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IN THE UNITED STATES DISTRICT COURT  
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  
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November 10, 2011

Jury Trial

A P P E A R A N C E S

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I N D E X

Witness	Examination By	Page
Ronald Alepin	Mr. Holley (Cross Cont.)	1530

Exhibit	Received
(No exhibits received.)	

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1 November 10, 2011

8:00 a.m.

2 P R O C E E D I N G S

3  
4 THE COURT: Get the jury.

5 Were you able to sleep? That is a tough thing to  
6 do.

7 THE WITNESS: Not to much, but I brought some  
8 pillows.

9 (WHEREUPON, the jury enters the proceedings.)

10 THE COURT: Mr. Holley.

11 MR. HOLLEY: Good morning, Your Honor.

12 CROSS-EXAMINATION (Cont.)

13 BY MR. HOLLEY

14 Q. Good morning, Mr. Alepin.

15 Now, yesterday I believe, sir, that you told the jury  
16 that you were the chief technology officer and vice  
17 president of strategic planning for Fujitsu.

18 Is that correct, sir?

19 A. I said the -- I'm sorry. I believe the precise titles  
20 were chief technical consultant for Fujitsu and then chief  
21 technical officer and vice president of strategic planning  
22 for Fujitsu software.

23 Q. You were never employed by either of those companies,  
24 isn't that right, sir? You were not an employee of any  
25 Fujitsu entity?

1 A. No, I was under a contract.

2 Q. And no one reported to you at Fujitsu; isn't that  
3 correct?

4 A. That is not correct.

5 Q. But at no point were you ever an officer of any Fujitsu  
6 entity?

7 A. Do you mean in corporate governance?

8 Q. Well, typically people who are officers of companies  
9 are employed by those companies.

10 Correct, sir?

11 A. I am afraid -- if you are asking whether I was a part  
12 of the corporate governance, no, I was not.

13 Q. Now, yesterday Mr. Schmidlein spent about an hour  
14 talking about your experience in the software industry and  
15 you didn't mention, sir, that for 18 years you were employed  
16 by a law firm; isn't that right?

17 A. I was not employed by a law firm, but I was a  
18 consultant to a law firm.

19 Q. You were the technology adviser to a very large law  
20 firm called Morrison & Foerster which is headquartered in  
21 San Francisco, correct?

22 A. That is correct, yes.

23 Q. And many of Morrison & Foerster's clients at the time  
24 you were there had matters that were adverse to the  
25 Microsoft Corporation; is that correct?

1 A. I'm not sure.

2 Q. You don't know one way or the other?

3 A. That is what I said, yes.

4 Q. Now, I would like to return to a topic that we were  
5 discussing yesterday afternoon before we broke. In terms of  
6 the namespace extension APIs, do you agree with me that at  
7 no time were those APIs implemented on the Apple Macintosh?

8 A. That is correct.

9 Q. And at no time were the namespace extension APIs  
10 implemented on any variant of the operating system called  
11 Unix?

12 A. That is correct.

13 Q. And at no time were the namespace extension APIs  
14 implemented on IBM OS2?

15 A. That is correct.

16 Q. And at not time were the namespace extension APIs  
17 implemented on any variant of the operating system called  
18 Linux?

19 A. That is correct.

20 Excuse me. I am not sure.

21 Q. As you sit here today, you can't tell me one way or the  
22 other whether the namespace extension APIs were ever  
23 implemented on a variant of Linux?

24 A. That is correct. The Blind Project which implements  
25 many of the Windows APIs may have undertaken to implement

1 the namespace APIs on Linux, but I don't know whether they  
2 have or not. It is a possibility, but I don't know.

3 Q. Okay. At no time, sir, were the namespace extension  
4 APIs implemented on the operating system called NeXT?

5 A. That is correct.

6 Q. And at no time were the namespace extension APIs  
7 implemented on Digital VMS?

8 A. That is correct.

9 Q. Now, you're familiar, are you not, Mr. Alepin, with an  
10 application called CorelDRAW?

11 A. Yes, I am.

12 Q. And that is a product which is a personal productivity  
13 application.

14 Is that not right, sir?

15 A. It is in the category of that personal productivity  
16 application, although more specialized.

17 Q. And do you think that CorelDRAW is a full featured  
18 personal productivity application?

19 A. I guess it depends on what people understand by full  
20 featured personal productivity application, but I would  
21 think it would be one.

22 Q. I would like to put up on the screen demonstrative  
23 Exhibit 103.

24 Mr. Alepin, I hope the screen is visible to you, but  
25 I'm going to give you one just in case.

1 A. Thank you.

2 THE COURT: You're getting a little closer to the  
3 books that I can read.

4 BY MR. HOLLEY

5 Q. CorelDRAW 6, version 6 was designed to run on Windows  
6 95, correct?

7 A. It would appear to be that.

8 Q. And I'll represent to you, and maybe you know -- are  
9 you aware of the fact that CorelDRAW 6 was released to the  
10 market the very same day that Microsoft released Windows 95?

11 A. I was not aware of that, but it is entirely possible.

12 Q. And CorelDRAW 6 was such a popular personal  
13 productivity application that there is a even a dummies book  
14 about how to use it.

15 Is that right, sir?

16 A. I don't think it is a broadly used application, but I  
17 think it is complicated enough that a manual for dummies is  
18 necessary.

19 Q. Okay. Now, I would like to show you demonstrative  
20 Exhibit 101.

21 Now, you're aware, Mr. Alepin, that there are certain  
22 findings of fact from an earlier lawsuit involving Microsoft  
23 that have been read, at least part of them have been read so  
24 far to the jury.

25 Is that right, sir?

1 A. I'm aware that there are findings of fact in the  
2 government case against Microsoft, but I am not sure what  
3 their status is in this proceeding.

4 Q. And you're aware that one of those findings of fact is  
5 this one, number 28.

6 Is that right, sir?

7 A. I'll read it and then I will see if I remember it.

8 Yes, I see that.

9 Q. Now, I'll just represent to you that when this  
10 particular finding of fact was read to the jury a few weeks  
11 ago, the Court instructed the jury that the word currently  
12 in the last sentence meant 1999. So with that  
13 representation can you tell me whether CorelDRAW is a full  
14 featured personal productivity application as used in this  
15 finding of fact?

16 A. I'm sorry. I missed the year that you were saying.

17 Q. 1999, sir.

18 A. And the question was can I tell you as of 1999 whether  
19 CorelDRAW was a full featured --

20 Q. Personal productivity application yes, sir.

21 A. That is the case, yes. Yep.

22 Q. Now, let's go back to slide number 7 from yesterday.

23 MR. HOLLEY: I'm not sure whose system that is on,  
24 but if we can --

25 THE COURT: I think it is over there.

1 MR. HOLLEY: If the Novell folks would be kind  
2 enough to put slide number 7 up, that would be beautiful.

3 Thank you very much.

4 BY MR. HOLLEY

5 Q. Now, let's go back to make sure that we are all on the  
6 same page about this.

7 At any time between 1994 and 1999 was CorelDRAW able to  
8 run on Netscape Navigator APIs excluding any Sun APIs?

9 A. I don't believe so.

10 Q. Okay. At any time between 1994 and 1999 was CorelDRAW  
11 able to run on the APIs exposed by the combination of  
12 Netscape Navigator, the Sun Java Virtual Machine, the Sun  
13 Scripting Technology and the Sun Class Libraries, Java Class  
14 Libraries?

15 A. Can you explain that a little bit more, please, what  
16 you mean be run?

17 Q. Sure. And I will go back to what finding of fact  
18 number 28 says. It says currently no middleware product  
19 exposes enough APIs to allow independent software vendors  
20 profitably to write full featured personal productivity  
21 applications that rely solely on those APIs.

22 My question to you, sir, is between 1994 and 1999 could  
23 CorelDRAW run on APIs, solely on the APIs exposed by  
24 Navigator and the Sun Java technology?

25 A. Well, I think the answer is it is possible.

1 Q. Did it?

2 A. It did not, but I thought your question was could it.

3 Q. Well, this product, CorelDRAW 6, was written to run on  
4 Windows 95.

5 Right, sir?

6 A. Right.

7 Q. And so unless it was rewritten to run on a different  
8 API set it wouldn't run.

9 Correct, sir?

10 A. That is correct, yes.

11 Q. And you're not aware of any full featured personal  
12 productivity application that was written to run only on  
13 APIs exposed by Navigator plus the Sun Java technology?

14 A. Well, I think we talked about that yesterday, the  
15 effort that they had made -- the Corel folks had made to get  
16 WordPerfect to run on that platform.

17 Q. And --

18 A. It hadn't been successful, but this is a different  
19 question I think from the one you were asking about whether  
20 there was API sufficiency as opposed to whether the platform  
21 would produce satisfactory results. That is what we talked  
22 about yesterday, whether it was too slow or too buggy. I  
23 think there were a few issues that we talked about  
24 yesterday, but API coverage was not one that we used  
25 yesterday.

1 Q. Well, let's go back to what finding of fact 28 says.  
2 It says currently no middleware product exposes enough APIs  
3 to allow independent software vendors profitably to write  
4 full featured personal productivity applications that rely  
5 solely on those APIs. And there is a concept in there, is  
6 there not, of profitability which implies success?

7 A. I don't know how profitably is applied in there. There  
8 is -- I think I agreed with you yesterday as to the  
9 performance capabilities or lack of performance capabilities  
10 in the Java Virtual Machine in the early days, but I think  
11 we were just talking about whether there were enough APIs  
12 that could write the applications to run on that platform.  
13 That is what I understood your questions to be.

14 Q. Well, let me ask a different question then.

15 Are you aware of any ISV that wrote a full featured  
16 personal productivity application that ran solely on APIs  
17 exposed by Netscape and Sun's Java technology that was a  
18 commercial success?

19 A. I can't think of one during that period.

20 Q. Now, looking at Novell technologies, could CorelDRAW  
21 between 1994 and 1999 have run on the APIs exposed by  
22 WordPerfect and no other APIs?

23 A. I don't believe so.

24 Q. Could CorelDRAW have between 1994 and 1999 run solely  
25 on the APIs exposed by what you describe as PerfectFit

1 shared code technology, just those APIs?

2 A. No, I don't believe so.

3 Q. Now, you testified yesterday about something called  
4 appware.

5 Is that right, sir?

6 A. Yes, briefly.

7 Q. Do you recall being asked at your deposition in this  
8 case about appware?

9 A. Vaguely.

10 Q. You told me in your deposition that you couldn't think  
11 of a single product that had ever been written to run on  
12 appware APIs.

13 Do you remember that, sir?

14 A. That is correct. Vaguely I remember that.

15 Q. And you don't --

16 A. I don't remember what the qualification was for the  
17 type of program, but I remember having a discussion about  
18 whether there were many programs available using appware.

19 Q. And as you sit here today it is not your testimony that  
20 a full featured personal productivity application like Corel  
21 6, CorelDRAW 6 could run on the APIs exposed by appware and  
22 no other APIs?

23 A. I don't believe that it would be possible, but I am not  
24 sure.

25 Q. Now, in terms of PerfectOffice, which is the last

1 product listed here, you're not aware of any full featured  
2 personal productivity application between 1994 and 1999 that  
3 could run solely on APIs exposed by PerfectOffice, correct?

4 A. I am not aware of anything like that.

5 Q. Now, there is a reference here on slide seven to  
6 something called OpenDoc. OpenDoc was an alternative to a  
7 Microsoft technology called OLE.

8 Is that right, sir?

9 A. Yes, that is what I described yesterday.

10 Q. And because there are all these acronyms that are very  
11 hard for people to remember, OLE, O-L-E, stands for  
12 objection linking and embedding.

13 Is that right, sir?

14 A. Yes, it does.

15 Q. And the technology, as you said yesterday, is a  
16 component interaction technology. So, for example, someone  
17 could use OLE to cut a chart from an Excel spreadsheet and  
18 paste it into a Word document?

19 A. And more. And more. It is not just cut and paste.  
20 Cut and paste and edit in place.

21 Q. Now, OpenDoc, the technology referred to on slide  
22 seven, was a specification promoted by Microsoft's  
23 competitors, but it was never incorporated into any shipping  
24 product; is that not right?

25 A. That is not correct.

1 Q. Well, do you recall me asking you in your deposition  
2 whether you could name a single product that had ever  
3 incorporated OpenDoc technology?

4 A. I remember being asked that question, yes.

5 Q. Right. And do you recall telling me that you could  
6 only think of one, and you couldn't remember the name?

7 A. I can now. I know now of three and I can't remember  
8 the names.

9 Q. Okay. At least you're consistent on that part. Okay.

10 In 1994 there were thousands and thousands and  
11 thousands of software products that relied on Microsoft OLE  
12 technology, correct?

13 A. That is correct.

14 Q. Now, when people are developing software there is a  
15 concept called mission creep that you're familiar with,  
16 right?

17 A. There is feature creep and mission creep, yes, two of  
18 them.

19 Q. So we have two creeps. Mission creep occurs when  
20 software developers add features to a product as they are  
21 working on the product; is that right?

22 A. That is correct. They overreach.

23 Q. And sometimes those software developers do that without  
24 the knowledge of the people who are managing them; isn't  
25 that right?

1 A. It depends on the management team and the development  
2 process, but if it is undisciplined or improperly managed  
3 then, in fact, you do get mission creep.

4 Q. And you have seen that in your career, sir, where  
5 without the knowledge of more senior management, software  
6 developers start adding features to products that they think  
7 are cool?

8 A. In the past I have seen it, yes.

9 Q. And sometimes it is necessary as the project moves  
10 along to trim some of those features that the software  
11 developers have decided to include in the product?

12 A. Well, I don't want us to get confused here by this.  
13 Mission creep usually happens in the plumbing of the  
14 program, so people on the development team think, well,  
15 gosh, it would be nice to have a more efficient way of  
16 exchanging information underneath the covers. Mission creep  
17 does not occur whereby, or at least it is not what I  
18 understood to be mission creep, where the features we're  
19 going to tell the customers about start expanding.

20 Q. So your testimony is that mission creep never involves  
21 the addition of features visible to end user customers?

22 A. Well, never is a tough word, a tough standard to meet  
23 here. I don't know whether never is the case, but what I  
24 usually use the term mission creep to mean is when  
25 developers start doing things inside the plumbing of the

1 program that do not add anything to the value of the product  
2 as seen by the customer.

3 Q. But sometimes the development team looks around for  
4 something else to add to the product, and they keep adding  
5 incremental features and functions.

6 Is that not right sir?

7 A. That is feature.

8 Q. That is feature. Okay. So mission creep is when  
9 people try to improve the internal operation of the product,  
10 and feature creep is when they keep adding more features to  
11 the product?

12 A. That is right. We're going to build the best word  
13 processor, and then internally they say we're going to build  
14 the best word processor, and we're going to have some super  
15 fancy memory management scheme, and then people say we are  
16 not paying you for super fancy memory management, we're  
17 paying you for a good word processor.

18 Q. And it is very important in a software development  
19 project for management to have hands-on control to make sure  
20 that the software developers don't engage in mission creep  
21 and feature creep.

22 Is that right, sir?

23 A. That is right. Oftentimes you organize so that you  
24 have a development manager and a program manager. The  
25 program manager is responsible for making sure that you are

1 going to meet your dates and the product is going to do what  
2 you have agreed to do, what you internally signed up to do,  
3 so you kind of structure the organization to make sure that  
4 there is a check on the development team.

5 Q. Now, in developing a complicated software product there  
6 are numerous constraints that these program managers and  
7 project managers that you have just described need to take  
8 into account; isn't that right?

9 A. I'm sorry. There was a noise over the last part of  
10 your sentence.

11 Q. Sorry. I will repeat my question.

12 So in managing a complex software development project,  
13 these program management and project management people that  
14 you just described need to take into account various  
15 constraints; isn't that right?

16 A. Absolutely. The development of any product, software  
17 or hardware, is one of balancing constraints. Yes, you have  
18 to live within the constraints.

19 Q. And among the constraints that need to be balanced in a  
20 complex software project are the time deadlines for  
21 releasing the product. That is one, isn't it?

22 A. That is one, although I think history tells us that  
23 that is the most elastic of the constraints under which a  
24 software development project operates, because software is  
25 sometimes -- looking at Microsoft's products, for example,

1 they tend to be late and they don't meet their deadlines,  
2 their announced deadlines, so there is the ability maybe to  
3 push out on a deadline.

4 Q. In fact, that is epidemic in the software industry  
5 across the board that people are overly optimistic and  
6 frequently miss their release dates.

7 Isn't that right, sir?

8 A. I think that there are some organizations that do that,  
9 yes.

10 Q. Now, another constraint that the management of a  
11 complex software product needs to bear in mind is what  
12 manpower they have available to the project; is that right?

13 A. Yes. Manpower is a constraint that effects what you  
14 can do and when you can do it.

15 Q. And another constraint is the skill sets of the people  
16 who have been assigned to work on the product; is that  
17 right?

18 A. Yes. Of course, skill and ability are inputs to the  
19 development process.

20 Q. And familiarity with the programming language that the  
21 software product is written in is something that can slow  
22 down -- or lack of familiarity, I guess I should say, with  
23 the programming language that a product is being written in  
24 can slow down the development of the project; isn't that  
25 right?

1 A. There is a learning curve for new technologies that is  
2 the same for development languages as it is for new platform  
3 technologies. Software developers are continuously taking  
4 in new technologies and internalizing them and developing to  
5 them and with them. The introduction of a new operating  
6 system, for example, is one where there are new APIs and new  
7 features and new components that have to be studied and  
8 understood and exploited.

9 Q. If people are writing in an object oriented programming  
10 language like C++, and they don't know much about C++, that  
11 could slow them down, correct?

12 A. It depends on -- there are other object oriented  
13 program languages, object oriented designs inseparable from  
14 C++, and the C programming language is a very close relative  
15 of C++, so there are three different things that can make  
16 the use of C++ nothing more than changing one's shirt.

17 Q. But if people are taking classes, if the developers  
18 working on a project that is being written in C++ are taking  
19 classes to enable them to understand how to write in C++,  
20 that could be a constraint that slows down the project,  
21 right?

22 A. It depends on what type of C++ programming class you're  
23 taking. If you're taking one from the local community  
24 college, the assistant professor's introduction to  
25 programming, then there might be some issues.

1 But if you're taking a class in advanced concepts or  
2 something like that, then it may be just some additional  
3 optimization that you're learning or something else that  
4 you're making sure that you have covered in your use, your  
5 particular use of the programming language. It is not  
6 clear -- it is not clear just because you're taking a course  
7 that you're suffering from a constraint.

8 Q. Well, what if people on the team believe that they had  
9 a lack of C++ experience and, therefore, were taking classes  
10 to learn about the programming language? In that situation  
11 you would agree with me, would you not, sir, that that lack  
12 of C++ experience would be a constraint?

13 A. Again, it depends on where or in what way they felt  
14 they were missing something. It is not -- I don't know. I  
15 mean, if you have some specific thing that you're thinking  
16 of, but if I needed a refresher course in C++ to help me,  
17 that would be something different.

18 Q. Well, let's look at the documents and see if that will  
19 help us at all.

20 A. Okay.

21 Q. I'm showing you Defendant's Exhibit 108 which is in  
22 evidence in the case. It is entitled PerfectFit Extended  
23 Services Group status report for May 1995. Now, May of 1995  
24 is three months before the release of Windows 95, correct?

25 A. Yes. August 25th is the release date.

1 Q. Now, if you'll turn -- I'm sorry, it does not have  
2 internal pages, but it does have Bates numbers at the  
3 bottom. If you look at the one that is NOV-V01904058, and  
4 just tell me, sir, when you are there.

5 A. I'm there.

6 Q. Down in the heading at the bottom, problems  
7 encountered, it says our lack of experience in the area of  
8 OOAD, and that means object oriented application  
9 development, correct?

10 A. I'm not sure. I might have -- I might have thought it  
11 was architectural design, but it could be application  
12 development.

13 Q. I'm happy to accept your interpretation, so let's say  
14 that it means object oriented architectural design. So in  
15 May of 1995, three months before the release of Windows 95,  
16 the PerfectFit team is saying that it has a lack of  
17 experience in the area of object oriented architectural  
18 design, correct?

19 MR. SCHMIDTLEIN: Objection, Your Honor, it  
20 mischaracterizes the document. It says PerfectFit Extended  
21 Services Group not the PerfectFit team.

22 MR. HOLLEY: Your Honor, I believe that when  
23 either Mr. Harrall or Mr. Richardson was asked whether this  
24 was the PerfectFit team he said yes, but obviously the  
25 record is what it was.

1 THE COURT: Well, you can ask your question.  
2 Actually you have got a transcript so you can establish it,  
3 but the jury's recollection finally will control.

4 MR. HOLLEY: Obviously the jury remembers what  
5 they do, and I don't mean to suggest otherwise.

6 BY MR. HOLLEY

7 Q. My question, Mr. Alepin, is in May of 1995, three  
8 months before the release of Windows 95, among the problems  
9 encountered is a lack of experience in the area of object  
10 oriented architectural design?

11 A. Yes. I think I prefer your application design, now  
12 that I have read the document.

13 Q. Okay.

14 A. I am sorry.

15 Q. That is all right.

16 A. I didn't have enough time to read the document.

17 Q. All right. Let's say that the lack of experience is in  
18 object oriented application development.

19 A. Uh-huh.

20 Q. Now, that lack of experience could slow down the  
21 development of a project that is being written in an object  
22 oriented programming language like C++, correct?

23 A. Well, a lot of consideration is in there. It depends  
24 if you have built in enough time for the team to learn that  
25 then this is simply a reflection of a problem that they are

1 having within the allocated time. It is not necessarily  
2 that they are slowing -- that they are slowing down against  
3 their deadlines, it is just that at this point in time they  
4 may have learned that they don't have specific skills that  
5 they needed for -- they have realized that they need some  
6 specific skills.

7 Q. Well, if your hope is to release a product in August of  
8 1995, isn't it a little late in the day to be learning how  
9 to write the product in May of 1995?

10 A. Well, I mean, if it is -- oftentimes people write in  
11 these reports -- I don't know what the purpose is of a  
12 status report, but you're supposed to write what you learned  
13 and what you experienced during a particular period, and the  
14 lesson learned was that we learned that we didn't have  
15 certain skills and that slowed us down and cost us some  
16 time. So in the future if you're planning a project like  
17 that, please make sure that you do this. I mean, it looks  
18 like it is a post sort of reflection on the past experience,  
19 not necessarily a forward looking thing.

20 Q. So the lesson learned is before you start writing in  
21 French you better know how to write in French, right?

22 A. That, or not being well schooled in French may slow you  
23 down, yes.

24 Q. Now, if your release date is important to you for your  
25 software product, is it sometimes necessary to throw things

1 over the side in order to get the product out the door in a  
2 timely way, correct?

3 A. Well, it is a very fact specific situation.

4 Q. But you are aware, sir, are you not, of situations in  
5 which in order to get a product out the door in a timely way  
6 it was necessary to throw things over the side?

7 A. As I said, in some cases you may push the deadline  
8 back, and in some cases it may be possible to add more folks  
9 to the plan. In some cases it may be that you drop  
10 something that is a feature that -- it depends very much on  
11 the facts.

12 Q. But one of the things that you can do, if you think  
13 that it is critical to get your product out the door at a  
14 particular time, is to take some of the features and throw  
15 them over the side?

16 A. Again, it is fact dependent, but it may be possible.  
17 If you promised features --

18 THE COURT: Could you speak in the mike?

19 THE WITNESS: If you promise features, or if there  
20 are certain things that are essential to the product, then  
21 you can't throw them over the side.

22 BY MR. HOLLEY

23 Q. I appreciate that clarification, but I just want to  
24 make sure that you and I are on the same page.

25 If you believe it is critical that you get your product

1 out the door at a particular time, one of the things that  
2 you can do is to take some of the features and throw them  
3 over the side?

4 MR. SCHMIDTLEIN: Objection, asked and answered.

5 THE COURT: It was answered frankly in a way that  
6 is inconsistent with some of the evidence, so you can ask  
7 again.

8 Assume that you have got a deadline and assume  
9 that you can't add people to the project.

10 MR. SCHMIDTLEIN: He testified that it is  
11 depending on the fact.

12 THE COURT: Absolutely, but the evidence he is  
13 that people couldn't be added to the project according to  
14 Mr. Harrall and the others, and that the whole logic of the  
15 case is that there is an inelastic deadline.

16 THE WITNESS: If it is core features that you're  
17 throwing out -- if your product is defined -- let's take an  
18 example. If you say that our product is going to be a  
19 Windows 95 word processor and you throw off the ability to  
20 run on Windows 95, then you don't have a product. Some  
21 features you can disregard, and some features it may be  
22 possible to discard in order to achieve a target deadline,  
23 but some features are essential and define the product and  
24 they are the essence of what you're building the product  
25 for.

1 BY MR. HOLLEY

2 Q. And if you feel that your deadline is critical, and  
3 that the things that you might delete are in your words  
4 core, one of the things that management can do is add some  
5 skilled, experienced software developers to the project and  
6 make it move faster.

7 Is that not right, sir?

8 A. Well, I think there is a lot more knowledge and  
9 literature on the optimum size of programming teams and the  
10 problems associated with adding people to projects both  
11 beyond the optimum size and the cost of acculturation and  
12 education and the delays attendant in bringing new people  
13 into a project you are already on. The bad news is  
14 generally that it slows the delivery of a project, not that  
15 it accelerates it.

16 Q. Mr. Alepin, are you now changing the answer, sir, that  
17 you gave me two minutes ago? You said that someone had  
18 three choices. They could either extend the deadline, if  
19 that was feasible, they could add more people to the  
20 project, or they could delete features.

21 That was your testimony, sir.

22 A. That is correct.

23 Q. And you're not backing away from that, are you, sir?

24 A. No, I am not.

25 Q. Okay. Now, Novell could have dropped some of the

1 features that it was trying to include in the PerfectFit  
2 file open dialogue without losing credibility in the  
3 marketplace?

4 MR. SCHMIDTLEIN: Objection.

5 Can I be heard, Your Honor?

6 THE COURT: You may.

7 (WHEREUPON, a bench conference was begun.)

8 MR. SCHMIDTLEIN: This is well beyond the scope of  
9 the direct testimony of this witness. This witness  
10 testified about middleware products, he testified about  
11 technical justification and he testified about the mapping  
12 share. He did not testify about the development schedule  
13 and the development issues surrounding the development of  
14 WordPerfect and development of PerfectOffice. This is  
15 beyond the scope.

16 THE COURT: No. I understand.

17 MR. SCHMIDTLEIN: Your Honor, respectfully, I make  
18 an objection, and I understand you may overrule my  
19 objection, but your commentary --

20 THE COURT: I'm sorry, but the logic of this case  
21 is that there was an inelastic deadline and you talked about  
22 an inelastic deadline in those terms, and I know that Mr.  
23 Frankenberg said that you could throw resources at it.  
24 Harrall and the other guy said that you couldn't throw  
25 resources at it, so watch out when you object.

1 Mr. Holley, how is this not beyond the scope?

2 MR. HOLLEY: Because he testified that their  
3 inability to use the namespace extensions is what delayed  
4 the product, and that was the entire second part of his  
5 testimony. I'm just exploring that and trying to point out  
6 that there were other reasons why they were late.

7 MR. SCHMIDTLEIN: I don't think he testified about  
8 the timing at all. He testified about the technical  
9 justifications.

10 MR. HOLLEY: Well, implicit in that is the notion  
11 that the namespace extension APIs are what delayed them.  
12 That is their case.

13 MR. SCHMIDTLEIN: Yeah, and the testimony --

14 MR. HOLLEY: Your Honor, I will move on.

15 THE COURT: I think there is a --

16 MR. HOLLEY: Thank you, Your Honor.

17 (WHEREUPON, the bench conference was concluded.)

18 BY MR. HOLLEY

19 Q. You testified yesterday, sir, about beta testing.

20 Do you recall that?

21 A. Yes.

22 Q. Now, a beta program is when a software development  
23 company feels that software is reasonably stable and close  
24 enough to let a larger community of users work with it, but  
25 they use it at their own risk.

1 Is that not right, sir?

2 A. Yes, they use it at their own risk. They shouldn't run  
3 their business critical applications on this software and  
4 expect what the results will be, correct.

5 Q. Because it is not finished yet, right, sir?

6 A. Because it may not work completely.

7 Q. And it may change; isn't that right?

8 A. The expectation is that the software is being worked  
9 on, that is correct.

10 Q. Now, one of the reasons that a PC operating system like  
11 Windows 95 that is being beta tested might change, is if the  
12 people who are testing it report that it has a problem; is  
13 that right?

14 A. Beta tester experience is input to the development  
15 process and used to identify problems which need fixing,  
16 issues that need attending to by the development team. That  
17 is part of the beta process, yes.

18 Q. So the answer to my question is, yes, one of the  
19 reasons why a PC operating system might change is if beta  
20 testers report that it has bugs or malfunctions?

21 A. I think that is fair, yes.

22 Q. And that would include if an API exposed in the beta  
23 version of an operating system could cause the operating  
24 system to crash, correct?

25 A. I think that is a little -- I think that if the API was

1 not properly implemented and it did not conform to  
2 specifications, and instead of producing X it produced the  
3 blue screen, then there would be a need to fix the  
4 implementation.

5 Q. If it couldn't be fixed, the implementation could not  
6 be fixed in time to get the operating system released on the  
7 schedule that the operating system vendor thought was  
8 important, one choice would be to remove the API from the  
9 system, correct?

10 A. That is a pretty big -- there are a lot of bridges that  
11 would need to be crossed before you would exercise that  
12 option if, indeed, you would exercise that option.

13 Q. But it is an option, sir. If you cannot change the  
14 implementation of the API and still yet your new operating  
15 system out in the time that you think is important to  
16 release it, one option is to take out this misbehaving API,  
17 correct?

18 A. Well, and you believe that the particular item that  
19 you're analyzing is in fact important enough to warrant that  
20 kind of drastic action, so that the behavior you're  
21 observing is sufficiently severe or the circumstances  
22 surrounding it are unique enough and there are no other  
23 remedies, then there is always the nuclear option.

24 Q. Now, you have been a beta tester yourself.

25 Is that right, sir?

1 A. I have the scars to show that, yes.

2 Q. And you say you have the scars because you have worked  
3 with products under development that were in many respects  
4 incomplete and did not perform the way that you thought they  
5 should.

6 Is that right, sir?

7 A. That is correct. One of the problems is that beta  
8 software can lull you into a false sense of working  
9 properly, and then all of a sudden surprise you.

10 Q. Surprise you by malfunctioning in a way you were not  
11 expecting, right?

12 A. Yes. If you go into a corner that you had not been  
13 before and it does not work properly, it sometimes  
14 disappoints you.

15 Q. We talked yesterday about the number of APIs exposed by  
16 Windows 95, and I don't want to put words in your mouth, but  
17 you agreed with me that they number in the thousands.

18 Is that right, sir?

19 A. Yes.

20 Q. And you're familiar, and I believe you may have  
21 testified about it yesterday, with a Microsoft program  
22 called the Microsoft Developer Network, which provides  
23 information to software developers about those thousands of  
24 APIs, correct?

25 A. That is correct. I am a card carrying, dues paying

1 member for 20 years almost.

2 Q. It is fair to say that there is so much information  
3 provided in MSDM releases, Microsoft Developer Network  
4 Releases, that it is difficult to read all of it?

5 A. Well, it is not like War and Peace. You don't start at  
6 page 1 and go to the end. You read it by topic of interest.  
7 So you -- it is more like a recipe book or an encyclopedia.  
8 It is not a romance novel.

9 Q. Depending on your personal taste, but --

10 A. In spite of the appearance that some of my developer  
11 colleagues may have given you.

12 Q. But in scale it is more like Encyclopedia Britannica.  
13 It is a huge amount of information?

14 A. O.C.D., yes.

15 Q. There are books published by Microsoft Press and other  
16 third-party publishers which do the same sort of thing,  
17 right? They explain to software developers how to call the  
18 APIs exposed by Windows?

19 A. Microsoft Press publishes a significant number of books  
20 like that. They publish some magazines to third parties,  
21 and they support the activities of third party publishers  
22 and authors to develop books that also explain Microsoft  
23 APIs and programming systems.

24 Q. You told me in your deposition that you yourself had  
25 some many of those books that your bookshelves were sagging

1 under their weight; is that correct?

2 A. They have sagged.

3 Q. But now they are --

4 A. That is correct.

5 Q. Now, in addition to having these published exposed  
6 APIs, there are also thousands of internal interfaces inside  
7 of an operating system like Windows 95 that are not  
8 documented; is that right?

9 A. Well, here we have to say not disclosed, not publicly  
10 disclosed as opposed to documented. My belief is that there  
11 is documentation. It is internal to Microsoft. It is not  
12 published, to be made available to the world at large.

13 Q. And for very good reasons, right?

14 A. I think that that is correct. There is an internal --  
15 there are internal interfaces and there are external  
16 interfaces and there are reasons for the separation.

17 Q. And one of the reasons why an operating system vendor  
18 like Microsoft may choose not to disclose one of these  
19 internal interfaces, is because it wants to preserve its  
20 ability to change that interface in the future?

21 A. That is correct. I think a reason for selecting  
22 interfaces that you keep and that you have disclosed is  
23 because there is a need for them in the user community, and  
24 that the users need to be able to do certain functions, and  
25 so you publish interfaces to support those activities.

1 There are some interfaces which you keep internal, because  
2 among the reasons that you might keep them internal is that  
3 you do not wish customers to attach to them, lest you be  
4 obligated to support them in the future.

5 Q. Now, even if you don't want to be tied to maintaining  
6 an interface into the future, you may be stuck with it as a  
7 practical matter once you have told people what it is, once  
8 you have told software developers what it is; isn't that  
9 right?

10 A. There are a couple of circumstances. One is as you  
11 have described that you're stuck with it once you have told  
12 customers. The other is that customers -- from the early  
13 days customers have reached into the operating system and  
14 tied their application programs to the operating systems in  
15 ways that the vendor did not entirely intend but for which  
16 there was no alternative to being able to provide a fully  
17 functioning program on the platform.

18 Lotus One Two Three in the early days of DOS is an  
19 example of that. They significantly connected their  
20 software to unexposed APIs in the DOS operating system in  
21 order to provide customers of One Two Three with that  
22 function of the program.

23 Q. And these undocumented APIs that people use, when they  
24 discover them as you have said, they to that without any  
25 formal documentation from Microsoft?

1 A. I'm referring to a specific period in time when it was  
2 possible to know those things. As the system becomes more  
3 complex it becomes less possible to identify interfaces and  
4 to be able to understand them with sufficient certainty and  
5 confidence that you can make use of them other than for  
6 experimental purposes.

7 Q. Well, you have talked to a man named Andrew Schulman in  
8 connection with your work in this case, right?

9 A. And at other times.

10 Q. You are a collaborator with Mr. Schulman on a variety  
11 of matters, right?

12 A. That sounds a little -- when you say it, Mr. Holley, it  
13 sounds a little dangerous, but --

14 Q. You're aware, are you not, sir, that even in the period  
15 of 1995, 1996, Mr. Schulman wrote an entire book which is  
16 about an inch and a half thick about undocumented APIs in  
17 Windows 95?

18 A. The entire book is not about undocumented APIs. There  
19 is only a portion of it that is, and it is much smaller than  
20 undocumented DOS and undocumented Windows. In fact, that  
21 was a vanishing publication niche in the undocumented API  
22 book category. The demand for knowledge on undocumented  
23 APIs diminished once -- not once, as Windows and Windows 95  
24 became a more regularized operating system with the standard  
25 development process and a standard -- and a full compliment

1 of programming interfaces and services for programmers to  
2 use. So before you may have needed Mr. Schulman's  
3 undocumented DOS manual, but by the time Windows 95 came  
4 around it was interesting but not very useful and certainly  
5 not something that you would use to develop software.

6 Q. I think you said earlier that software developers could  
7 use undocumented APIs if they saw it as a necessity. Did I  
8 understand that correctly?

9 A. That was at a period in time when the world was simple,  
10 and you could see -- when the world was simpler -- it was  
11 possible to understand the full consequence of what an API  
12 did. By the time Windows 95 comes around it is virtually  
13 impossible to understand all of the side effects of anything  
14 but the simplest of APIs, and you would only be able to  
15 understand that if the API had its origins in Windows 3.1  
16 or, perish the thought, in DOS, where you had enough of the  
17 bearings that you could bring forward from the internal  
18 design of those systems.

19 Once you are in Windows 95 it is a practical  
20 impossibility to understand all of the side affects of APIs  
21 of many of --

22 Q. Let's go back to this point that you made earlier,  
23 which is that once the documentation has been released to  
24 the developer community about an API, the horse is out of  
25 the barn, right? It is very difficult to stop people from

1 using APIs that you have told them about; isn't that right?

2 A. This is --

3 THE COURT: Let me understand what you're talking  
4 about. You're talking about undocumented APIs that you told  
5 people about?

6 MR. HOLLEY: That is a fair point. I was making a  
7 transition, Your Honor.

8 BY MR. HOLLEY

9 Q. We're going back to the question of even if you wish  
10 you hadn't done it, if you tell people about an API exposed  
11 by the system, can you stop them from using it once they  
12 know what it is?

13 A. Well, let's see. That is a complicated question, even  
14 beyond the clarification. You can stop people from using an  
15 API by breaking it, so you can make it not work, you can  
16 remove it, you can tell people not to use it, so you have a  
17 number of mechanisms that you can use to communicate to the  
18 developer community on the issue of interfaces.

19 So, as I said, you can break it so it won't work. If a  
20 developer tries to write a program and calls that API the  
21 API says, sorry, out of order. Or you can write and try and  
22 use the API and the API is not found or you get a  
23 compilation error in the program. The developer can  
24 instruct you not to use these APIs. We will not support  
25 them. We have no intention of supporting them and they may

1 break in the future, so if they don't say out of order now  
2 they will say that tomorrow.

3 Q. Let's talk about the specific case of the namespace  
4 extension APIs which were documented in the M-6 beta of  
5 Windows 95. In the case of those namespace extensions APIs,  
6 they were not removed from the system, were they, sir?

7 A. The programming means to use them were removed, so that  
8 when you wrote programs the programs would not compile  
9 properly. The implementing functionality for the APIs  
10 remained in place. That is a distinction here. Maybe I  
11 should make a better statement.

12 There is the API definition, and that is the way that  
13 the programmer is taught to write his program to say I want  
14 to use this API, and that mechanism was removed. The  
15 function of the code that would respond to that API, if the  
16 programmer could write a program to use that API, would  
17 still work.

18 Q. Well, actually, if you had the M-6 documentation you  
19 knew how to call the API, right?

20 A. Let me make sure that I understand what you're asking.  
21 You're asking if I had the M-7 beta now, and I used -- and I  
22 was writing a piece of software, I would go to M-6 beta and  
23 use the API definitions from the M-6 beta to run against the  
24 M-7 beta?

25 Q. Sure. Why not? The information was given to you, and

1 you just said the code stayed in the system, so the mere  
2 fact that somebody deleted that information from a beta does  
3 not mean that you can't call the API; isn't that right?

4 A. Well, I don't think that is -- there are a number of  
5 problems with that. Sorry. There are a number of problems  
6 with that.

7 First of all, the documentation that was delivered with  
8 M-6 was insufficient and was to be supplemented, so you did  
9 not have enough information to develop a program, a  
10 production quality program. You could experiment perhaps,  
11 but you could not develop a fully functioning program in  
12 which you had confidence would operate properly.

13 The second part of the problem was that you had been  
14 told that you should not use the APIs because they may be  
15 broken in the next version of Windows or in the next beta,  
16 and their disappearance in M-7 confirmed the information  
17 that you were told when the APIs were pulled, that they were  
18 gone.

19 I guess somebody might have engaged in some reverse  
20 engineering to determine just how far gone the APIs were,  
21 but the mechanisms to use them had been removed confirming  
22 the information that you had been told by Microsoft from  
23 your developer network contact folks and your development  
24 relations group of people. So it is hard to imagine why you  
25 would do that.

1           The third point is that the -- as you said, the  
2 software is changing between betas, naturally, as bugs are  
3 being found and corrected, and if you use the header files,  
4 the definition files from the earlier Windows beta to build  
5 a program that was going to run on the newer beta version of  
6 Windows, you might be introducing other bugs because of the  
7 changes that had happened between the M-6 and M-7 beta not  
8 related to those interfaces.

9           Q.   Well, actually you testified to the opposite yesterday,  
10 sir, did you not?  On slide 14 under the heading  
11 applications using the namespace extensions could crash the  
12 Windows 95 shell, the bullet point says that Microsoft  
13 re-documented later in 1996 without changing the namespace  
14 extension APIs.  So your testimony yesterday was that they  
15 were never changed?

16           THE COURT:  You can ask that question, but there  
17 is no contradiction.  That is a whole new question.

18           THE WITNESS:  No.  I am talking about what -- from  
19 a developer's perspective I am looking at the information  
20 that I have available to me, and the fact that they are  
21 republished, unchanged a year and how much was that -- 18  
22 months, 18 months later -- does not change the fact that  
23 they were removed and declared unavailable to me and  
24 evidently unavailable to me in the M-7 beta.

25           BY MR. HOLLEY

1 Q. Let's be very precise, sir. The APIs were never  
2 removed; isn't that right? They were never removed. The  
3 code stayed in the system and the interfaces were in the  
4 system and they could have been called if somebody wanted to  
5 do it?

6 A. The answer is no. That is just not correct. The  
7 implementations of the functionality described by the  
8 namespace remained in the system. That much is correct.

9 However, the means to request those APIs had been  
10 removed from the material that was provided to third party  
11 independent software vendors. I am sure that inside  
12 Microsoft there was a copy of the API definitions that  
13 Microsoft developers continued to use during the time that  
14 these APIs were removed from the material given to  
15 independent software vendors, but the means available to the  
16 programmers to request the -- iShellFolder, iShellView,  
17 iShellBrowser functionality and the -- DLG and  
18 iPersistFolder and -- were unavailable. If I wrote a  
19 program that contained those statements I would get a  
20 compilation error.

21 Q. Have you reviewed the trial testimony of Greg  
22 Richardson in this case two weeks ago?

23 A. I have not reviewed his direct testimony, no.

24 Q. Well, he was asked the following questions and gave the  
25 following answer at page 677 of the transcript. Question,

1 you're telling me that before October of 1994 when Novell  
2 learned that Microsoft was not committing to support the  
3 namespace extensions in the future, Novell had already  
4 written the code to implement all of these com interfaces?  
5 Answer, so my question is that Steve Giles, in working with  
6 the documentation from Microsoft, had written our own file  
7 dialogue that made use of the interfaces provided by  
8 Microsoft necessary to interact with the namespace  
9 extensions. Then the question was asked, we know that you  
10 said -- we know that you can use this documentation to write  
11 a file open browser that calls the Windows 95 Shell  
12 extension APIs, because Steve Giles, according to you, did  
13 it between June and October of 1994? Answer, so Steve made  
14 use not only of this documentation, but also extensive  
15 support. From my recollection of conversations with him, he  
16 indicated that he needed significant support from Premiere  
17 Support and through the Compuserve forum in order to  
18 complete the work that he did. Question, which he  
19 apparently got, right, because he did it? Answer, correct.

20 So the testimony in this case, which maybe you didn't  
21 know about until just now, is that Steve Giles from Novell  
22 used the documentation in the M-6 beta to write a file open  
23 dialogue that called the namespace extension APIs?

24 A. That is entirely consistent with what I have said.

25 Q. Your testimony, just so I have it clear, is that the

1 code that he wrote broke in the M-7 beta?

2 A. If he took his source code and recompiled it it would  
3 not compile. That is all -- if he found a bug or wished to  
4 change something in the source code that he had written to  
5 those APIs, and he handed it back to the Microsoft compiler,  
6 the Microsoft compiler would say, sorry, I don't know the  
7 name. I don't know what you mean by iShellFolder. I don't  
8 know what you mean by iShellBrowser. Error. No more  
9 compilation. Your source code does not work. Go fix it.

10 Q. Did you confirm the testimony that you just gave by  
11 looking at the source code for what Steve Giles wrote?

12 A. I did not. I can look at what -- I can look at what  
13 developers did by taking the shell arch from M-6 and the  
14 shell arch from M-7 using those interfaces and getting  
15 compilation.

16 Q. Can you answer the question that I asked you, which is  
17 did you confirm the testimony that you're giving now by  
18 trying to compile the source code that Steve Giles wrote,  
19 according to Mr. Richardson, between June of '94 and October  
20 of '94, and running it on the M-7 beta of Windows 95?

21 A. No, I did not.

22 Q. In fact, you have never seen any source code for any  
23 file open browser written by Steve Giles between June of  
24 1994 and October of 1994.

25 Isn't that right, sir?

1 A. That is correct. That was not part of the material  
2 that I reviewed.

3 Q. But in your experience in the software industry,  
4 sophisticated software companies like Novell keep the source  
5 code of their product in source code control systems,  
6 correct?

7 THE COURT: Hold on a second.

8 MR. SCHMIDTLEIN: Can we take a short break?

9 THE COURT: I'm sorry.

10 THE WITNESS: If you want to continue, and then  
11 stop after this topic.

12 MR. HOLLEY: I am happy to.

13 THE COURT: Thank you very much.

14 THE WITNESS: I'm sorry.

15 THE COURT: No.

16 THE WITNESS: The answer is that it is customary  
17 for software development companies in particular and  
18 corporations that have IT organizations generally to make  
19 use of source code control systems to maintain the source  
20 code -- versions of the source code that they have  
21 developed.

22 MR. HOLLEY: Thank you, sir.

23 THE COURT: Let's take a short break. I am ready  
24 as soon as everybody else is.

25 (Recess)