is the reversible loss of focus component of this.

Q. And you then come up with some shortfall. And what does that shortfall represent?

A. Okay, yes. Here we are. Okay. This is going to be my cumulative effect. Now each of these are the individual day events. So when I started over here I start off with the negative and I add this one and then I add the big one and then I add this one. And by the end of the event I have got about a 22 percent fall in the value of Novell's stock, okay. So now I take a look at the first recovery event, okay. And if you combine all of this together, you get about a 17 percent bounce back, all right.

So I'm going to take out the 17 percent bounce back, and that affects the 17 percent bounce back, then I'm going to look at the final event and I'm going to say all right let me take that in, that is another four percent that comes up, and by the time I'm through, my overall effect has gone to about 4.74 percent. Now, some of you look at these numbers and, you know, will sort of immediately recognize why am I not all the way back home again when I got a 22 percent reduction and I'm up by 17 and I'm up by four and if I look at this right I'm up by 21 percent, down by 22, up by 21 percent, how come I'm still down by four and, of course, the answer any of you who have looked at your 401(K) over the last couple of years, you have noticed that when your 401(K) fell in half, it fell by 50 percent. You know it had to increase by 100 percent to get back to where you are before. So that is why you can't just add up the numbers. All right. That is -- that is the arithmetic.

So I have a 4.74 percent fall, but remember that is in the value of Novell and there is a lot, lot more to Novell than just the applications. So I have to do a little arithmetic since there is no way I can remember this, okay I have to have it printed at the bottom of the slide. I have 365.8 million shares, okay, that is the 314 million that both Mr. Tulchin and I assumed earlier, plus the 51,000,000 that Dr. Hubbard notices, so I'm now at 365 million shares. Um, and at this moment, the day before the decline started, okay, um, it was Novell's price was $24.25 a share. And so what that gives me is that on this date, just before everything hit the fan here, the value of Novell -- stock market value of Novell was 8.87 billion. This was quite a company in 1994. Okay. All right.

So what I have to do to get my estimated overpayment, I take my 4.74 percent of 8.87 billion and that is 421 million and that -- that number may ring a bell by now. So that is my overpayment. And to put it in context, I am not really interested in how big are the share of Novell, I'm really interested in how big is that as a share of the amount that I paid or Novell paid for the assets. They paid 1.555 billion. So my 421 million is 27 percent what I paid. And that is how I arrived at my estimate of the overpayment.

Q. So I think that is a little laborious, but this is sort of the key issue that you and Dr. Hubbard disagree on?

A. Yes.

Q. And it was probably useful to walk you through to understand how he got there and how he backed up loss of focus to that compared to the actual overpayment. Did you actually do another -- do a slide that shows how that works?

A. Um, yes. This is -- you have seen this before. This is just reviewing the bidding a little bit. You know, this is how I get to 27 percent or my 421 million overpayment. And Dr. Hubbard will explain how he gets to his overpayment.

Q. I think you said earlier that overpayment really is just the flip side of the value; is that right?

A. Yes. It is like a seesaw or a flip side. The more the overpayment the less the value; the less the overpayment the higher the value. But everybody agrees these two numbers have to add up to 1.555 billion. We're all on board there.

Q. All right. So that is your basic number?

A. Yes.

Q. And what have you now done, what other methods of valuation do you undertake at all to corroborate or confirm that that is a correct assessment of the value of the company?

A. Well --

Q. And by contrast the flip side, the value of the overpayment?

A. Well, as I said, there are two ways you can methodological go about this. One you can go with this one you can do this extensive analysis of trying to figure out how much the overpayment was and you know using the financial market's reactions and events and all that sort of thing. But there is also you could just do the flip side of it. You can ask the question, well, maybe instead I should be just looking at trying to figure out what the value of the assets were in 1994 rather than figuring out the overpayment. And that is basically what I have done, what I mentioned before. That is the other thing that Dr. Hubbard and I are going to disagree on or actually let me rephrase it. That is something that I have done, okay. You know, I have gone to some effort to try to separately see if I can check that number of 1.134 billion and separately from overpayment.

Q. Is that something that economists do in their regular professional standard economic approach?

A. Yes. There are a number of ways that you can go about doing that. Um, I think I have --

Q. Earlier I think you said, earlier I think you said that you calculated a value during -- using standard finance techniques?

A. I have looked at that.

Q. And then you look at what other investors thought assets were worth? And that you looked at what Lotus was willing to pay for those assets?

A. That is correct.

Q. And so you have now shown us the first method by a standard finance technique of looking at the market exchange and doing event study. Um, let's look now, if we can, at what other investors thought as a matter of historical fact Novell -- WordPerfect was worth at the time and what Lotus was willing to pay at the time, and can you tell us about how you assessed those?

A. Sure. So we're now doing our flip side, we're looking for valuation. And we have got a lot of different ways to look at this valuation. You know, some are going to be better, some are going to be more accurate than others and what I have basically done is I have dug through it and I have asked what is all of the information that I can come up with that offers some guide to what the value of these assets actually were as 1.1 billion or was it 200,000,000. Um, so, I'm going to start with outside valuations and then I'm going to turn to some other evaluations. It is going to take a little while.

Um, the first outside evaluation, a bit of -- on a bit of an extreme, comes from a Pete Peterson. As some may know, he was the CEO of WordPerfect back when and he wrote a book in 1994. And in that book he estimated the value of the -- he said he thought the value of WordPerfect in 1992 was about two billion. That is a nice round number. And so, um, you know, you can put whatever valuation or credibility on that that you would like. But he thought it was worth about two billion, okay.

Um, the second estimate also comes from Mr. Peterson but it is a very, very different estimate, okay. I interpreted it as about 585 billion. And that estimate actually comes from the following that when Mr. Peterson left WordPerfect in December of 1992, he sold his stock.

There were two founders and then Mr. Peterson had one percent and the two founders had the rest of it. And when he left, Mr. Peterson sold his one percent share back to the two founders and he sold it for four and a half million dollars. Now, one way of getting to the question of well gee, what did Mr. Pete Peterson think the firm was worth in 1992 if you are willing to sell one percent of the firm for 4.5 million, then what is 100 percent of the firm worth? And so you multiply it. If it is 100 and you get a valuation of 450,000,000, okay. I didn't say these estimates were going to be close to each other.

Q. So they're pretty wide?

A. They're pretty wide.

Q. What do you as an economist infer from that kind of gap?

A. Well, just to begin with, you can't just go to the 450,000,000. It is -- because a minority share isn't worth as much as a controlling share and there is something in finance called control premium, usually actually for the control of the company you are willing to pay about 30 percent more of the share for the shares. And so, you know, if you went to the -- sorry 450,000,000 you would have to gross about 5 -- about 30 percent to get to the 555 million. But nevertheless that is quite a reach. And so, um, you know, to me what I do is I look at that and I say that is really like the bookends. Okay. That is like one of the two extreme valuations that you can come up with. And what we have got to do is we have got to come up with some valuations that are more precise here. And so we're going to move on to -- move to the --

Q. The third one, the third one says 1.17 billion and it reflects an August 1993 Morgan Stanley initial public offering. Can you tell us what that refers to?

A. Well, in 1993 the founders and owners of WordPerfect thought it would be a good idea to cash out a little bit. So what they proposed to do was take what is a privately held company and sell some of their shares. I think it is about 16 percent of the shares. And the way you do that is what is called an initial public offering. You go out and you find a major investment bank which can advise you on, you know, what do you think these shares would sell for, and then you offer those shares out in the market as initial public offering, you know, at that price. And they retained Morgan Stanley, which is a very well known investment bank, to advise them on what was the best price that they should set for selling those shares. Morgan values -- put a valuation on this somewhere between 18 and $20 per share and then the average of that is $19 per share. So if we take the $19 per share from Morgan Stanley, the investment bank, and we multiply it times the number of shares and this now, remember, this is the number of shares of WordPerfect not Novell, that was the big number, okay, number of shares of WordPerfect, what we get is essentially Morgan Stanley, the investment bank, valuing WordPerfect at that time at about $1.17 billion. So this is a professional investment bank that is -- that has valued WordPerfect at the time of the IPO. That's 1993. Okay.

Q. How did that compare to your valuation?

A. Um, it's pretty close. I think I am 1.1 something. But it's -- it's as we used to say, close enough for government work.

Q. So we have the fourth of -- the fourth now. And that says 1.3 billion or more. Can you tell the jury what that is about?

A. I think as I mentioned before, in 1994 when Novell was thinking about buying WordPerfect, it wasn't the only company. And the other major company that was looking into actively negotiating flying back and forth to Utah, negotiating with the WordPerfect management was Lotus. And that basically bidding war went on for a little while. Um, by the time the WordPerfect management decided to actually go with Novell, at that moment it's my understanding that they basically had what I might call a conditional offer from Lotus at 1.3 billion. Lotus may have been a little concerned about antitrust problems and things like that, but not a formal offer, but that was the offer that that they thought that Lotus was willing to make, might even be willing to raise it if they kept the bidding war going on. But really, without giving Lotus a chance to go back and re-up it, the management on WordPerfect decided to go with Novell. I think they were apparently concerned about other things, they were concerned about strategic fits. I think the founders wanted to continue to play an active role in the company and so they basically cut off the bidding. But at the time that they went with WordPerfect, sorry, with Novell, there was this $1.3 billion offer. And so, you know, again as an economist I look at what a willing buyer and willing seller and if I see somebody out there that is willing to pay 1.3 billion dollars and somebody else, a second person who has no particular reason why he should be overpaying, you know, I look at that and I think that is also not an unreasonable valuation on those assets.

THE COURT: All right. Mr. Taskier, since you have already slowed down Dr. Warren-Boulton, maybe we ought to take the morning recess. We'll take a short recess. Any time you're ready.

(Recess.)