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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF UTAH, CENTRAL DIVISION

NOVELL, INC.,)
Plaintiff,)
vs.) Case No. 2:04-CV-1045 JFM
MICROSOFT CORPORATION,)
Defendant.)
_____)

BEFORE THE HONORABLE J. FREDERICK MOTZ

DATE: DECEMBER 8, 2011

REPORTER'S TRANSCRIPT OF PROCEEDINGS

JURY TRIAL

REPORTED BY: Patti Walker, CSR, RPR, CP
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I N D E X

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	Mr. Tulchin (Redirect)	4927

1 SALT LAKE CITY, UTAH; THURSDAY, DECEMBER 8, 2011; 8:00 A.M.

2 PROCEEDINGS

3 THE COURT: I'm not going to give the instruction
4 Mr. Tulchin asked for, but I'm going to say something.

5 Let's get the jury.

6 (Jury present)

7 THE COURT: Good morning, everybody.

8 Unfortunately, Mr. Taskier apparently has the flu, so
9 Mr. Johnson will take over the cross-examination.

10 Professor, you can come up. While you're coming
11 up, I just want to reemphasize to you all, and we have been
12 here for such a long time, it's hard not to talk about the
13 case or think about the case, just make sure you don't
14 discuss the case with one another until it's over. This is,
15 like all cases, a very important case. Until the end, it's
16 about the rule of law and you putting aside anything that
17 you think one way or the other way until you've heard the
18 closing arguments, all the evidence, closing arguments, my
19 instruction and focus upon applying the rules of law and the
20 facts as you've heard them. You know that as well as I do,
21 we've been here a long time, as I think I said back a long
22 time ago, a case this long and this complicated, it's
23 perfectly natural if you talk about it a little bit. But
24 the important thing is don't stake out positions until
25 you've heard everything because obviously one of the great

1 things this country is all about is the rule of law, and the
2 rule of law involves putting aside anything you think about
3 before you come in the courtroom and apply the rules as a
4 I'll tell you they are to the facts as you hear them to be.

5 Mr. Johnson.

6 MR. JOHNSON: Thank you, Your Honor. Mr. Taskier
7 sends his apologies. He felt very, very bad.

8 THE COURT: I'm glad -- it's a bad thing to say
9 you're glad -- it's the flu because he didn't look very
10 good.

11 MR. JOHNSON: No, he did not. He's in bed. I
12 think he's going to be fine. Just a couple days rest.

13 CROSS-EXAMINATION (Cont)

14 BY MR. JOHNSON:

15 Q Dr. Murphy, good morning.

16 A Good morning, Mr. Johnson.

17 Q Of course you remember me, I took your deposition in
18 this case, right?

19 A Yeah. It's been two plus years ago, so it's been a
20 while.

21 Q It has been a while.

22 Dr. Murphy, in your report you opined that three
23 conditions must be satisfied in order to find Microsoft
24 liable; is that correct?

25 A I believe that's the case, yes.

1 Q Let me put up a demonstrative Exhibit 22, which we've
2 taken away from your report.

3 As I understand the three conditions that must be
4 valid, at least must be satisfied in your view, is that
5 Novell's office productivity applications, that's what API
6 stands for, had the potential to impact competition in the
7 PC operating system market. B, the challenged conduct
8 directly harmed Novell's office productivity applications at
9 the time they were owned by Novell, and did not have
10 offsetting pro-competitive effects. And, C, the harm to
11 Novell's office productivity applications identified in B,
12 if it occurred, must have sufficient -- be sufficient to
13 cause a reduction in PC operating system competition.

14 Does that look like the three conditions in your
15 report, sir?

16 A Yes, they do.

17 Q To be clear about those conditions, do I understand
18 correctly that you aren't here to talk about legal standards
19 to the jury but rather the framework in which you assessed
20 whether or not Microsoft's conduct harmed competition in the
21 operating systems market?

22 A Yes. I'm not a lawyer, so I'm here to talk about the
23 economics, not the legal aspects.

24 THE COURT: Even if you were a lawyer, from the
25 witness stand you couldn't testify.

1 BY MR. JOHNSON:

2 Q Do I understand that your testimony before this jury is
3 that you are now assuming, for purposes of your analysis,
4 that part B of your three conditions is satisfied, that is
5 the challenged conduct directly harmed Novell's office
6 productivity applications at the time they were owned by
7 Novell and that Microsoft did not have any offsetting
8 pro-competitive effects, correct?

9 A Yes. I think I said yesterday I'm assuming -- I just
10 want to make clear that the report, as you will recall, was
11 a little different than all the things that we talked about
12 yesterday. But it was the impact of the namespace extension
13 changes on the delay on Novell. That's what we were talking
14 about yesterday.

15 Q Yes. Just to be clear, B is done because B you assume
16 that that conduct directly harmed Novell and that there were
17 no offsetting pro-competitive effects, correct?

18 A Yeah, I just want to make sure I'm clear. I'm not
19 saying I know that that happened. I'm assuming for purposes
20 of my analysis that that happened.

21 Q So we don't have to worry about B, right? You and
22 me --

23 A Exactly. Our discussion is more about A and C,
24 certainly.

25 Q Now as a matter of antitrust economics, Professor Noll

1 does not agree with your contentions in A and C, correct?

2 A I would say that's correct.

3 Q Let me show you what has been marked demonstrative 23,
4 which contains Professor Noll's framework for analysis in
5 this case. Professor Noll's framework was, one, whether
6 WordPerfect and Novell's applications and middleware
7 products as well as other products threatened Microsoft's
8 operating systems monopoly. Two, whether Microsoft engaged
9 in anticompetitive conduct, some of which directly harmed
10 WordPerfect and Novell. And, three, whether Microsoft's
11 conduct against WordPerfect and Novell were a significant
12 contributor to anticompetitive harm in the PC operating
13 systems market in light of the weakened state of other
14 applications and ISVs.

15 Do you think that captures fairly Professor Noll's
16 contentions in this case?

17 A I can't really speak for him, but I think it's pretty
18 close.

19 Q Now you would have to --

20 MR. TULCHIN: Your Honor, sorry to interrupt. All
21 of this is really going to be a matter for the Court's
22 instructions to the jury. And I'm not sure a debate about
23 what the standard should be in the absence of the Court's
24 instructions --

25 MR. JOHNSON: Your Honor, we should approach if

1 he's going to do this in front of the jury.

2 THE COURT: I think it's an appropriate and valid
3 objection. Obviously what the legal standards are the legal
4 standards. I'm going to overrule the objection.

5 Go ahead.

6 BY MR. JOHNSON:

7 Q In fact, that's what we talked about earlier,
8 Dr. Murphy, is you're not a lawyer and you're not providing
9 legal standards, right?

10 A No, absolutely. I'm saying the correct way to analyze
11 it from the point of economics.

12 THE COURT: There are legal standards included in
13 these demonstrative exhibits, and I'm going to allow the
14 testimony to proceed, but obviously I'll tell you what the
15 legal standards are.

16 BY MR. JOHNSON:

17 Q Dr. Murphy, you would agree with me that your
18 framework, which we just looked at a moment ago, does not
19 take into account the weakened state of other applications
20 and ISVs, correct?

21 MR. TULCHIN: Same objection, Your Honor.

22 THE WITNESS: Absolutely that's not true.

23 THE COURT: Overruled.

24 BY MR. JOHNSON:

25 Q Let's turn back to your framework again.

1 A Absolutely.

2 Q Where in your framework do you mention anything about
3 any other applications and ISVs other than Novell?

4 A I take -- I apply to my framework the world as it
5 actually exists. So whatever is at present in the world,
6 OS/2 is doing something, Netscape is doing something, Java
7 is doing something, whatever the actual state of the world
8 is is the situation in which I apply it.

9 So if there was a weakened state in the actual world, I
10 take that into account in my analysis. So I don't
11 explicitly say it, but I take the world as it exists.

12 Q Dr. Murphy, you don't even implicitly say it in these
13 three conditions --

14 THE COURT: You've got your answer and don't argue
15 with the witness. Move on.

16 BY MR. JOHNSON:

17 Q Your framework does not consider anticompetitive
18 conduct engaged by Microsoft against others; isn't that
19 correct, sir?

20 A To the extent it had an effect in the marketplace, I
21 take it into account. I take the world as it existed and
22 ask what was the effect of these actions in that actual
23 world.

24 Q Isn't it a fact, sir, that under your framework,
25 Novell's products have to impact competition in the

1 operating systems market standing alone?

2 A They have to have an impact on top of whatever else was
3 there. They have to have an impact. I'm not interested in
4 measuring the effect that other people had. I'm interested
5 in measuring the effect that things that happened to Novell
6 had. That's the framework I used.

7 Q Under your part C, only harm to Novell's products can
8 be considered in assessing harm to competition in the
9 operating systems market, correct?

10 A When I measure the effect on these actions and how they
11 affected competition, I look at how these actions affected
12 Novell and how that affected competition. If there were
13 other actions that affected competition, that's other
14 actions. I look at these actions and the effect that they
15 had. That's the framework economists apply generally.

16 Q And these actions, as I understand it, are the actions
17 against Novell, correct?

18 A Yes, but those actions are analyzed in a world in which
19 all the other things that actually happened took place.

20 Q Do I understand correctly, Dr. Murphy, that the basis
21 for your deciding that only the impacts on Novell should be
22 considered in this analysis?

23 THE COURT: That's not what he said. So rephrase
24 your question.

25 //

1 BY MR. JOHNSON:

2 Q Do I understand, Dr. Murphy, that this framework for
3 analysis that's on the screen behind you was gained by
4 discussions about the economics of the case with counsel for
5 Microsoft and your staff?

6 A I think we did talk to counsel and my staff, although
7 it's not a different analysis than we apply in economics
8 always. Economics is always asking what is the impact of
9 something, which you answer the question by saying how would
10 the world be different if that hadn't happened. That's what
11 we mean by the impact of an action. You compare the world
12 with the action to the world without the action. That's
13 what it means to ask the impact of an action.

14 Q My question was a little simpler, and that is to gain
15 your understanding, to make this framework that's on the
16 board, you did so -- you gained that understanding based on
17 discussions with Microsoft's counsel and your staff, right?

18 A We did discuss it. But what I just said is that we
19 reached the same conclusion we reach in economics and, in
20 fact, in almost all scientific analysis of the impact of
21 something, it's defined to be how would things be different
22 if that hadn't happened. That's what we mean by an impact
23 of something.

24 Q Dr. Murphy, do you understand that the primary goal of
25 antitrust law is to improve consumer welfare?

1 MR. TULCHIN: Your Honor --

2 THE COURT: Sustained.

3 BY MR. JOHNSON:

4 Q Isn't it true that your three conditions would lead to
5 situations where a monopolist could partake in numerous acts
6 that harm various potential threats to their monopoly, yet
7 you would find no liability so long as each threat alone was
8 not large enough to have an impact on the relevant market at
9 the time of the acts?

10 MR. TULCHIN: Objection, Your Honor. This is just
11 calling for a legal conclusion.

12 THE COURT: Obviously he's going to answer this as
13 an economist.

14 If you have an answer.

15 THE WITNESS: Yeah, I think there are hypothetical
16 situations that aren't similar to this one where you would
17 have to take that into account. This case I think is pretty
18 easy because you always ask what's the incremental effect.
19 If we were asking what's the incremental effect of a set of
20 actions -- from my understanding is the actions at issue
21 here are the actions against Novell. So if you were asking
22 me what is the impact of 20 different actions, we could ask
23 that question, how would the world be different if 20
24 different things hadn't happened. Here we're looking at a
25 particular set of actions. That's what my understanding is

1 at issue here, a particular set of actions.

2 BY MR. JOHNSON:

3 Q So you would agree if a monopolist had undertaken
4 numerous acts that harmed various potential threats, that it
5 would be appropriate to take all of those into consideration
6 in an economic analysis of anticompetitive harm, correct?

7 MR. TULCHIN: Your Honor --

8 THE COURT: Sustained.

9 MR. TULCHIN: Thank you, Your Honor.

10 BY MR. JOHNSON:

11 Q Isn't it a fact, sir, that multiple acts of
12 anticompetitive conduct together could be significant enough
13 so as to constrain the power of a monopolist while the acts
14 of only one might not be?

15 A I think you misstated that question. Could you repeat
16 it?

17 Q I'll try. Dr. Murphy, isn't it a fact that if you had
18 a situation where you had anticompetitive conduct against
19 multiple threats that together would be significant enough
20 to constrain the power of a monopolist while only one actor
21 within that group standing alone would not?

22 A I actually think that question is not posed correctly
23 grammatically because you are talking about anticompetitive
24 acts somehow restraining the monopolist, but it doesn't work
25 that way. I'm not trying to be difficult, it's just I think

1 the question is not --

2 Q Let's go to demonstrative 302A.

3 This is your first opinion, correct?

4 A Yes -- I mean this is a summary of it I would say. We
5 talked in depth about this yesterday. But, yeah, this is
6 kind of the conclusory statement.

7 Q Isn't it true, however, that only a relatively small
8 number of applications are needed to advance development on
9 a competing operating system because people generally don't
10 need multiple word processors, multiple databases or
11 multiple applications of any kind, correct?

12 A I think that's a bit at odds with the findings that are
13 binding in this case, because one of the findings that I
14 cited yesterday talked about how it was important to have
15 multiple versions of the same software. So I'm not sure
16 that conclusion is consistent with the findings.

17 Q Whether or not it's consistent with the findings, can
18 you answer the question, sir?

19 A Yeah, I can. I just -- so, again, I think for the
20 reasons that are cited in the findings, people value having
21 multiple versions because -- multiple options because they
22 don't always like the same option. They want to have the
23 ability to choose among them. But it is true having one
24 helps for sure.

25 Q Are you aware, sir, that Microsoft's senior vice

1 president, James Allchin, so testified in the case against
2 Microsoft in Washington, D.C.?

3 MR. TULCHIN: Your Honor, again, we had this whole
4 debate in Baltimore, and I thought we resolved that in favor
5 of collateral estoppel on the findings here.

6 MR. JOHNSON: Your Honor, may we approach?

7 THE COURT: Overruled.

8 MR. JOHNSON: May we approach, Your Honor?

9 THE COURT: No.

10 BY MR. JOHNSON:

11 Q Let me show you what has been marked Plaintiff's
12 Exhibit 619. That binder before you contains the sworn
13 testimony of Mr. Allchin and Mr. Maritz in the case against
14 Microsoft in Washington, D.C.

15 Let's turn to paragraph 290 of Mr. Allchin's testimony,
16 please.

17 THE COURT: Don't put it up.

18 BY MR. JOHNSON:

19 Q Do you see where Mr. Allchin testified in paragraph
20 290, quote, if Linux and the applications created for it
21 work well, more customers will be attracted to Linux,
22 leading to the development of more Linux applications and so
23 forth. Only a relatively small number of applications are
24 needed to start the process off because people generally
25 don't need multiple word processors, multiple databases and

1 so forth. Although over time, variety is, of course,
2 desirable.

3 Now do you have any basis, Dr. Murphy --

4 THE COURT: Do you want to relitigate the
5 findings, do you want to relitigate the case that was found
6 in D.C? I'm sure Microsoft would. If you want to
7 relitigate everything under the findings, go ahead and do
8 it.

9 MR. JOHNSON: Your Honor, again, may we approach?

10 THE COURT: No. I'm just telling you, you are in
11 an area where you're getting close to relitigating what was
12 decided in the findings of fact.

13 Go on. Ask a question.

14 BY MR. JOHNSON:

15 Q Dr. Murphy, do you have any basis for disagreeing with
16 the sworn testimony of Mr. Allchin, a senior Microsoft
17 executive?

18 MR. TULCHIN: We object, Your Honor. I don't
19 think Novell can have the findings and also try to explore
20 what's beneath them.

21 THE COURT: I'm going to overrule this, but we're
22 getting into a dangerous pasture.

23 THE WITNESS: Actually, I do. In fact, this was
24 written -- this was prospectively looking at the time about
25 what was going to happen with Linux. In fact, the history

1 of Linux is that it hasn't done very well at all. It did
2 get some initial applications. It simply didn't have
3 sufficient number to really allow it to grow on the desktop.
4 It did okay on servers where this wasn't important, where
5 people don't have the same demands for a wide variety of
6 applications. I think the history of the marketplace bears
7 out that this, in fact, didn't carry forward.

8 BY MR. JOHNSON:

9 Q Dr. Murphy, my question really wasn't about Linux, it
10 was about what Mr. Allchin said in the next sentence, he
11 stated, only a relatively small number of applications are
12 needed to start the process off because people generally
13 don't need multiple word processors, multiple databases and
14 so forth, although over time, variety is, of course,
15 desirable.

16 With respect to that statement of Mr. Allchin, do you
17 have any basis to disagree with the sworn testimony of
18 Mr. Allchin?

19 MR. TULCHIN: Same objection, Your Honor.

20 THE COURT: Overruled.

21 THE WITNESS: Yes, I do. He clearly talks about
22 Linux before that statement. He talks about Linux after
23 that statement. Mr. Allchin is saying Linux is, in fact, a
24 test case for his hypothesis. We actually know what's
25 happened. So I think using the very test case that he

1 suggests, the case that he says that logic applies to seems
2 to contradict his conclusion.

3 What I'm stating is really just the applications
4 barrier to entry as I think was reflected in the findings
5 and was reflected in much of the analysis surrounding
6 operating system competition.

7 BY MR. JOHNSON:

8 Q Dr. Murphy, then you would agree that by 1998 the Linux
9 operating system had gained a lot of top tier developer
10 support, correct?

11 A I don't think you would go that far. It had some
12 support. But, you know, as a desktop operating system, it
13 just wasn't very successful, certainly among the wide swath
14 of users.

15 Q Let's turn to paragraph 289 of Mr. Allchin's testimony
16 in front of you. He testified, quote, Linux is an operating
17 system that has gained a lot of top tier developer support
18 recently, a wide range of leading applications from Oracle,
19 IBM, Informix, Corel, the WordPerfect suite of business
20 productivity applications, Computer Associates, Netscape and
21 others are already available to run on Linux or currently
22 under development.

23 Do you have any basis to disagree with Mr. Allchin's
24 sworn testimony, sir?

25 A No.

1 THE COURT: Did you object?

2 MR. TULCHIN: Yes, sir.

3 THE COURT: I sustain because the previous
4 question had to do with his testimony here about this case,
5 about his opinion, about a number of applications. This is
6 simply relitigating the issues from another case in which
7 you've read in collateral estoppel findings. So the
8 objection is sustained. You are not going to relitigate
9 that case here.

10 BY MR. JOHNSON:

11 Q Dr. Murphy, I think you just said something about Linux
12 not having that many users. Is that what you said, sir?

13 A I said Linux was not successful as a desktop operating
14 system for the mainstream users. Linux has had success as a
15 server operating system where the same type of economic
16 considerations are -- I should say the economic
17 considerations are different. I think it fits very well
18 with the analysis I put forth yesterday.

19 Q Isn't it a fact, sir, that by 1998 Linux was reported
20 to have five or ten million users?

21 A That probably sounds okay.

22 Q Isn't it the case, sir, in the latter half of the 1990s
23 Linux became increasingly competitive with Microsoft's
24 Windows?

25 A Yeah. We have to remember the scale we're talking

1 about here. In terms of overall share of users, it was
2 still very small. As I said before, most of those were
3 users from particular segments not representing the big
4 chunk of, say, office or home users. There are a lot of
5 power users and servers and other people who are attracted
6 to Linux. I've used Linux myself. But that doesn't mean it
7 was popular as a replacement for Windows for the vast
8 majority of users, which is what we care about here.

9 Q Dr. Murphy, do I understand correctly that in the but
10 for world, which you are supposed to be analyzing, you have
11 to assume that PerfectOffice came out close to the release
12 of Windows 95 and was successful, correct?

13 A Yes.

14 Q So Linux would have been one of the platforms that
15 would have provided a place for WordPerfect to land in its
16 competition against Microsoft, correct?

17 A Not at that time. There wasn't a version of -- a new
18 version of PerfectOffice that was running on Linux at that
19 time.

20 Q No. I'm not suggesting at that time, but within the
21 next cycle of purchases by computer users, say three years,
22 Linux would have been available, correct?

23 A It would have been? It certainly wasn't in the actual
24 world, not in that version. There were older versions of
25 WordPerfect that were ported, but not the newer versions.

1 Q I'm sorry, Dr. Murphy, Linux wouldn't have been
2 available in 1998?

3 A No, WordPerfect for Linux.

4 Q WordPerfect for Linux would not have been available in
5 1998; is that your testimony, sir?

6 A No. I'm saying if you look at the actual world at the
7 time this happened, there was not a version that supported
8 all the same features that was in the Windows version.
9 There was a version later that -- there was a version that
10 was ported to Linux, but it wasn't the same version.

11 Q So it's your testimony it has to be the same version in
12 order to engender competition in the operating systems
13 market?

14 A It depends on the theory you have. Obviously the
15 closer it is, the better. Because to the extent it doesn't
16 support all the same features, you don't get as much of the
17 benefit of people being able to transfer their experience
18 and their value using it on Windows.

19 To the extent WordPerfect would have been better on
20 Windows than it was on Linux, that would be a reason for
21 people to stay on Windows. In fact, that's what
22 Mr. Frankenberg talked about the other day.

23 Q Don't consumers often choose less features for less
24 price?

25 A Yeah, they can, they can be willing. But the whole

1 notion here, remember, this is -- either it's the franchise
2 application theory that we'd be applying. That was one of
3 Mr. Noll's theories. The other theory was the middleware
4 theory. Certainly the middleware theory, it had to support
5 the same or close to the same API set, otherwise that theory
6 doesn't work at all.

7 Under the franchise application theory, the whole basis
8 is people can transfer over what they are doing, and to the
9 extent it doesn't support the features they are using today,
10 that's less applicable. It has some applicability, but not
11 as much.

12 Q I appreciate you repeating all your opinions, but my
13 question was a little more --

14 MR. TULCHIN: Object to that, Your Honor.

15 THE COURT: Sustained. Just ask questions. Don't
16 argue with the witness.

17 BY MR. JOHNSON:

18 Q Don't consumers in the economic world which you
19 analyzed often make choices to give up some key features for
20 a lower price? Can you answer that one yes or no?

21 A Yes, they do do that.

22 Q And Linux, in fact, is free correct, sir?

23 A Some versions are free. A lot of versions are charged
24 for.

25 Q So it would be reasonable for a consumer to choose

1 perhaps less features in a WordPerfect version ported to
2 Linux in order to have a free operating system, correct,
3 sir?

4 A Yeah. People had that choice in the actual world, and
5 not very many desktop users chose it.

6 Q Isn't it a fact, sir, that by 1998, that Windows faced
7 competition from a number of competing operating systems,
8 not only Linux, but IBM's OS/2, WARP, VOS, and the various
9 flavors of the Unix operating system?

10 A Yeah, it's true. They were -- but they are all
11 captured in that small fraction of -- it was a small
12 increment there. They weren't very big as desktop operating
13 systems at the time.

14 Q Isn't it a fact, sir, that by 1998, Linux was an
15 operating system that was comparable in size, capability and
16 complexity to Microsoft's Windows 98 and Windows NT
17 operating systems?

18 A Yes, it was, but it lacked the broad spectrum of
19 applications. It really gets back to the same point we've
20 been talking about all along, and that was really the key
21 difference.

22 Q Isn't it a fact, sir, that by 1998, applications that
23 support Linux was also growing rapidly?

24 A It was. I mean Linux is what it was and people chose
25 it to the extent they did. And I think when we have actual

1 evidence about how people make their choices, why are we
2 focusing on all the hypotheticals? We should just look and
3 see what people chose.

4 Q Sir, isn't it a fact that that's what you are supposed
5 to be doing in a but for analysis, a but for world, it is a
6 hypothetical, correct, sir? You must assume things happened
7 that did not happen.

8 A Absolutely, but you start with the actual world. You
9 don't start with some hypothetical world. You start with
10 this is the world we're in, how would the world have been
11 different if the actions at issue had changed. That's the
12 way you do economic analysis, that's the way you do logical
13 analysis of cause and effect more generally. You start with
14 the actual world -- I just want to make it clear. You start
15 with the actual world, which informs you a lot. You learn a
16 lot from the actual world. Then you start with -- you don't
17 start with some hypothetical place in which you could assume
18 all kinds of things. You start with the actual world. Then
19 this gives you an anchor. Once you have that anchor, you
20 can ask how would the world be different if we changed
21 something.

22 In this case, we changed the time in which
23 WordPerfect's Office Suite came out and made it come out
24 closer to the time at which Windows 95 was released.

25 Q And you also must assume that WordPerfect on Windows 95

1 was successful, correct?

2 A That's correct.

3 Q And that could have changed things further down the
4 road. Isn't it a fact, sir, the way you're doing it is
5 saying even though that happened, nothing else would have
6 changed?

7 A No. I'm trying to figure out what else would have
8 changed. And the analysis we put forth yesterday, which is
9 that WordPerfect, had its office suite come out closer to
10 the time of Windows 95, would have it achieved a share
11 similar to what it had in the time period before Windows 95
12 came out. That's what Professor Noll, in fact, said.
13 That's what he said was probably the best way to think about
14 it.

15 And I looked at the numbers and I said, had that
16 happened, how would that have played out in terms of both
17 his franchise application theory and in terms of his
18 middleware theory, which is I think exactly the right thing
19 to do.

20 Q But in your testimony the only thing that you have
21 changed is that WordPerfect came out in time and was
22 successful. In your world, nothing else changes, correct?

23 A No. I asked the question what would that have done to
24 the ability of other operating systems to compete. And the
25 point we made was that, first off, with regard to the

1 franchise application theory, it would not have made a
2 substantial difference in the number of people who would
3 have been willing to switch to other operating systems.
4 Secondly, in terms of the middleware theory, it wouldn't
5 have led to a popularity of middleware -- of Novell's
6 Middleware that would have been sufficiently popular to have
7 affected -- sufficiently functional, I should say, to have
8 affected competition between the operating systems.

9 So I actually asked the question would, in fact, those
10 other changes have occurred. That's the point.

11 Q In your but for world, did Microsoft allow Netscape to
12 thrive?

13 A I think you could -- the way I did it was with the
14 actual world. You could do it either way.

15 Professor Noll in his testimony said we would get the
16 biggest effect of the actions to Novell if we assume that
17 Netscape and Java were in their weakened state. So if I
18 take that as the basis, because that's what he said, he said
19 the effect on Novell would be biggest when Netscape and Java
20 are weakened, if you take that to be the base case, I think
21 that you have reached the conclusion I did. So taking it
22 would be the strongest case for Professor Noll's theory, you
23 still wouldn't get this. In fact, that's the world I
24 considered because that's the strongest effect.

25 Q I'm not sure I got an answer to my question. In your

1 but for world, did Microsoft allow Netscape to thrive? In
2 other words, did you remove from your analysis the
3 anticompetitive conduct that Microsoft engaged in against
4 Netscape?

5 A I think the analysis I did applies in either case, so
6 it doesn't matter which way you go on that. What I just
7 said is, according to Professor Noll, the biggest effect
8 would have occurred when Netscape is weakened so it's not
9 allowed to thrive. That's what he said in his testimony.
10 And so if you consider that case, my analysis is as I
11 presented it.

12 Q In your but for world, did Microsoft allow Sun's Java
13 to thrive?

14 A Same exact answer.

15 Q So I take it you did not -- in your analysis, it
16 doesn't matter whether Microsoft engaged in an
17 anticompetitive manner against Sun's Java as well, correct?

18 A It doesn't change the bottom line conclusion about the
19 impact of the actions at issue here. Obviously the world
20 would be different if you changed those actions. I mean you
21 are changing the world. But it doesn't change your
22 conclusions regarding the impact of the actions at issue
23 here.

24 Q Do you happen to have a reference at all for that
25 testimony of Dr. Noll? I don't recall it.

1 A I would have to go find it. There was some questioning
2 where he was asked about -- yeah, I just reread that last
3 night. I don't know -- sorry, I don't know the line
4 numbers. I could find it for you, if you want.

5 Q I don't think we want to take that kind of time this
6 morning.

7 MR. JOHNSON: Could we put up Novell's
8 demonstrative 302B, please.

9 BY MR. JOHNSON:

10 Q So this is your second opinion, right?

11 A I think you called it Noll's demonstrative.

12 Q Novell's. Sorry. I may have misspoke.

13 This is your second opinion, right, with respect to the
14 middleware theory?

15 A It looks like it, yes.

16 MR. JOHNSON: If we could turn to demonstrative
17 313A.

18 BY MR. JOHNSON:

19 Q And as I understand it, Dr. Murphy, in your world, the
20 only middleware that could pose a threat to competition in
21 the PC operating systems market must meet all three of these
22 three criteria, correct?

23 A I think in order to have it pose a threat, yeah, it
24 does have to meet all three of these.

25 Q Isn't it a fact, sir, that in the case against

1 Microsoft in Washington, D.C., it was plainly found that
2 Netscape Navigator did not meet your condition three?

3 MR. TULCHIN: Objection, Your Honor, different
4 legal standard there.

5 THE COURT: Overruled.

6 THE WITNESS: I think what was found at the time,
7 it had not met number three. And I think the -- I mean I
8 don't know the extent to which you want to get into the
9 details of what was going on there. That was on the basis
10 that they thought it had some potential maybe to reach
11 number three. It wouldn't have just been Navigator. It
12 would have been Navigator and Java together would be the
13 most logical way to read that. But it was based on a
14 potential theory as opposed to an actual theory. I should
15 say a theory of potential as opposed to a theory of
16 actuality.

17 BY MR. JOHNSON:

18 Q Isn't it a fact, sir, I think you just said this, but
19 just to get it on the record, that Sun's Java cross
20 libraries also did not meet your condition three in the case
21 against Microsoft in Washington, D.C.?

22 A I would have to go back and read what they say. I
23 think, again, it was on a theory they had a potential rather
24 than actual capability.

25 Q Let's turn to the finding of fact 77. So finding of

1 fact 77 states: The combined efforts of Netscape and Sun
2 threatened to hasten the demise of the applications barrier
3 to entry, opening the way for non-Microsoft operating
4 systems to emerge as acceptable substitutes for Windows. By
5 stimulating the development of network centric Java
6 applications accessible to users through browser products,
7 the collaboration of Netscape and Sun also heralded the day
8 when vendors of information appliances and network computers
9 could present users with viable alternatives to PCs
10 themselves. Nevertheless, these middleware technologies
11 have a long way to go before they might imperil the
12 applications barrier to entry. Windows 98 exposes nearly
13 10,000 APIs, whereas the combined APIs of Navigator and the
14 Java class libraries, together representing the greatest
15 hope for proponents of middleware, total less than a
16 thousand. Decision makers at Microsoft are apprehensive of
17 potential as well as present threats, though, and in 1995
18 the implications -- excuse me. I'm sorry. I'm trying to
19 read this right through you.

20 THE COURT: Just don't get the flu.

21 BY MR. JOHNSON:

22 Q The implications of the symbiosis between Navigator and
23 Sun's Java implementation were not lost on executives at
24 Microsoft that viewed Netscape's cooperation with Sun as a
25 further reason to dread the increasing use of Navigator.

1 So you will acknowledge, will you not, sir, even the
2 combination of Netscape and Java did not meet your condition
3 three?

4 A I think it's exactly what I said a moment ago, that
5 people thought of it as a potential, not as an actuality.

6 Q But you will acknowledge, sir, that both Netscape's
7 Navigator and Sun's Java were found to be middleware in the
8 case against Microsoft in Washington, D.C.?

9 THE COURT: If you object to that, it's sustained.
10 There the relevance of a different standard applies.
11 Sustained.

12 BY MR. JOHNSON:

13 Q But being a threat isn't sufficient for you, right, it
14 actually has to destroy the applications barrier of entry;
15 is that correct, sir?

16 A No, I wouldn't say that. I think it has to have --
17 first of all, it has to have an effect in that direction.
18 In fact, if you go through the impact that has happened here
19 in greater detail than I did yesterday, and yesterday I
20 think I presented what I thought was the clearest way to
21 talk about why this wouldn't have changed PC operating
22 system competition, but, in fact, if you focus on both
23 theories even more finely, you will actually find it's not
24 even clear which way it goes. For example, on the franchise
25 application theory as emphasized by Mr. Frankenberg, it's

1 quite possible that a more functional WordPerfect on Windows
2 would have actually discouraged people from leaving Windows
3 and increased Windows' share of the market.

4 Q We'll get to that, sir.

5 A I would just like to finish.

6 Q Sure, please.

7 A Secondly, with regard to the middleware theory,
8 remember, Novell's applications were not going to be on the
9 majority of PCs on the Windows operating system or likely
10 other operating systems. And as such, to the extent people
11 wrote to that middleware, it would have actually probably
12 diminished the overall middleware threat by actually what we
13 would call fragmenting the middleware world.

14 So I mean these theories -- it's not that they need to
15 break it down. It's not even clear they add anything.
16 That's really the stronger version of the conclusions.

17 Q Are you done?

18 A Yes.

19 Q Okay. Isn't it a fact, sir, that Microsoft's own
20 executives testified under oath that Novell's AppWare was,
21 in fact, an operating system?

22 A I don't remember if they called it an operating system.
23 They might have, but obviously you can have computer experts
24 testify to this. It wasn't an operating system per se. It
25 was something that worked on top of the operating system.

1 Q Let me show you Mr. Silverberg's testimony in this
2 case.

3 MR. JOHNSON: Can we bring up demonstrative 24.

4 BY MR. JOHNSON:

5 Q Question: What is your understanding of AppWare?

6 Answer: AppWare is an operating system. AppWare contains
7 all the functions of an operating system and is a wonderful
8 attempt by Novell to again reduce Windows or anything
9 underneath it for a commodity so it could then get
10 applications completely dependent on AppWare, have no
11 dependence on Microsoft or other pieces underneath it, so
12 that they could then supply their own pieces underneath it
13 and thus eliminate -- as Mr. Noorda has stated his goal is a
14 Windows free world.

15 So you can see, sir, that Mr. Silverberg testified
16 under oath that AppWare was an operating system, right?

17 A Yes, although his next sentence made the same point, I
18 was going to clarify things.

19 Q An operating system certainly has the ability to
20 support full-featured personal productivity applications,
21 correct, sir?

22 A Well, generally it would. He is kind of making an
23 analogy here. I think the issue is -- again, I think you
24 have got to go back to the real world. You've got to ask in
25 the actual world did AppWare have that ability on Windows

1 and did it accomplish that goal. And I think the answer is
2 the testimony has been in this case it didn't.

3 Q Isn't the question, sir, in the but for world whether
4 it would have accomplished that goal?

5 A Well, you have to be careful. If you had no
6 applications in the actual world, it's a big leap to say I
7 would have then in some but for world had lots of
8 applications, enough to erode the applications barrier to
9 entry. I think that's the problem you have. How do you get
10 from none to a lot. I mean you can't just assume it. You
11 can't just -- it's speculative to say, well, geez, there
12 weren't any in the actual world, but had WordPerfect been a
13 little more popular or more popular than it was, that
14 suddenly things would have been dramatically different.

15 Q AppWare was cross-platform as well; isn't that correct,
16 sir?

17 A I don't know if there were any applications at the time
18 off the Windows platform. Mr. Silverberg here was talking
19 about it as something available on the Windows platform.

20 Q Are you aware, sir, that thousands of PerfectOffice
21 partners were writing to the shared code within WordPerfect
22 at the time of the events in question?

23 A There were lots of partners. I am trying to -- I don't
24 think there were -- what was commercially released.

25 Q With respect to Mr. Silverberg's testimony, you didn't

1 even consider it in your report, did you, sir?

2 A I certainly was aware of his testimony.

3 Q Can you find it in your report, sir?

4 A I don't think I cited it, no.

5 Q You didn't even consider it, did you, sir? It's not
6 among the testimony or documents you considered in this
7 case, correct?

8 MR. TULCHIN: Objection, Your Honor.

9 THE WITNESS: I don't know. I would have to go
10 back and check. It's certainly something that I was aware
11 of because I was aware of the testimony from the D.C. case.

12 BY MR. JOHNSON:

13 Q Let's talk about your condition one for middleware that
14 it must be cross-platform. You told this jury that Novell
15 did not make PerfectOffice cross-platform, but it is a fact,
16 sir, that the testimony in this case is that they planned to
17 do so, correct?

18 A I think there has been testimony that they had plans.

19 Q I'm sorry. Go ahead.

20 A It wasn't there at the time. I don't think they even
21 started at the time.

22 Q Isn't the whole point of developing a but for world to
23 take into account what would have happened if Novell had
24 been successful in releasing a PerfectOffice Suite for
25 Windows 95?

1 A Yes, I think that is.

2 Q So why wouldn't it be reasonable, sir, to have to
3 accept the fact, given WordPerfect's historic cross-platform
4 capabilities, that they would have also made PerfectOffice
5 cross-platform as well?

6 A Well, I think you need more -- I'm not sure they would
7 have for lots of reasons. First of all, this would involve
8 more than just having a version that runs because this is a
9 middleware case, so you would actually have to have a
10 comparable set of APIs available on the other platforms.
11 And even if they had been available, you still need wide
12 enough distribution on those platforms to draw ISVs to
13 write. And WordPerfect's share of OPAs taken together with
14 the fact that many users don't have OPAs, it doesn't get you
15 there, even if you make the most generous assumptions.

16 Q You certainly didn't make that assumption, did you,
17 sir?

18 A We could make that assumption. I just tackled each one
19 individually. I said even if they had passed number one,
20 number two would have stood in their way and they wouldn't
21 have gotten past number two. Even if I grant you everything
22 and say, okay, they would have been cross-platform
23 everywhere, they still would have been limited in terms of
24 their overall distribution to a point where from the point
25 of view ISVs, it wouldn't have been economically something

1 that would draw their attention. In fact, had it drawn
2 attention to that limited distribution set of APIs, it
3 probably would have done more harm than good to the
4 middleware effort because it would have limited the number
5 of platforms on which that software could have run.

6 Q I kept interrupting you. I want to make sure you're
7 finished.

8 A I'm finished.

9 Q Sir, isn't it also a fact that although PerfectOffice
10 was not made cross-platform in 1994 and 1995, that
11 WordPerfect was cross-platform during both of those years?

12 A Yes, but that doesn't help for the middleware theory.
13 We're talking about the middleware theory now. That just
14 doesn't help at all in the middleware theory.

15 Q In fact, during Mr. Frankenberg's tenure, Novell also
16 developed a version of WordPerfect for the Linux operating
17 system; isn't that correct, sir?

18 A I would have to go back and check exactly when it
19 happened, but that was, as I understand it, part of an older
20 version that wouldn't help with his middleware theory.
21 That's again the problem. You are not putting together the
22 facts the way they need to be put together to actually have
23 the effects that have been hypothesized here. You are
24 putting together facts that are just -- are kind of
25 inconsistent.

1 Q Sir, do you understand that once the shared code
2 running under WordPerfect is made cross-platform, that all
3 of the applications in the suite will also be
4 cross-platform?

5 A Well, I mean that's certainly the design. We know for
6 other, quote, middleware, it's not always worked that way,
7 so you have to be a little careful. But certainly if
8 everything worked according to plan, that would be the case.

9 Q So once WordPerfect was cross-platform on the Linux
10 system and others, all of the applications within the
11 PerfectOffice Suite would also be cross-platform; isn't that
12 a fact, sir?

13 A In fact, that would be the case, again, as long as
14 we're talking about the ones that are written that way, not
15 the versions, for example, of a ported older version of
16 WordPerfect wouldn't have that same feature. So, for
17 example, the version that you were talking about a moment
18 ago that was put on Linux, it wouldn't have that feature.

19 Q What feature?

20 A The feature of ability to support anything that worked
21 with the shared code because that version didn't use the
22 shared code in that way.

23 Q What version are you talking about, sir?

24 A You were talking about the version that ultimately went
25 on Linux. It was not -- the version that went on Linux was

1 not the same version that would have supported all the
2 middleware that you are talking about today.

3 Q Do you understand, sir, that shared code is middleware?

4 A I do. But I also understand that there are versions of
5 WordPerfect running on other operating systems that don't
6 have that middleware functionality.

7 Q What is the basis of that testimony?

8 A That is a fact. You know, that's the fact --

9 Q I'm asking for the basis, sir.

10 A I would have to go back and check if anybody said that
11 at trial, but that's certainly true. Just go look at what
12 version -- so, for example, when they made a version of
13 WordPerfect for Linux, that version of WordPerfect, they
14 didn't have the whole PerfectOffice Suite available.

15 Q I'm not asking about the PerfectOffice Suite, I'm
16 asking you about shared code, sir.

17 A Let me finish. Under your version of the world, you
18 said a moment ago if WordPerfect would work, then everything
19 in the office suite would work. But you then just told me
20 just now that the version of WordPerfect for Linux actually
21 didn't have the rest of the office suite. It only had
22 WordPerfect. So which way is it?

23 Q Okay. Let's back up a little bit. What I'm talking
24 about now is shared code. You do understand, sir, that the
25 shared code is middleware, right?

1 A That's correct, but there are versions of WordPerfect
2 that don't support that middleware functionality.

3 Q Okay. What versions of WordPerfect in 1994 and 1995
4 built on different operating systems was not middleware?

5 A Certainly the DOS version wouldn't have been.

6 Q What is the basis of that testimony, sir?

7 A Well, the DOS version wouldn't have supported Windows
8 applications. So applications written to run on top of
9 Windows wouldn't run on the DOS version of WordPerfect.

10 Q Are you testifying now as a technical expert?

11 A No. You can ask the technical experts. All I'm saying
12 is this is what's been established by the technical experts.

13 Q So if an application is written to middleware, say the
14 shared code was then WordPerfect --

15 A Then a version of WordPerfect -- let me just finish.
16 Then a version of WordPerfect that supports the shared code
17 would run those applications. I agree with that. All I'm
18 saying is it has to be that kind of version of WordPerfect.
19 If you had a version of WordPerfect that wasn't based on a
20 shared code, it would not support those applications. It's
21 that simple.

22 Q Sir, can you give me a basis for that testimony?

23 MR. TULCHIN: It's been asked and answered.

24 BY MR. JOHNSON:

25 Q I think it's outside the scope of your expertise, but

1 can you give me a basis for it?

2 MR. TULCHIN: Object to that comment, Your Honor.

3 THE COURT: Obviously comments are not evidence.

4 Go ahead.

5 THE WITNESS: I would say the following. Let's
6 just talk about this in a simple logical way. You are
7 saying shared code is middleware, right, and that things
8 written to shared code will run on other versions that also
9 support shared code.

10 My statement is if you have a version that's not
11 based on shared code, so it doesn't support the shared code,
12 then things written to shared code won't work. That's like
13 almost by definition, because if it doesn't have the shared
14 code, then things written to the shared code wouldn't have
15 the APIs to call. It's almost definitional.

16 BY MR. JOHNSON:

17 Q Let's turn to your condition two, that middleware must
18 be available on almost all PCs.

19 I would like to start by going back to a piece of your
20 testimony from direct examination today.

21 MR. JOHNSON: Can we bring that up, Mr. Goldberg?

22 THE WITNESS: I think from yesterday.

23 BY MR. JOHNSON:

24 Q Yesterday. I'm sorry.

25 So Mr. Tulchin asked the question of you, so just

1 hypothetically, let's say you looked at installed base and
2 WordPerfect share was 50 percent, was half, would that meet
3 the criteria of being available on all or nearly all PCs?

4 Answer: No, because in that case you'd be giving up almost
5 half the customers on Windows by writing to middleware
6 rather than writing directly to the operating system.

7 Do you recall that testimony, sir?

8 A Yes, I do.

9 Q Isn't it a fact, sir, that in the case against
10 Microsoft in Washington, D.C. you assumed that a 50-percent
11 share would be sufficient to achieve ubiquity?

12 A I would have to go back and check. That may be true.

13 Q Not may be true, it is true, isn't it, sir?

14 A That's probably true, yes. But, again, you've got to
15 go back to the context, and we can discuss it if you would
16 like.

17 Q I would like to discuss, sir, why it is in the
18 government case against Microsoft in Washington, D.C. --

19 MR. TULCHIN: Objection, Your Honor.

20 THE COURT: Sustained. It's struck.

21 We'll discuss it later.

22 BY MR. JOHNSON:

23 Q Dr. Murphy, if a 50-percent share was sufficient to
24 achieve ubiquity in your prior sworn testimony, why is it
25 not sufficient to achieve ubiquity in this case?

1 A I would have to go back and read my testimony. I think
2 I said that would be the minimum share required. I don't
3 think I said that would be sufficient. But, you know, I
4 would have to recall that.

5 But also we have to remember, these are actually quite
6 different because we were dealing in that case with types of
7 middleware that were distributed free, that people could get
8 free copies of it if they want. Therefore, if it got
9 popular and you had enough people using it, the rest of the
10 people -- the other 50 percent could get it without paying.

11 In this example, you're talking about middleware that's
12 distributed as part of a personal -- an office productivity
13 application. It's not free to get those things. A lot of
14 people don't use those office productivity applications or
15 can use different office productivity applications. And
16 it's a far cry from saying people will go out and get
17 additional copies to take advantage of some functionality
18 when they can get it for free than when they have to go out
19 and buy a piece of software that they don't want or buy a
20 piece of software that duplicates what they already have.

21 Again, you've got to take the context into account.
22 You can't just pull numbers from one place and say they
23 apply somewhere else.

24 Q I just want you to apply the same standard you applied
25 in the government case to this case, sir.

1 MR. TULCHIN: Objection, Your Honor.

2 THE COURT: Approach the bench.

3 (Side-bar conference held)

4 THE COURT: Certainly by that second reference
5 when you know the first, that you may very well have given
6 Microsoft a mistrial in their hip pocket depending on what
7 the jury does. If you do it a third time, you are just
8 adding to the possibility that you yourself, by your
9 interjecting self-righteousness, have given perhaps -- I'm
10 not saying they have, Microsoft may very well have in their
11 hip pocket a mistrial, depending upon what the jury does.
12 Don't do it again. You are making Microsoft's position all
13 the stronger.

14 (Side-bar conference concluded.)

15 THE COURT: Let's go ahead.

16 BY MR. JOHNSON:

17 Q Dr. Murphy, I think you acknowledged on direct that
18 Dr. Noll never accepted the proposition that in order to
19 pose a threat to Microsoft in the PC operating systems
20 market, that middleware must expose enough APIs to allow
21 ISVs profitably to write full-featured personal productivity
22 applications that rely solely on those of APIs, correct,
23 sir?

24 A I don't think he said that, no.

25 Q I would like to take a look at what Professor Noll said

1 in that regard.

2 MR. JOHNSON: Could we bring up transcript 1958 at
3 lines 4 through 19. I believe this was my redirect of
4 Dr. Noll.

5 BY MR. JOHNSON:

6 Q Question: There was quite a bit of cross-examination
7 with respect to whether or not full-featured applications
8 had been written to middleware during various time periods
9 and I'd ask you, sir, if applications were writing to
10 middleware that still had to rely, in some sense, on
11 operating systems beneath, does that have any effect on
12 increasing competition? Answer: Well, the effect on
13 competition in the operating system market depends on the
14 degree to which the middleware is reducing the porting costs
15 of becoming cross-platform, that if middleware is exposing a
16 certain number of APIs, we can write to those APIs and be
17 on -- and access functions in multiple operating systems.
18 You may have to write additional code separately for each
19 operating system, but if the middleware reduces the amount
20 of code you have to write to be cross-platform, then it
21 makes cross-platform more attractive.

22 So isn't it a fact, sir, that it's really more of a
23 continuum, as more and more applications are written in
24 whole or part to the middleware, the applications barrier to
25 entry is reduced?

1 A Yeah, that's true. The key, though, is they have to be
2 written. And what happens as you support less and less, you
3 have to rely more on the operating system and not just the
4 middleware. The gain you're getting from using middleware
5 is going down. So that kind of works in the opposite
6 direction. I mean that's the basic problem.

7 Q You would agree that it's only necessary to reduce the
8 applications barrier to entry, not destroy the applications
9 barrier to entry in order to engender more competition in
10 the operating systems market, right?

11 A Well, you would have to reduce it enough to change
12 competition. But as I said a while ago, it's not even clear
13 that greater success for Novell's Middleware would even go
14 in that direction. I mean if people chose to write to
15 Novell's Middleware that had a more limited distribution
16 base rather than write to other middleware, that could very
17 well go in the opposite direction.

18 Q I was speaking of a simple antitrust economic theory.
19 It's not necessary to destroy the applications barrier to
20 entry to engender more competition, right? It's only
21 necessary to reduce the applications barrier to entry,
22 right?

23 A Yeah, you have to reduce it, to some extent, but it's
24 going to effect competition. I mean that's true.

25 Q Let's talk about your other criticisms of Dr. Noll's

1 testimony.

2 MR. JOHNSON: If we could bring up demonstrative
3 303, Mr. Goldberg.

4 BY MR. JOHNSON:

5 Q Now the first one you basically say that Professor
6 Noll's theory conflicts with the fact that Novell intended
7 to use the namespace extensions and to make it -- therefore,
8 make Windows even more desirable to consumers, correct?

9 A Yes.

10 Q Isn't it a fact, sir, that Novell's cross-platform
11 middleware could only succeed if it was successful on
12 Windows?

13 A I think it would have to be successful on Windows, but
14 that creates a basic tension.

15 Q Isn't it a fact, sir, that the Court in the case
16 against Microsoft in Washington, D.C. found that some of the
17 middleware strategy could only succeed if Java's run time
18 environment found its way onto Windows?

19 A I think that's true.

20 Q So isn't it a fact, sir, for middleware to succeed it
21 must be present on the monopolist's operating system, in
22 this case Windows?

23 A I think it has to be on most of the PCs, I think is the
24 general theory, and that's the key problem for these OPAs
25 based solutions. These office productivity applications

1 based middleware solutions run into the fundamental problem
2 that even if you have the kind of share of the office
3 productivity applications base that Novell had prior to
4 Windows 95 or -- and given the fact that lots of people
5 aren't using the OPAs, you're just not going to get there.
6 That's the real problem. The very fact that you say that
7 that's needed is the very fact that it prevents these types
8 of middleware from reaching that type of widespread use.

9 Q And if I understand your second criticism, you're
10 basically saying that in the absence of an effective
11 operating system competitor, you claim that Professor Noll's
12 theories are untenable; is that right?

13 A Yes.

14 Q So do I understand correctly that Linux, which is
15 available free to consumers and which is used by millions of
16 people in the late 1990s, is not an effective operating
17 system competitor? Is that your testimony, sir?

18 A I think as long as we're talking about desktop users,
19 and for the majority of desktop users it was not a very
20 viable alternative.

21 Q So I guess it's your view that all Intel compatible
22 versions of the Linux system were not effective competitors;
23 is that right?

24 A I think it would be what I just said. You can talk
25 about certain groups of users, particularly some power users

1 and some people doing lots of numeric intensive type
2 activities, Linux was an attractive operating system. But
3 for the majority of users on a platform, it was not.

4 Q You do recognize, sir, that Linux is available for
5 desktop users?

6 A Absolutely, it is available, but it has not been very
7 successful.

8 Q Do you think that it might be possible that some people
9 might want to go with a free operating system rather than
10 paying Microsoft for the latest version of Windows?

11 A You know, I'm not even sure the majority of people who
12 use Linux use a free version. I think most of them have --
13 I would have to go check, but a lot of the users don't use
14 the free versions. So to say Linux is free, it's true you
15 can get it for free, but, in fact, most of the users buy
16 from Linux distributors.

17 Q Let's put it this way, sir. You would agree that even
18 the ones you have to purchase are a lot cheaper than
19 Windows?

20 A Depends on the ones you're talking about. There were
21 certainly time periods when Linux was comparably priced.

22 MR. JOHNSON: Nothing further, Your Honor.

23 MR. TULCHIN: Just a few questions, Your Honor. I
24 don't think it will be too long.

25 //

1 THE COURT: We have 20 more witnesses to go.
2 Don't keep your hopes up.

3 MR. TULCHIN: We'll have to go find them.

4 REDIRECT EXAMINATION

5 BY MR. TULCHIN:

6 Q Professor, just starting with some of the questions
7 that Mr. Johnson was asking you --

8 MR. TULCHIN: Can we put up slide 301.

9 BY MR. TULCHIN:

10 Q This is the chart that you prepared for our testimony
11 on direct, and I want to ask you to look at the years 1995,
12 six, seven, eight and nine. What was Microsoft's market
13 share of the PC operating system market in those years?

14 A It was as low as the high 80s to the mid upper 90s at
15 times.

16 Q I'm sorry, sir --

17 A It was as low as the high 80s, just a little bit below
18 90 percent, and in -- you know, in the 90s most of the time.

19 Q So the market share that Microsoft had in the years I
20 mentioned, let's say '95 to '99, was something close to
21 90 percent on the low end and would you say 95 percent or so
22 on the high?

23 MR. JOHNSON: Your Honor, he just said it was in
24 the high 80s.

25 THE COURT: The chart shows it was in the high

1 80s.

2 THE WITNESS: I said it was as low as the high 80s
3 and up into the 90s, I think if you could go back and --

4 THE COURT: The question is whether Mr. Tulchin
5 misspoke. Frankly, my mind was wandering, so I don't even
6 know.

7 BY MR. TULCHIN:

8 Q I think -- do you recall Professor Noll's testimony
9 about Linux in the years '95 and '96, thereabouts, do you
10 remember what he said about whether Linux was an effective
11 competitor?

12 A I think he said they weren't a very effective
13 competitor. I don't recall his precise words. But it's in
14 the record, so we could find it, sir.

15 Q Even at the time when Linux became available, let's
16 assume the world is as it is, Linux became available at
17 whatever time, if Microsoft's market share was roughly
18 90 percent or more, that only left ten percent or less for
19 all the other competitors, correct?

20 A That's correct.

21 Q If anyone wanted Linux, there was nothing to stop that
22 consumer from choosing Linux?

23 A No. I mean consumers did choose Linux to some extent,
24 but just not very many of them.

25 Q But roughly speaking, nine out of ten consumers chose

1 Windows, correct?

2 MR. JOHNSON: Objection, leading.

3 THE COURT: It's leading, and also should be
4 supplemented by the world as it existed.

5 THE WITNESS: During those years, Windows' share
6 was over 90 percent. Just look at the chart. It's pretty
7 simple.

8 BY MR. TULCHIN:

9 Q On another subject, Professor, if Novell had written
10 shared code and Novell's products, let's say WordPerfect and
11 PerfectOffice and Quattro Pro, had utilized the shared code
12 on versions of those products that were written for Windows
13 95, would that have made those Novell products more portable
14 to operating systems other than Microsoft's or less
15 portable?

16 MR. JOHNSON: Your Honor, this is an economic
17 expert. That is very much a technical question. Object.

18 MR. TULCHIN: Just following up on Mr. Johnson's
19 questions, Your Honor.

20 THE WITNESS: I don't think I can answer the
21 technical part of that.

22 MR. JOHNSON: Your Honor, objection.

23 THE COURT: He obviously can't answer that as a
24 technical expert. If you can add as an economist, add it.

25 THE WITNESS: Yeah, I will try to do that. I mean

1 certainly I can't answer -- the technical expert will have
2 to answer the technical part. To the extent you're using
3 functionality that's available on Windows but not available
4 elsewhere, and users therefore can get that functionality if
5 they use Windows' version but not get that functionality if
6 they go elsewhere, that's going to make them less likely to
7 move. It's simple economics.

8 BY MR. TULCHIN:

9 Q Professor, you were asked some questions on cross about
10 the but for world, the world that would have existed had
11 Microsoft not decided in October 1994 to withdraw support
12 for the namespace extension APIs. Do you recall those
13 questions?

14 A Yes, I do.

15 Q And I just want to ask you as an economist what the
16 proper approach is in constructing this so-called but for
17 world, the world that would have existed had Microsoft not
18 made that decision. And am I right that as an economist --

19 THE COURT: Ask him that question. Don't read it.

20 THE WITNESS: I will answer the question. As an
21 economist, I think you do what we do in general, start with
22 the actual world and where things were a certain way, say,
23 okay, let's assume that something had changed, in this case
24 the status of the namespace extension APIs. Then say what
25 would that have done, well, that would have changed what

1 happened to WordPerfect and its success. And then
2 ultimately what we're interested in here, had that happened,
3 what would that then imply about any change in operating
4 system competition. You follow that logic to get from one
5 to the other, and that's what I tried to do.

6 BY MR. TULCHIN:

7 Q Now in that hypothetical but for world, do you make
8 changes to what AppWare actually became and its success or
9 do you assume that AppWare was whatever it turned out to be?

10 A I think you would want to look at the world as it would
11 have evolved. And the analysis we did was to say, you know,
12 when we, for example, were analyzing step two or step three,
13 we were saying even if they were cross-platform, would they
14 have been on enough PCs to make it viable for ISVs to write.
15 And number three, would ISVs have had the incentive to do
16 the writing, even assuming they were cross-platform. I
17 think that was a little bit of confusion between me and
18 Mr. Johnson. We had those three steps, and we sort of said,
19 well, they didn't really meet step number one. Then he said
20 even if they had met step number one, would they be able to
21 meet step number two. If they had been able to meet step
22 number two, would they have met step number three. So you
23 do it in a sequence like that is the most easy way to do it.

24 Q In the but for world where you are trying to figure out
25 the success that WordPerfect or PerfectOffice would have had

1 on Windows 95, do you remember what Professor Noll said
2 about what market shares would be appropriate for you to
3 assume if WordPerfect and PerfectOffice had come out earlier
4 than it did?

5 MR. JOHNSON: Your Honor, I'm going to object to
6 these references. I think if he's got a transcript or
7 something to show. He's basically asking him to repeat his
8 testimony.

9 THE COURT: I'm not going to let him go very far.
10 But if he does remember, it seems to me that it's proper
11 redirect, but I don't want it to go too far.

12 Go ahead, Mr. Tulchin.

13 THE WITNESS: He said it would be the last couple
14 of years prior to -- as I recall, he said the last couple of
15 years prior to that time period. You know, his testimony is
16 in the record. We can go back and look at it. But I don't
17 think I need to characterize it.

18 THE COURT: One of the few times I agree with
19 Mr. Johnson.

20 MR. JOHNSON: Fake praise, Your Honor.

21 THE COURT: It's praise.

22 MR. JOHNSON: I'll take what I can get.

23 BY MR. TULCHIN:

24 Q Professor Murphy, is that what you did in your analysis
25 is to in the but for world attempt to determine what the

1 market shares would have been for PerfectOffice and
2 WordPerfect by looking back at what the market shares
3 actually were for those products on the versions of those
4 products that were written for Windows 3.1?

5 A That's what I did. I mean that's the charts we put up
6 yesterday. We looked at their success on Windows and one of
7 the things we noticed is their share had actually peaked in
8 '92 and was actually going down in '93 and '94. And if, in
9 fact, you look at the data more finely, we're going down in
10 '95 because they had gotten a little bit of a boost in late
11 '94, early '95 from having come out with a new version.
12 Whenever you come out with a new version, you're going to
13 get a little bump because people buy it when it first comes
14 out.

15 Q When you constructed your but for world and made your
16 analysis and examined those market shares for PerfectOffice
17 and WordPerfect, based on the same test that Professor Noll
18 offered, what did you determine about what the success would
19 have been and how does that pertain to your opinions about
20 Professor Noll's middleware theories?

21 A Well, I think there are two things you have to take
22 account of. One is shares of sales from those preceding
23 periods were, you know, 20 percent and going down. But also
24 you have to remember that that's the share of people who are
25 using office productivity applications. That's a fraction

1 of the people who were using platforms at all. That means
2 that relatively small number, certainly from any middleware
3 point of view, a very small number of users would have had
4 access to that type of middleware.

5 MR. TULCHIN: Nothing else, Your Honor.

6 THE COURT: Anything further, Mr. Johnson?

7 MR. JOHNSON: No, Your Honor.

8 THE COURT: Thank you very much.

9 I assume this really does close the testimony for
10 today; is that right?

11 MR. TULCHIN: Yes, sir.

12 THE COURT: Sorry. Don't run off. A couple of
13 things. I still -- do we know how many witnesses you're
14 going to do on Monday?

15 MR. TULCHIN: We have one witness on Monday.

16 THE COURT: One witness on Monday.

17 You can step down, Professor, and do whatever you
18 want to do.

19 THE WITNESS: Thank you.

20 THE COURT: I think it's a technical expert. I
21 don't know how long the testimony is going to be. We may be
22 finished by 1:30 or 2:00. If we have to go a little longer
23 on Monday, how long can we go? 2:15? 2:15. Okay.

24 Then we still don't know what's going to happen
25 next week. Talk to one another. My best guess is, and I

1 could be wrong about this, I'm wrong about a lot of things,
2 that the case will be submitted to you on Wednesday. What I
3 mean by that is the lawyers will make their closing
4 statements to you on Wednesday. I will give you, I hope,
5 part of the instructions on Tuesday. If not, I'll give them
6 to you on Wednesday.

7 MR. SCHMIDTLEIN: I think it would be -- you know,
8 if we could find out if they could stay maybe a little late
9 on -- just a little late on Tuesday to start the
10 instructions on Tuesday.

11 THE COURT: How late? 3:00? I know one person
12 has a problem.

13 MR. SCHMIDTLEIN: Two o'clock.

14 THE COURT: If we stay until 2:15 on Tuesday, that
15 probably will mean that I can give you part of the
16 instructions. Then Wednesday would be closing arguments,
17 and then I would give you the last part of my instructions,
18 which is just how you go about your business. Then it's
19 going to be to you. From then on it's up to you whether or
20 not you want to deliberate late through Wednesday and into
21 Thursday. How long you deliberate is entirely up to you.
22 In fact, you don't know until you start your deliberations.

23 We can go into Friday. We can go into next
24 Monday. We can do whatever. I know there's at least one of
25 you who has a commitment that makes it difficult to stay

1 until after 2:15. Frankly, you're going to have to talk
2 that through and see whether the commitment can be changed
3 or, frankly, there's enough of you. I don't want to lose
4 any of you. You've been a remarkable group. Presumptively,
5 I would like all of you to be able to deliberate. If, in
6 fact, it turns out that is not doable with what the rest of
7 you have want to do, then we'll have to make a decision
8 accordingly. I'm not suggesting that because I think you
9 all -- you have all been very conscientious and I'd like all
10 of you to be able to deliberate. But we've got to face the
11 reality as a reality.

12 So what you do from Tuesday on is entirely up to
13 you. How long you stay. I'm not going to keep you here
14 until very late at night, I just don't believe in that. But
15 how long you deliberate is entirely up to you. Frankly,
16 you're not going to know until you start your deliberations.
17 That's about how we are.

18 Any questions?

19 Have a wonderful day.

20 I will take a short break and come back.

21 (Recess)

22
23
24
25