

1 (Jury present)

2 THE COURT: Mr. Schmidtlein.

3 MR. SCHMIDTLEIN: Thank you, Your Honor.

4 CROSS-EXAMINATION

5 BY MR. SCHMIDTLEIN:

6 Q Good morning, Dr. Bennett.

7 A Good morning, Mr. Schmidtlein.

8 Q We just met here this morning. My name is John  
9 Schmidtlein. I am representing Novell here. I will be  
10 asking you a few questions this morning.

11 Just as an initial matter, you have never worked for a  
12 company developing word processing or spreadsheet software;  
13 is that correct?

14 A Directly, that is correct. Indirectly, that is  
15 incorrect.

16 Q Did you do some -- well, explain to me what you mean by  
17 indirectly that's not correct.

18 A When I had a company, we did work for Microsoft which  
19 developed word processing applications. So the literal  
20 answer to your question is yes, but my company did not  
21 develop word processing applications.

22 Q Am I correct that in terms of expertise in actually  
23 writing business applications software, the software  
24 developers and engineers at Novell and WordPerfect would  
25 certainly have more expertise than you in doing that?

1 A I have no knowledge about expertise in software  
2 developers at Novell.

3 Q Am I correct that you are not offering any opinions in  
4 this case regarding what Microsoft's intent was when it  
5 withdrew support for the namespace extension APIs?

6 A I don't believe so. I stand on the opinions that I've  
7 offered. They are what I've offered.

8 Q You don't purport to be an expert in determining  
9 witness credibility, do you?

10 A Of course not.

11 Q And you understand that you are not supposed to form  
12 expert opinions by taking one witness's word over another  
13 witness's word, correct?

14 A That is my understanding.

15 Q You are certainly not here offering legal opinions, we  
16 can agree on that?

17 A Absolutely not.

18 MR. SCHMIDTLEIN: That makes me nervous. That's  
19 my most important technical guy in the court.

20 Are we all right?

21 BY MR. SCHMIDTLEIN:

22 Q I want to talk a little bit about some of your opinions  
23 here this morning, and initially about some of your opinions  
24 about data versions changing and features dropping during  
25 the design development testing of software. I want to talk

1 about that a little bit in the context of the namespace  
2 extensions APIs.

3 You would agree with me that Microsoft evangelized the  
4 namespace extensions to ISVs like WordPerfect early in the  
5 development process of Windows 95?

6 A As the term evangelism is used in the industry, yes.

7 Q They were promoting or evangelizing these namespace  
8 extension APIs going all the way back to as early as 1993,  
9 correct?

10 A I mean I remember a presentation by Mr. Belfiore where  
11 they were one of many features discussed.

12 Q And you remember that presentation was, I believe, from  
13 December 93?

14 A That's my recollection.

15 Q The jury has seen this so many times, I just loathe to  
16 put it up. It's one of our fun colored ones. This is  
17 PX113. This is the document we're both talking about,  
18 correct?

19 A I will take your representation.

20 Q And one of the things -- one of the things that  
21 Mr. Belfiore discussed in his presentation was the ability  
22 to use the namespace extensions for integrating things like  
23 e-mail and document management systems, correct?

24 A That's my recollection.

25 Q Those were one of the things that would be good to use

1 the namespace extensions to implement, correct?

2 A I wouldn't put a value on it. He mentioned those as  
3 examples of where they might be appropriate. I think in the  
4 same set of slides he said something like not for all  
5 applications and specifically spoke to word processing  
6 applications as an example of something where namespace  
7 extensions would not be appropriate.

8 Q And you are aware, aren't you, that in 1993, Microsoft  
9 actually had a meeting with WordPerfect where the namespace  
10 extension APIs were discussed and Microsoft recognized that  
11 WordPerfect was interested in using the namespace extension  
12 APIs to do this document management and e-mail integration  
13 that Mr. Belfiore was talking about, correct?

14 A I wouldn't want to testify on what Microsoft did or did  
15 not recognize.

16 Q Let me show you what has been admitted as PX105.  
17 Do you recognize that document?

18 A I do. May I quickly refresh my memory?

19 Q Absolutely.

20 THE COURT: Why don't you confirm the paragraph.

21 BY MR. SCHMIDTLEIN:

22 Q It's the paragraph -- it's that second e-mail and it's  
23 the fourth paragraph, the one that begins they were very  
24 happy about us deciding to document the shell extensions.

25 Do you see that?

1 A I see that.

2 Q And this goes on, I explained conceptually -- this is a  
3 document written by Dave Cole, who is a Microsoft executive,  
4 right?

5 A That's my understanding.

6 Q It was written to a number of other people in the -- at  
7 Microsoft internally, and it's talking about -- the subject  
8 is WordPerfect visit. And he goes on to say, I explained  
9 conceptually how the extensibility would work and what  
10 controls they'd have since they just acquired a document  
11 management system, I forgot from who, I assume they will  
12 want to plug that in, plus WordPerfect mail and other parts  
13 of WordPerfect Office too. I'm sure they will also supply  
14 shell property sheets for their docs too.

15 Does that refresh your recollection that Microsoft and  
16 WordPerfect had discussed in November 1993 some of  
17 WordPerfect's specific plans for implementing the namespace  
18 extensions APIs?

19 A I mean this is -- I'm sorry. This is what I think  
20 would be commonly called a trip report. I think the  
21 language here stands for what it is.

22 Q And just so we're clear, the document management and WP  
23 mail that's referred to there, that's the same type of thing  
24 that Mr. Belfiore had been referring to in his presentation,  
25 right?

1 A I don't know, but that's a reasonable inference.

2 Q In fact, the first sentence there makes reference to  
3 the fact that they, referring to WordPerfect, they were very  
4 happy about us deciding to document the shell extensions.

5 So you would agree with me that in November of -- that  
6 at least by November of 1993, Microsoft had made the  
7 decision it was going to document the shell extensions that  
8 include the namespace extension APIs, correct?

9 MR. HOLLEY: Your Honor, I object, to the extent  
10 that this is --

11 THE COURT: Sustained. He doesn't know what they  
12 decided, and this is what they were told.

13 BY MR. SCHMIDTLEIN:

14 Q In forming your opinions in this case, did you assume  
15 or understand that Microsoft had decided to document the  
16 namespace extension APIs at least as early as November 1993?

17 A I don't know. I know they were documented in I think  
18 May of 1994.

19 Q I think it was June 1994 is when the M6 beta was  
20 released.

21 A That's correct, but the documentation was produced in  
22 May.

23 Q What specific documentation in May are you referring  
24 to, something outside of what was produced with the actual  
25 beta?

1 A The -- I don't mean to quibble, but the documents  
2 contained in the beta are generally dated in May of '94.  
3 The beta was made available in June of '94.

4 Q Do you know whether those May documents were made  
5 available separate from the beta?

6 A They were on the CD, so I -- I know they were on the  
7 CD, that anyone who got the beta got the documents.

8 Q During this time period, this 1993 sort of '94 time  
9 period when Microsoft was out promoting the namespace  
10 extension APIs, were they out promoting Chico app?

11 A So I -- the first part of your question, I mean are you  
12 representing to me that Microsoft was out promoting in that  
13 time frame? I have no direct knowledge of that.

14 Q Well, we just looked at a document and we have just  
15 been discussing Mr. Belifiore's presentation, which I  
16 thought you said you had looked at?

17 A I had. I thought you were then moving -- are you  
18 talking about a time period between December of '93 and June  
19 of '94, or are you talking broadly about the pre-M6 time  
20 period?

21 Q We can take that time period, fall of '93 to June '94.

22 A I mean sitting here right now, I don't recall something  
23 specific. I will take a representation that they were doing  
24 it.

25 Q No, I'm asking you because I haven't seen any documents

1 in this case where anybody was out promoting Chico app?

2 MR. HOLLEY: Your Honor, I object to the form of  
3 the question. Mr. Schmidtlein is not testifying.

4 THE COURT: Actually the witness was talking  
5 about some kind of Chico app anyway. So we're back to where  
6 we belong. Why don't you just ask him your question.

7 BY MR. SCHMIDTLEIN:

8 Q Are you aware of any evidence in this case that  
9 Microsoft was out promoting the use of Chico app in the fall  
10 of 1993 up through when the beta was released in June of  
11 1994?

12 A To the best of my knowledge, Chico app was made  
13 available in June of '94.

14 Q That's fine. Were you aware of Microsoft out promoting  
15 and telling people they should be using Chico app instead of  
16 the namespace extensions?

17 A No, I'm not.

18 Q And during Mr. Belfiore's -- well, we'll move on.

19 Are you aware that during this time period Microsoft  
20 was promoting the namespace extension APIs to authors of PC  
21 Magazine and other publications?

22 A I am aware of articles that appeared in the trade  
23 press. I don't know whether they were promoted articles or  
24 whether the trade press simply wrote the article.

25 Q And you understand that when software developers are



1 out promoting functionality in their products, particularly  
2 an operating system developer, the purpose of that is to  
3 encourage the ISVs to begin developing their products using  
4 that functionality, correct?

5 A That might be one purpose.

6 Q And it's certainly, from your experience, not  
7 unreasonable for ISVs, in response to this promotion and  
8 beta releases and things like that, to actually rely upon  
9 that functionality when they begin to develop their  
10 products, correct?

11 A Not entirely. May I expand?

12 Q Sure.

13 A The ISVs are not unsophisticated. They are, you know,  
14 developers who, in my experience, understand what it  
15 means -- you know, what beta software means, and make  
16 decisions about beta software based on that experience.

17 Q Well, you are certainly not offering the opinion that  
18 software developers wait to begin designing and building  
19 their products until after the final release of the  
20 operating system is made available, correct?

21 A In my experience some do, but many don't.

22 Q Are you aware of something called the First Wave  
23 Program that Microsoft had for Windows 95?

24 A I am generally aware of it, yes.

25 Q And the First Wave Program, there were, I'm sure, a lot

1 of various provisions to it, but the provisions that I think  
2 are at least most germane for my questions are it provided  
3 that certain information -- technical information would be  
4 made available to ISVs on the one hand, and the ISVs  
5 committed to having their applications released for the  
6 Windows operating system within 90 days of the release of  
7 the operating system. Are you familiar with those  
8 provisions?

9 A I mean I am generally aware that there was an  
10 agreement. I don't recall it directly -- you know, the  
11 details sitting here today.

12 Q Can we agree that in order to have your product running  
13 within 90 days of the release of an operating system, a  
14 product as complex as PerfectOffice, you couldn't start  
15 developing that product when the final Windows 95 version  
16 was released?

17 A That would be a reasonable conclusion.

18 Q Now you testified that you are aware of situations  
19 where APIs have been withdrawn prior to the final release of  
20 the product; is that correct?

21 A Yes.

22 Q And you talked about a situation with Sun, a Unix  
23 derivative of Sun; is that right?

24 A Yes.

25 Q And you talked about a common protocol behaving in an

1 unexpected way; is that right?

2 A Yes.

3 Q And that was a situation where the protocol actually  
4 began having some negative impact on software that would be  
5 written to it?

6 A That's not technically accurate. It actually  
7 interacted with the other components of the operating system  
8 in an unexpected way.

9 Q So it actually harmed the operating system; is that  
10 right?

11 A I think it's more accurate to say it interacted in an  
12 unexpected way that could have harmed the operating system.

13 Q Well, it wasn't an -- I'm going to try to speak  
14 English, so you will have to excuse me.

15 It wasn't a happy interaction with the operating  
16 system; is that fair?

17 A That's a fair statement.

18 Q Are you familiar -- is it standard industry practice  
19 for a software developer to withdraw support for APIs for  
20 arbitrary reasons?

21 A If by arbitrary you mean truly arbitrary, that is not  
22 my experience.

23 Q Is it standard industry practice to withdraw support  
24 for APIs for reasons that don't have any technical  
25 justification?

1 A Sure.

2 Q And one of those I think you talked about was in the  
3 situation where it might somehow delay release of a product  
4 for some reason, or slow down development?

5 A That's one instance.

6 Q Are you aware -- is it standard industry practice for a  
7 software developer to withdraw support for APIs for  
8 anticompetitive reasons?

9 A I wouldn't think so, but I would prefer not to offer  
10 opinions about anticompetitiveness.

11 Q Based on all of your years of experience, are you aware  
12 of any situation where a software -- an operating system  
13 vendor withdrew support for APIs to harm a competitor of  
14 that operating system's developer?

15 A I am pausing because, you know, the determinations of  
16 harm are typically the result of legal proceedings, and  
17 there is not a -- decisions about withdrawal might be --  
18 might be later construed through some legal proceeding. I'm  
19 trying to be responsive, but I really don't want to offer  
20 legal opinions here.

21 Q And in your experience you have never seen a situation,  
22 you know, historically, putting this case aside, you have  
23 never seen a situation where an operating system  
24 manufacturer, for example, who also manufactured  
25 applications that ran on the operating system, withdrew

1 support for the APIs to advantage its applications and to  
2 harm applications that competed with the operating system's  
3 applications?

4 MR. HOLLEY: Your Honor, I object to the form of  
5 the question.

6 THE COURT: Sustained. Sustained.

7 BY MR. SCHMIDTLEIN:

8 Q Would you agree that relying on undisclosed functions  
9 of an operating system is a dangerous practice for software  
10 developers?

11 A It can be.

12 Q And you would agree with me that Microsoft has strongly  
13 advised ISVs against using undocumented features in the  
14 operating system, correct?

15 A Yes.

16 Q And would you agree with me that well disciplined  
17 application programmers do not use undocumented functions of  
18 an operating system?

19 A In general, I would.

20 Q You would agree with me that it's a bad practice to  
21 call on undocumented APIs, right?

22 A I believe I have offered that opinion in testimony --  
23 deposition testimony in this case. However, that said, the  
24 developers do make undocumented calls for reasons that they  
25 consider valid, as I explained in some detail in my

1 deposition testimony.

2 Q You would agree with me that it's your opinion it's a  
3 bad practice to call on undocumented APIs, right?

4 A In general, I believe it is.

5 Q And this bad practice that you testified to, that is a  
6 principle that is recognized in software engineering  
7 generally, isn't it?

8 A Yes.

9 Q And you are aware that in this case Microsoft decided  
10 in October 1994 that it would no longer publish  
11 documentation and support the namespace extensions, correct?

12 A Yes.

13 Q And you are aware that Microsoft told ISVs that after  
14 this de-documentation, they should stop using the namespace  
15 extension APIs, correct?

16 A I mean that's a summary of a fairly complex set of  
17 communications, but I think it fairly represents those  
18 communications.

19 Q And you would agree that ISVs should have heeded  
20 Microsoft's direction to stop using the namespace extension  
21 APIs after they withdrew support for them, correct?

22 A As I say, in general, I think that would be good  
23 practice. There may have been, you know, sound engineering  
24 reasons why they would have continued or would have made use  
25 of those undocumented APIs.

1 Q But you are not suggesting that in response to  
2 Microsoft's decision to withdraw the documentation for the  
3 namespace extension APIs, that the WordPerfect developers  
4 should have disregarded your principle of good practice and  
5 gone ahead and used these undocumented APIs, are you?

6 A Well, I know that the Stac and Symantec developers did  
7 use the APIs. They made an engineering decision. The  
8 factors governing decisions within WordPerfect were known to  
9 WordPerfect developers. They would make a decision based on  
10 factors relevant to them.

11 Q Let me try it again. You, here today, in this case,  
12 you are not offering the opinion that in response to  
13 Microsoft's decision to withdraw the documentation for the  
14 namespace extension APIs, that the Novell/WordPerfect  
15 developers should have disregarded your principle of good  
16 practice and gone ahead and used these undocumented APIs,  
17 correct?

18 A I am not offering that opinion.

19 Q In your testimony here today you are not offering the  
20 opinion that it would have been better for WordPerfect to  
21 use the undocumented APIs as compared to doing what they  
22 did, you are not offering that opinion, are you?

23 A I don't know. I mean I am not offering an opinion  
24 either way. It was an option available to them.

25 MR. SCHMIDTLEIN: May I have the deposition

1 pulled.

2 We're going to pull it up on the screen, but -- in  
3 case that's easier for you.

4 MR. HOLLEY: Your Honor, I can't imagine what  
5 conceivable impeachment could now occur since the question  
6 was are you offering an opinion here today. The answer is  
7 no.

8 Q I don't think I got a no out of that last question.

9 THE COURT: Overruled. Move ahead.

10 BY MR. SCHMIDTLEIN:

11 Q If you'd go to page 83, line 20 --

12 MR. SCHMIDTLEIN: Pull that down. We'll find it.  
13 We've got the wrong cite up there. I'll come back to that.

14 I apologize, Doctor.

15 BY MR. SCHMIDTLEIN:

16 Q Let's talk a little bit about the technical reasons  
17 that you have offered -- the technical reasons for  
18 withdrawing support for the namespace extension APIs. So  
19 you've testified that the namespace extensions were  
20 implemented in the same process as the rest of the Windows  
21 95 shell; is that right?

22 A Yes, sir.

23 Q So a software bug in an ISV's namespace could render  
24 the operating system unuseable; is that right?

25 A I just want to finish accurately. It refers to a



1 namespace extension. So an ISV who wrote a namespace  
2 extension that misbehaved or failed could result in bringing  
3 down the shell.

4 Q And there has been -- okay. My trusty colleague has  
5 found the right spot. It was page 84, not 83. Page 84,  
6 line 20 to 23.

7 Question: Is it your opinion that it would have been  
8 better for WordPerfect to use the undocumented APIs as  
9 compared to doing what they did? Answer: That is not my  
10 opinion.

11 Do you stand by that testimony, sir?

12 A Yes, sir. If you read the context around the question,  
13 you would have my actual opinions.

14 Q So you have got -- let me go to the technical  
15 justifications. I didn't think there was anything unclear  
16 about that's not my opinion, but we'll come back to that.

17 This issue about being implemented in the same process,  
18 you talked about that and I think Mr. Holley talked about  
19 that colloquially as sort of running in the same process; is  
20 that right?

21 A Yes.

22 Q If I talk about running in the same process, we'll be  
23 talking about this same robustness issue you've testified  
24 to, correct?

25 A Yes.

1 Q When did this issue of running in the same process get  
2 discovered by Microsoft?

3 A I wouldn't use the -- I mean it was implemented in that  
4 way. The implementers certainly knew about it from the  
5 start.

6 Q It was that issue, this issue of whether an application  
7 that was written poorly could crash not only the extension  
8 but the whole shell, that was something that --

9 THE COURT: Rephrase the question. I don't  
10 think -- rephrase the question. I'm not sure that something  
11 being written poorly and not being robust is necessarily the  
12 same thing. So I would ask you to rephrase the question.  
13 Something can be, as I think somebody testified,  
14 Mr. Belfiore, to be elegant but still have robustness  
15 problems. Just rephrase the question.

16 BY MR. SCHMIDTLEIN:

17 Q Mr. Nakajima was aware of the robustness problem right  
18 from the very beginning of the development of the namespace  
19 extensions, right?

20 A I think that's a fair statement.

21 Q And was this running in process issue ever subject to  
22 any testing by Microsoft?

23 A Necessarily it was. I mean the M6 beta was tested.

24 Q I understand generally that the beta was tested. But  
25 was there any specific testing done on the namespace

1 extension APIs regarding the robustness issue?

2 A I'm not sure what -- the direct answer to your question  
3 is I don't recall.

4 Q And the issue about running in the same process, the  
5 people from the Windows NT group raised this issue as far  
6 back as 1993; is that right?

7 A That's my recollection, yes.

8 Q This wasn't -- this wasn't an issue that got raised on  
9 the eve of Mr. Gates's decision in October '94, correct?

10 A I believe there was extensive discussion within the  
11 company over a period of time.

12 Q And the Windows 95 development team, they didn't have  
13 any concerns about this running in process issue, correct?

14 A I wouldn't characterize it in that way.

15 Q Well, Mr. Silverberg, who is the head of that group, he  
16 didn't have any problems with it, correct?

17 A I think it would be -- again, I would not characterize  
18 it in that way. As I have testified here this morning,  
19 Windows 95 had a particular -- chose a particular point on  
20 the line between functionality and reliability, and  
21 that's -- you know, choosing something that, you know,  
22 places more emphasis on functionality at the expense of  
23 reliability may be something that you do knowingly knowing  
24 that it exposes problems.

25 Q Mr. Nakajima, Mr. Belfiore and Mr. Silverberg, they all

1 favored publishing and supporting the namespace extension  
2 APIs, correct?

3 A There are a lot of documents over time, but I think it  
4 would be generally -- my recollection of those many  
5 documents and e-mails sitting here today, that that would be  
6 generally true.

7 Q And during the time that -- you are familiar with a  
8 group in Microsoft that's been referred to as the DRG?

9 A Yes.

10 Q The developer relations group?

11 A Yes, I am.

12 Q And it was their job to go out and promote the  
13 functionality in Windows 95 to ISVs; is that right?

14 A I think it would be more accurate, as has been  
15 represented here in the evidence I have read, that their job  
16 was to respond to the needs of ISVs who wanted to use  
17 Windows 95 software.

18 Q Well, their job wasn't just to respond to the needs. I  
19 mean they were sort of the promoters of Windows 95, weren't  
20 they?

21 A My recollection is that their primary job was described  
22 as meeting the needs of developers.

23 Q During the time that the DRG was out having  
24 interactions with people like WordPerfect, are you aware of  
25 any evidence that anybody from Microsoft ever alerted any

1 ISV to this ongoing debate about robustness or compatibility  
2 for the namespace extension APIs?

3 A Sitting here right now, I don't recall it.

4 Q I believe the jury has heard some testimony from  
5 Mr. Muglia. Have you reviewed his trial testimony in this  
6 case?

7 A Yes.

8 Q You have reviewed his deposition as well as part of  
9 forming your opinions in this case?

10 A Yes.

11 Q And so you are aware that Mr. Muglia referred to the  
12 namespace extension APIs in his trial testimony here, I  
13 believe, as dog meat, quote, unquote. Do you recall that?

14 A I saw that testimony.

15 Q Is it customary in the software industry for a company  
16 to go out and promote and publish in a beta APIs that senior  
17 executives within the company refer to as dog meat?

18 A In a company as large as Microsoft, there were clearly  
19 strong opinions about these particular APIs. The record  
20 reflects that. Mr. Muglia had strong opinions that they  
21 exposed serious reliability issues and they exposed serious  
22 future compatibility issues. I think he expressed that  
23 somewhat succinctly here in court. But that is the  
24 substance of my -- that's my understanding of the issues  
25 that were in his -- you know, the reasons behind that view.

1 Q I understand that. My question was a little bit  
2 different, which is is it customary in the software industry  
3 for a company to promote APIs and publish those APIs in a  
4 beta where senior executives within the company refer to  
5 them as dog meat?

6 THE COURT: Why don't you rephrase the question.  
7 I think he answered the question. First you asked him  
8 whether it's customary for senior executives to refer to the  
9 products as dog meat. I think you've gotten the answer to  
10 the question in any event. But if you want to rephrase the  
11 question, you can.

12 I think you got an answer.

13 BY MR. SCHMIDTLEIN:

14 Q During this time that this debate was going on within  
15 Microsoft, did anybody within Microsoft explain any of the  
16 details about this debate to ISVs?

17 A I don't know.

18 Q I think you testified on direct that Microsoft made  
19 some changes to the namespace extension APIs from their  
20 original design to address this robustness issue; is that  
21 right?

22 MR. HOLLEY: Objection, Your Honor, misstates the  
23 witness's testimony.

24 THE COURT: State the question again. I'm sorry.  
25 My mind wanders.

1 BY MR. SCHMIDTLEIN:

2 Q I believe you testified on direct that Microsoft, they  
3 did something either to the APIs or their implementation  
4 from the original design that supposedly addressed the  
5 robustness issue; is that right?

6 A I believe I testified that they did not do anything to  
7 the namespace extension APIs themselves, but they did  
8 something to the execution context in which those namespace  
9 extension APIs ran in both Windows 95 and Windows NT.

10 Q And this change that was made -- let's back up. So, in  
11 fact, no code was ever changed in the namespace extension  
12 APIs, correct?

13 A That's not quite true. The header file that we talked  
14 about when the support was removed was modified to not refer  
15 to the specific interphases that were made private.

16 Q When they were later redocumented, there weren't any  
17 changes to the APIs, correct?

18 A None of which I'm aware of.

19 Q And the change that was made was to allow the  
20 applications to run in a separate window; is that right?

21 A No, sir. I think we're -- the terms you have used are  
22 technically imprecise, so I don't want to -- I want to be  
23 responsive, but you used the term window and application,  
24 and those would not accurately refer to the software we're  
25 talking about.

1 Q Why don't you explain -- the change that was made would  
2 allow the application to run in a separate process; is that  
3 correct?

4 A So the namespace extensions are not an application,  
5 they are part of the operating system.

6 Q I understand that, sir. Go ahead.

7 A So I just --

8 Q The application that is usable, the namespace  
9 extension, would run in a separate process?

10 A Actually the namespace extension itself would run in a  
11 separate -- a process separate from critical shell, user  
12 interphase components.

13 Q Well, this fix that Microsoft put in place to address  
14 the robustness issue, isn't it true Microsoft had made this  
15 fix as early as November 1994?

16 A No, sir, I don't believe that's true.

17 Q Let me show you what has already been admitted as DX84.  
18 Have you seen this document before?

19 A Yes, sir, I have. May I take a moment to refresh?

20 Q Sure. The section that I'm going to be asking you  
21 about is the second page under number six, Q and A.

22 A I see that.

23 Q And this paragraph says -- and this is a Q and A that  
24 was drafted by -- the jury has seen this document before and  
25 has heard testimony I believe about it. This is an e-mail



1 from Brad Struss to Bill Gates, November 12, 1994. And  
2 under Q and A, it says, number one, the namespace extensions  
3 were initially pulled from Win95 and ISVs were informed of  
4 this change. In general they've been okay with this. Just  
5 recently, because Marvel could not completely stop using  
6 them and still ship on time, the decision was made to  
7 provide documentation for these as dead APIs. Dead means  
8 not supported after Win95 V1 and not part of SDK, available  
9 by request. The semantics of these APIs has also changed  
10 slightly. Apps that use these will come up in a new  
11 explorer window and the left-hand pane will only represent  
12 the hierarchy that the applications presents (previous  
13 semantics allowed apps to show their hierarchy along with  
14 file systems and run in the same window).

15 Do you see that?

16 A Yes, sir.

17 Q Isn't this true that this demonstrates that Microsoft  
18 had fixed this problem as of November 1994?

19 A No, sir.

20 Q Are you aware that there is testimony in this case that  
21 contradicts you on this point?

22 A Could you show me the testimony to which you refer?

23 Q I would be happy to.

24 A If I just could complete my answer, semantics are  
25 different than implementation. This statement says that the

1 apps will come up in a new window. It doesn't say that they  
2 do come up in a new window.

3 MR. SCHMIDTLEIN: Okay. As we're talking about  
4 semantics, can I have Mr. Nakajima's testimony?

5 MR. HOLLEY: Your Honor, can we strike  
6 Mr. Schmidtlein's snide commentary?

7 THE COURT: We can strike -- yeah, that was  
8 adjectives. We can only strike commentary.

9 THE WITNESS: It's fairly hard for me to read it  
10 on the screen. Could I have a paper copy?

11 THE COURT: I think it will probably --

12 THE WITNESS: Get bigger.

13 THE COURT: Is that better?

14 THE WITNESS: Thank you.

15 MR. SCHMIDTLEIN: Now can you actually start with  
16 line two.

17 BY MR. SCHMIDTLEIN:

18 Q So Mr. Nakajima is being asked about this same Exhibit  
19 84. He's asked about this same passage. And he was asked,  
20 this is exactly what we were talking about before, this  
21 rooted extension versus nonrooted. Isn't that the fix that  
22 you were previously testifying to?

23 A Again, this describes a mechanism. It doesn't -- at  
24 least the testimony that you've shown me so far, it doesn't  
25 say that that mechanism was implemented or tested, or

1 anything.

2           Shall I clarify?

3 Q     You are saying that Mr. Nakajima's testimony when he's  
4 asked, this is exactly what you were talking about, using a  
5 rooted extension instead of a nonrooted one, that was the  
6 fix that was ultimately put in place, correct?

7 A     Yes, but having an idea about how to implement a fix,  
8 as you have called it, doesn't mean that the fix has been  
9 implemented or tested or used, or anything beyond I think I  
10 have an idea how to do it.

11 Q     So your interpretation of this is --

12           THE COURT: He's already given his testimony.  
13 Move on to something else. Clearly you have your position  
14 and the expert -- excuse me, Doctor, has his position.

15 BY MR. SCHMIDTLEIN:

16 Q     The fix, this running in the same process issue, once  
17 that was solved, that solved the Windows NT robustness  
18 issue, correct?

19 A     So I don't want to conflate Windows 95 and Windows NT.  
20 The changes that were made were different in the two  
21 operating systems. So if you could just clarify which  
22 you're asking me about.

23 Q     Well, the robustness issue that was expressed by  
24 Microsoft executives had to do with Windows NT, correct?  
25 The Windows 95 executives didn't think there was a

1 robustness issue.

2 A I would not characterize -- certainly that's not my  
3 understanding. They -- I think it would be accurate to say  
4 they knew there was a robustness issue and didn't give -- or  
5 as I have used the term before, privileged functionality  
6 over reliability.

7 Q They said go ahead and publish the namespace extension  
8 APIs and use them, right?

9 A I mean Microsoft did so, but I would expect that to be  
10 a senior executive decision. I don't recall seeing any  
11 evidence that said precisely what you have just said.

12 Q You are not aware of any evidence that Mr. Silverberg  
13 or Belifiore or Nakajima all favored continuing to publish  
14 and support the namespace extension APIs at the time Windows  
15 95 was released in August '95?

16 A Are you -- I'm sorry. I didn't quite understand the  
17 question. Are you asking me, to the best of my knowledge,  
18 did they favor publication? The answer is yes, I believe  
19 they did.

20 Q Now the Windows NT shell group -- the Windows NT shell  
21 project, that was canceled before Mr. Gates made his  
22 decision in October 1994, correct?

23 A I think it would be more accurate to say that the  
24 decision was made I believe by Mr. Allchin, if memory  
25 serves, that the Windows NT would adopt the Windows 95 shell

1 with some changes that made it appropriate for Windows NT.

2 Q Now Microsoft did not redocument the namespace  
3 extension APIs until sometime in 1996; is that correct?

4 A The -- again, I want to be responsive. By redocument,  
5 you mean fully supported and documented?

6 Q Correct.

7 A Yes, to my understanding that occurred in 1996.

8 Q Do you recall when that occurred in 1996?

9 A During the period of time between March and say July of  
10 1996.

11 Q Of course, by that time Windows 95 had long since  
12 shipped in August 1995, correct?

13 A That's correct.

14 Q Now when Microsoft finally redocumented the namespace  
15 extensions during this -- I think April to July 1996 time  
16 period, isn't it true that Microsoft did not force all  
17 applications to open up in a separate window?

18 A Yes, I believe that's true. That's -- I mean opening  
19 in a separate window is not -- there is no direct  
20 correlation between opening in a separate window or not and  
21 using the namespace extensions.

22 Q The fix you have testified to, the fix that was made to  
23 address the robustness issue, okay, Microsoft didn't require  
24 all applications to essentially adopt this fix when they ran  
25 on Windows 95 and Windows NT after the documentation was

1 republished, correct?

2 A By application, you again mean namespace extensions?

3 Q Uh-huh. (Affirmative)

4 A I mean I believe it was possible by modifying the  
5 registry to change that behavior.

6 Q Let me show you what we're going to mark as PX604 --  
7 it's already been marked and admitted as PX604.

8 You have seen this document before, haven't you,  
9 Doctor?

10 A I have, but my recollection is that it had some  
11 pieces -- some pages in the front of it providing a little  
12 bit of context. So I have seen a PX exhibit that I think  
13 began something like letter to ISVs or something like that.  
14 Is this the same exhibit?

15 Q I think this is -- this is I believe a stand-alone  
16 document that may have also been attached to the document  
17 you are referring to.

18 A Okay. That's the one that I recall sitting here. I  
19 think this document was also an attachment to an e-mail  
20 exchange between Mr. Belfiore and Mr. Andrew Schulman, or at  
21 least an earlier version of this document with the other  
22 pages that aren't in front of me.

23 Q Is this some of the documentation from 1996 that you  
24 are referring to where Microsoft began redocumenting the  
25 namespace extension APIs?

1 A I think it would be more accurate to say that Microsoft  
2 added to the documentation which was already available as  
3 early as the M6 beta, but this is additional documentation  
4 that was made available in that 1996 time frame.

5 Q Well, after the M6 beta, Microsoft told the world we're  
6 withdrawing support for the namespace extensions, correct?

7 A I don't know if they told the world, but they told some  
8 number of ISVs and others.

9 Q And during this time period, this April to July time  
10 period, they were now back telling the world, oh, we're now  
11 going to begin resupporting these, correct?

12 A That's a reasonable characterization.

13 Q And if you look on page 2 of this document, the  
14 nonrooted and rooted Explorers section. Do you see that?

15 A Yes, sir.

16 Q Can you explain what they are referring to, the  
17 nonrooted versus the rooted?

18 A Nonrooted refers to appearing in the Explorer window.  
19 Rooted means -- actually it has to do -- it's a little more  
20 technical than that.

21 THE COURT: Just make it easy for us. Same  
22 process or not the same process. Is it running in the same  
23 process or not in the same process. Is that right? Or  
24 maybe not.

25 Excuse me. That's what I understood.

1           Go ahead.

2           THE WITNESS: I would never want to disagree with  
3 Your Honor.

4           THE COURT: Feel free. Feel free. I wish I was  
5 like Secretariat running down the home stretch, just as  
6 anybody. But I'm probably more like the Jersey loser.

7           THE WITNESS: That's not an unreasonable  
8 characterization, but it has to do specifically with the  
9 way -- how the namespace -- you know, where the root of the  
10 namespace that might be enumerated resides. The consequence  
11 of that is typically to run in -- you know, a rooted process  
12 would be in a different -- or a rooted namespace extension  
13 would typically be in a different process. And a nonrooted  
14 one would typically be in the same process. That is not  
15 necessarily the case.

16 BY MR. SCHMIDTLEIN:

17 Q       But the nonrooted process they are talking about here,  
18 that is the process that Mr. Muglia and others were so  
19 worked up about, correct?

20 A       I would like to read -- refresh my memory so I can  
21 answer your question if the information is, in fact, here.

22       Okay. Could I request you to repeat the question?

23 Q       Sure. What's being set forth here is describing to  
24 ISVs, to quote that page that we put on the screen, page 2,  
25 your namespace extension can be implemented in either of two



1 ways and there is no set criteria for determining which to  
2 use. Rather, it depends only on your evaluation of which is  
3 more logical and better suited to your particular  
4 application.

5 What Microsoft is doing here is giving the ISV the  
6 option to either run in the separate process, the fix, or to  
7 run in the same process, the mechanism or implementation  
8 that doesn't have the fix?

9 A No, sir, that's not my understanding.

10 Q It's not your understanding?

11 A What this document describes, and it goes on, this  
12 discussion about junction points is relevant as is other  
13 discussion here. It has to do with where the actual root of  
14 the namespace exists. In general, a rooted namespace will  
15 be in a separate process. That is not a requirement. In  
16 general, a nonrooted namespace will be in the same process.  
17 Again, that is not a requirement. I'm just trying to be  
18 technically accurate in my answer to you.

19 Q ISVs were given the option of running nonrooted,  
20 correct?

21 A Correct.

22 Q And when they run nonrooted, they run in the same  
23 process, correct?

24 A Not necessarily.

25 Q They could if they registered as such, correct?

1 A Registered as?

2 Q If they wanted to run in the same process?

3 A It is possible using the Windows 95 OLE APIs to run in  
4 the same process.

5 Q And so ISVs -- when the documentation was republished,  
6 ISVs were able to run nonrooted in the same process, which  
7 is the exact thing that Mr. Muglia and others claimed was  
8 the problem back in 1993, correct?

9 A The short answer is yes, but a complete answer requires  
10 a short explanation, if I may?

11 Q Okay.

12 A The Windows 95 APIs provided the opportunity to run in  
13 the same process throughout this period of time. ISVs could  
14 have taken advantage of low level functionality to do that  
15 at any time, including at this time.

16 Q This has been admitted already as PX355.

17 And you've seen this document before, Doctor?

18 A Yes, sir, I have.

19 Q And this is a document that was published on the  
20 Microsoft developers network; is that right?

21 A Yes, sir.

22 Q That's a place where Microsoft frequently puts  
23 documentation?

24 A Yes, sir.

25 Q And this -- again, this is from July 1996. This is,

1 again, more of the formal documentation that I think you  
2 referred to before that Microsoft began putting out in 1996?

3 A Yes, sir.

4 Q And, again, this is talking about extending the Windows  
5 Explorer with the namespace extensions. If you go down to  
6 the types of namespace extensions there, again, there is  
7 that discussion of rooted versus nonrooted that we've been  
8 talking about?

9 A Yes, sir.

10 Q And if you go to the very next -- the next paragraph  
11 there, the difference between -- I'm sorry. You had it.  
12 The difference between rooted extensions and nonrooted  
13 extensions and how they are used. There is no code  
14 difference between the two.

15 I think that's consistent with what you've testified to  
16 before, that there is no change in the code for the APIs; is  
17 that correct?

18 A To the namespace extension, that's correct.

19 Q Then if you go over to the next page, under the figure  
20 three, it says, the implementation of the namespace  
21 extension is basically the same for both kinds. Which  
22 method you use depends on your extension and is a matter of  
23 style and common sense as much as anything.

24 Do you see that?

25 A Yes, sir.

1 Q Is that consistent with your recollection that  
2 Microsoft gave ISVs the option as to whether they wanted to  
3 run rooted or nonrooted?

4 A Yes.

5 Q I want to talk a little bit about Cairo. You talked a  
6 little bit about Cairo this morning. I think you testified  
7 that there was some debate -- or that the debate, I should  
8 say, included people from the Cairo group who expressed  
9 concerns about the namespace extension APIs; is that  
10 correct?

11 A Yes, sir.

12 Q Now the Cairo project was some sort of futuristic  
13 operating system that Microsoft had under development; is  
14 that right?

15 A I mean clearly it was an operating system in  
16 development that looked farther down the road to more  
17 powerful machines.

18 Q The Cairo project never had a ship date, did it?

19 A Sitting here today, I don't recall.

20 Q And we do know it never did ship, correct?

21 A That's my understanding.

22 Q And, in fact, Mr. Nakajima quit the Cairo group in late  
23 '92 or early '93 because in his opinion the people in Cairo  
24 weren't actually writing any code, correct?

25 A I recall his testimony to that effect.

1 Q And, in fact, Mr. Nakajima concluded they were never  
2 going to release a product, correct?

3 A I don't recall that specific testimony, but, you know,  
4 his testimony should stand for itself.

5 Q In forming your opinions in this case, did you consider  
6 Mr. Nakajima's testimony regarding whether the Cairo team  
7 had legitimate technical objections to supporting the  
8 namespace extension APIs?

9 A Yes.

10 Q Isn't it true that Mr. Nakajima believed that the Cairo  
11 team's objections were made because they didn't want to lose  
12 face when the project was canceled, not because they had  
13 valid technical objections?

14 A I think that oversimplifies both his testimony and the  
15 documents in evidence in this case.

16 Q Didn't Mr. Nakajima testify that there was sort of --  
17 in his words, there was a public way to say something and  
18 then there was the real reason why the namespace extensions  
19 were being pulled. Do you recall that testimony?

20 A I mean I did not memorize Mr. Nakajima's testimony. If  
21 you're going to ask me specific questions, I would ask that  
22 you show it to me.

23 I guess in reading Mr. Nakajima's testimony, I took  
24 into account the fact that he, as a person of Japanese  
25 descent, had cultural -- approached agreements and

1 disagreements in a culturally -- with a specific cultural  
2 context.

3 Q What context was that?

4 A Well, I think the -- my experience working with  
5 Japanese companies and, you know, Japanese colleagues, there  
6 are, you know -- I should not be -- I am not a cultural  
7 expert. I'm speaking now from personal experience, and, you  
8 know, persons of Japanese ancestry don't like to say no in a  
9 direct way.

10 Q Sir, didn't Mr. Nakajima testify that he didn't believe  
11 that the namespace extension APIs were withdrawn because of  
12 the Cairo team's purported technical justifications?

13 MR. HOLLEY: Your Honor, I object to the form of  
14 that question.

15 THE COURT: I think Mr. Nakajima's testimony  
16 speaks for itself. Just ask him another question.

17 BY MR. SCHMIDTLEIN:

18 Q Sir, isn't it true that the Cairo project was  
19 effectively canceled in September 1994?

20 A Certainly the record reflects that many of the  
21 individuals working in Cairo were assigned to other groups.  
22 Whether that represents cancellation or not is not something  
23 I have seen in evidence.

24 Q The Cairo shell project was canceled in September 1994  
25 in that same e-mail Mr. Allchin sent that we talked about

1 before where people from the Cairo team were actually  
2 reassigned to another group; isn't that right?

3 A My recollection of that document, and we should get it  
4 in front of us if you're going to ask me specific questions,  
5 is that that group was reassigned to Office to consider how  
6 Office might -- how Office products might think about a  
7 shell.

8 Q The plan was to have them -- the Office team develop  
9 its own shell, right?

10 A That's my best recollection of the document, but I  
11 don't have it in front of me.

12 Q So by October 1994, the only operating system shell  
13 team that was working was the Chicago shell team, correct?

14 A I don't know that to be the case.

15 Q Based on your review of the record, are you aware of  
16 any others?

17 A Well, we just discussed there was a group working on a  
18 shell in the Office product group. There was, of course,  
19 the Chicago shell team. And at that point, you know, the NT  
20 shell team still existed, but they were charged with porting  
21 the Windows 95 shell to Windows NT. It's a different group  
22 of people.

23 Q But the Windows NT shell project, that had been  
24 canceled in September 1994?

25 A I think, based on my review of the record, it would be

1 inaccurate to characterize that as a project. The Windows  
2 NT shell was very much -- or the Windows NT 3.51 shell was  
3 very much like the Windows 3.1 shell. And when a decision  
4 was made to make the Windows NT shell use the Chicago, the  
5 Windows 95 shell, work began within Windows NT to do things  
6 like add Unicode and other things like that. That only was  
7 relevant to the Windows NT.

8 Q But the shell part, there was a decision -- the  
9 decision that was made ensured that the Chicago shell was  
10 going to be the shell that runs on Windows 98, correct?

11 A A modified version that had been tailored to NT, yes,  
12 that's my understanding.

13 Q So that, again, going back to my earlier question, the  
14 only operating system shell team that was working in  
15 October 1994 was the Chicago team, correct?

16 MR. HOLLEY: Objection, Your Honor, asked and  
17 answered.

18 THE COURT: I think he answered it.

19 MR. SCHMIDTLEIN: He made reference to Office.

20 BY MR. SCHMIDTLEIN:

21 Q Office wasn't a operating system, correct?

22 A No, sir. However, there were two shell teams at work.  
23 There was a shell team in Windows NT that was working to  
24 port to Windows 95, and the Chicago shell to Windows NT.  
25 There was another shell team in Windows 95 working to do



1 things in the shell for Windows 95. So there were two at  
2 least.

3 Q Now you testified earlier today about looking at Office  
4 and confirming that Office -- the version of Office that  
5 actually shipped did not use the namespace extension APIs;  
6 is that right?

7 A Yes, sir.

8 MR. HOLLEY: Your Honor, could we just have  
9 clarity on which version of Office we're talking about,  
10 because I asked him about three.

11 MR. SCHMIDTLEIN: The three.

12 THE COURT: Just rephrase the question.

13 BY MR. SCHMIDTLEIN:

14 Q Do you know whether the source code for the namespace  
15 extensions was ever integrated into Office?

16 A I do not.

17 Q Did you test for that?

18 A I did not have Office source code.

19 Q Now at the time that Microsoft withdrew support for the  
20 namespace extension APIs, Microsoft's plan was to use them  
21 as part of -- as part of Office, correct?

22 A I don't know what -- I would prefer not to testify  
23 about Microsoft's plans.

24 Q I'm sorry?

25 A I would prefer not to testify about Microsoft's plans.

1 Those are business matters.

2 Q Well, you are familiar obviously with Mr. Gates's  
3 October 1994 decision e-mail where he makes specific  
4 reference to the fact that the plan was for the Office group  
5 to make use of the namespace extension APIs, correct?

6 MR. HOLLEY: Your Honor, that grossly misstates  
7 what PX1 says.

8 THE COURT: PX1 states what PX1 states.

9 THE WITNESS: I'm not sure what I'm supposed to  
10 do, sir.

11 THE COURT: Sit there and wait for the next  
12 question.

13 BY MR. SCHMIDTLEIN:

14 Q Are you aware of any evidence in this case that the  
15 Office group, there was an Office shell plan that planned to  
16 make use of the namespace extension APIs?

17 A I'm sorry. Could you repeat the question?

18 Q Sure. There were developers in the Office group that  
19 were using the namespace extension APIs at the time  
20 Mr. Gates made his decision in October 1994, correct?

21 A In the Office group? I'm trying to remember -- my  
22 hesitation is because I don't know whether, for example, the  
23 Capone mail utility was developed by -- in the operating  
24 systems group or in the Office group. So I don't have a  
25 good enough recollection to answer with specificity.

1 THE COURT: Do you know where Marvel was?

2 THE WITNESS: Yes, sir, I do.

3 THE COURT: Where was Marvel?

4 THE WITNESS: I don't know where it was. I just  
5 know what it is.

6 BY MR. SCHMIDTLEIN:

7 Q I've handed you what's been marked and admitted  
8 previously as PX215. This is a September 22, 1994 e-mail.

9 If you will look under -- about halfway down the first  
10 page under Microsoft. Do you see that? Here's how the  
11 shell integration APIs affect our software development  
12 plans.

13 Do you see that?

14 A Yes, sir, I do.

15 Q There is a reference to the Office team there?

16 A I see that.

17 Q Does that refresh your recollection that in the fall of  
18 1994, the Office team was making use of the namespace  
19 extension APIs?

20 A I mean the document says what it says. I know that in  
21 products that actually shipped, they were not used.

22 Q Subsequent to the time when Mr. Gates made his decision  
23 to withdraw the namespace extension APIs, the Office group  
24 continued to do development work using the namespace  
25 extension APIs, correct?

1 A Sitting here right now, I don't recall.

2 Q This is PX379.

3 MR. HOLLEY: Your Honor, I would like to object on  
4 the grounds that cross-examination of an expert is not an  
5 occasion to conduct a mini closing by showing the witness  
6 every document that Novell likes. The purpose is to try to  
7 explore the opinions that the expert gave. The opinion is  
8 that the --

9 MR. SCHMIDTLEIN: Now we're getting --

10 MR. HOLLEY: No.

11 THE COURT: His point is well taken. All we're  
12 doing is reviewing your documents. What he testified to --  
13 all he testified to was he examined the product after it was  
14 shipped and then continued. So that's all. If you want to  
15 ask about that, ask about that. We'll have closing argument  
16 tomorrow or Wednesday.

17 BY MR. SCHMIDTLEIN:

18 Q Sir, the fact that -- the fact that Microsoft  
19 applications continued to engage in development work using  
20 the namespace extension APIs after the decision was to  
21 withdraw documentation from ISVs, did you take that into  
22 consideration when forming your opinions about whether there  
23 were valid technical justifications?

24 MR. HOLLEY: Your Honor, object to the form of the  
25 question as misstating the evidentiary record in the case.

1 THE COURT: Just restate the question.

2 BY MR. SCHMIDTLEIN:

3 Q Sir, you are aware that Microsoft applications  
4 continued to do development work with the namespace  
5 extension APIs after October 1994, correct?

6 A My recollection sitting here is that there is evidence  
7 that developers in Microsoft continued to work with  
8 namespace extensions and other things. What I know is that  
9 those namespace extensions did not find their way into a  
10 shipping Office product between '95 and 2000.

11 Q Did you take -- for example, they did continue to be  
12 used by Marvel, correct?

13 A That's my understanding, yes.

14 Q And the document I just put in front of you shows that  
15 the Office group continued to work with them after October  
16 of 1994; am I correct? You don't have a recollection of  
17 that?

18 MR. HOLLEY: Your Honor, that's impossible. The  
19 document is dated September 12, 1994. It doesn't say  
20 anything about what happened after October 4th. I will just  
21 point out that this very same document, or one like it, says  
22 whoever is using these namespace extensions internally  
23 should stop.

24 THE COURT: Okay. That's your -- I don't want  
25 your closing argument now either, or Mr. Tulchin's, or

1 whoever makes it.

2 BY MR. SCHMIDTLEIN:

3 Q Sir, did you take into consideration in deciding  
4 whether there were valid technical justifications for  
5 withdrawing support the fact that Microsoft's own developers  
6 kept using them?

7 A I frankly don't understand the question. What  
8 Microsoft developers did or did not do after the decision  
9 was made doesn't have bearing, in my view, on the facts and  
10 circumstances that led to the decision.

11 Q So I guess your answer is no, you didn't take that into  
12 consideration?

13 A I think I would like to offer the answer I gave.

14 Q Now you said also that Athena did not make use of the  
15 namespace extensions when that product shipped; is that  
16 right?

17 A Yes, sir, that is my testimony.

18 Q Did you do any evaluation as to whether after  
19 October 1994 Athena continued in its development process to  
20 make use of the namespace extension APIs?

21 A There is some evidence in the record that at some  
22 period of time after the decision was made Athena did use  
23 namespace extensions. The evidence is what it is. All I  
24 know for sure, I never -- let me state it a different way.  
25 No version of the Athena in development was ever produced to

1 me, so what I know is it wasn't in the shipping product.

2 Q So you never tested an Athena beta release; is that  
3 right?

4 A To my knowledge it was never offered in a beta release.

5 Q To create a namespace extension, you need to register  
6 the extension with the Windows 95 operating system; is that  
7 correct?

8 A Yes.

9 Q And isn't it correct that Athena modified the registry  
10 to add Internet news and Internet mail?

11 A Yes. I mean all namespace extensions have to register  
12 in a very precise way in order to function and -- go ahead.

13 Q And isn't it true that Athena is implemented as a  
14 namespace extension?

15 A No, sir. It's implemented as an OLE in-proc server.  
16 We talked about it a little while ago. OLE in process  
17 server.

18 Q Marvel was the MSN client, right?

19 A Yes, sir.

20 Q I think you have agreed that Marvel did use the  
21 namespace extensions when it finally was released; is that  
22 right?

23 A Yes.

24 Q It was released as part of Windows 95, right?

25 A Yes, specifically was part of the operating system.

1 Q One of the reasons why Marvel was allowed to continue  
2 using the namespace extension APIs after October 1994 was  
3 that Marvel wouldn't be able to ship with Windows 95 if, in  
4 fact, it had to start over and use something else, right?

5 A The evidence reflects that statement to be accurate.

6 Q And I think you talked earlier this morning about  
7 Internet Explorer used the namespace extension APIs,  
8 correct?

9 A Just to be precise, Internet Explorer 4.0.

10 Q And Internet Explorer 4.0 was released when?

11 A 1998, with Windows 98.

12 Q And would you agree with me that Internet Explorer --  
13 strike that.

14 You would agree with me during the development process  
15 for Internet Explorer 4.0, the Windows namespace extension  
16 APIs were used as early as 1995?

17 A Potentially. I have seen evidence that -- I guess the  
18 only evidence I recall from 1995 is that there was  
19 discussion of their use at that time.

20 Q Now I think you testified that WordPerfect Office  
21 shipped in the spring of 1996 and didn't use the namespace  
22 extension APIs; is that right?

23 A I believe I testified that it did not use them. I  
24 don't think I testified as to which ship date.

25 Q I'm sorry?



1 A I did not testify regarding the ship date to my  
2 recollection.

3 Q Do you --

4 A I'm trying to be accurate.

5 Q Is the version that you were testifying about the  
6 version that Corel launched?

7 A Yes, sir.

8 Q And that would have been in the spring of 1996; is that  
9 right?

10 A That's my recollection. I think Mr. Holley has a box  
11 in front of him that is the version I used as well.

12 Q So the Corel product that shipped in the spring of  
13 1996, that shipped either right before or right at the same  
14 time as the namespace extension documentation was  
15 republished by Microsoft that we've talked about, correct?

16 A Yes, I believe that's true.

17 MR. SCHMIDTLEIN: I don't know if now is a good  
18 breaking point. I'm at a logical breaking point.

19 THE COURT: Five minutes. I doubt lunch is here.  
20 Five minutes.

21 MR. SCHMIDTLEIN: Okay.

22 BY MR. SCHMIDTLEIN:

23 Q You gave some testimony this morning about middleware.  
24 And I believe your point number ten is that PerfectOffice,  
25 WordPerfect, PerfectFit, AppWare and OpenDoc are not

1 middleware as that term is generally understood. They are  
2 not remotely capable of enabling ISVs to develop general  
3 purpose personal productivity applications.

4 Your reference to the -- and as that term is generally  
5 understood, where did you get a general understanding of how  
6 middleware is defined?

7 A Based on teaching, researching over a 30-year career  
8 and having formed opinions about middleware several times in  
9 that career, that is I believe -- the definition I offered  
10 in testimony this morning accurately reflects the common  
11 computer science understanding of middleware.

12 Q You said opinions that you formed. What opinions are  
13 you talking about? Opinions in litigation?

14 A The opinion about middleware I have offered before.

15 Q The opinion that -- when you said opinions you formed  
16 before, you are referring to opinions that you have  
17 expressed in litigation serving as a Microsoft expert; is  
18 that right?

19 A Yes.

20 Q Can you point me to any document, dictionary, textbook  
21 that defines middleware in the way that you define  
22 middleware?

23 A I think I discussed this in my report offered in this  
24 case. Sitting here right now, I have no textbooks,  
25 documents, or dictionaries in front of me, so that would be

1 difficult to do.

2 Q Well, sir, when you were coming up with your definition  
3 of middleware, did you look at any documents, dictionaries,  
4 textbooks, or anything to help inform you to see if those  
5 sources would support your definition?

6 A I did, and discussed those in my report offered in this  
7 case.

8 Q Okay. I don't recall any dictionaries or textbooks  
9 being cited in your report that are on all fours with the  
10 definition of middleware that you are offering here today.  
11 Are there any?

12 A By all fours, do you mean state precisely that?

13 Q Even generally that.

14 A Yes.

15 Q What are those?

16 A I think -- you know, I don't have my report in front of  
17 me, it was written two years ago, but most computer  
18 dictionaries contain definitions for a general purpose  
19 audience. The iTripoli has one. Microsoft Press has one.  
20 In forming what I thought was a considered definition that  
21 would be useful, I considered both of those dictionaries as  
22 well as my experience and academic research, reading,  
23 publishing, and my own work in the field.

24 Q Is the Microsoft dictionary definition, is that the  
25 same definition that you've offered?

1 A Not precisely, no.

2 Q Show you what we've marked as PX625.

3 THE COURT: The lunches have now been delivered,  
4 so you tell me when is a good time.

5 MR. SCHMIDTLEIN: Okay.

6 THE COURT: She's amazing. I didn't know they  
7 were here.

8 BY MR. SCHMIDTLEIN:

9 Q Look what I've handed you, sir. I have handed you a  
10 document that we've marked as PX625. It is the first page  
11 of the Microsoft Computer Dictionary, fifth edition. What  
12 I've done is I have only appended rather than copy the  
13 entire document, which is a rather large book, but I can  
14 give it to you if you would like to see the whole book.

15 A That's all right.

16 Q But what I've tried to do is I've attached the pages  
17 that have the definition of middleware from Microsoft's  
18 dictionary. If we can look at that.

19 The Microsoft dictionary there talks about software  
20 that sits between two or more types of software and  
21 translates information between them. Middleware can cover a  
22 broad spectrum of software and generally sits between an  
23 application and an operating system, a network working  
24 system, or a database management system. Examples of  
25 middleware include CORBA and other object broker programs

1 and network control programs.

2 Do you see that?

3 A I do.

4 Q That's not the definition that you are offering here  
5 today, is it?

6 A No, sir.

7 Q And that definition does not include, for example, any  
8 requirement that the middleware be capable of enabling ISVs  
9 to develop general purpose personal productivity  
10 applications, does it?

11 A No, it does not.

12 Q In fact, none of the definitions in Microsoft's own  
13 dictionary comport with your definition, do they?

14 A No.

15 MR. SCHMIDTLEIN: Your Honor, this would be a good  
16 time for a break.

17 THE COURT: Okay. Let's break for lunch. See you  
18 all in 20 minutes.

19 (Recess)

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