

1 THE COURT: Let's get the jury.

2 (Whereupon, the jury returned to the court
3 proceedings.)

4 THE COURT: Mr. Johnson?

5 MR. JOHNSON: Thank you, Your Honor.

6 Q. BY MR. JOHNSON: Mr. Harral, when we broke, we were
7 looking at Plaintiff's Exhibit 181, which was the computerease
8 about all of these APIs involving the NameSpace extensions.

9 Can you tell me, Mr. Harral, did this document
10 provide WordPerfect with full documentation regarding the
11 NameSpace extension functionality?

12 A. It would not.

13 Q. And how do you know that this document provided
14 only partial documentation for the NameSpace extension API?

15 A. As I mentioned before, you have what the machine
16 needs to know, which is this document. The computer can't
17 infer how I want to use things or what my --the intended
18 outcome is. So that's, you know, that's what we call
19 semantics of the process. It's the intent. And so the person
20 who's developing their software, they would need additional
21 documentation that would describe how these computer
22 definitions are meant to be used. There will be edge cases
23 where you could try and use them, and it may not behave in
24 ways that are predictable with the rest of the system. And so
25 those nuances or differences would be documented.

1 There would also be samples of how to use them, and
2 there would be -- and recommended ways in which they would
3 use, as well. And I'm speaking from documentation that we had
4 seen in the past, that I had seen in the past from both IBM
5 and Microsoft on programming interfaces for other systems and
6 party systems.

7 Q. Did you have any conversations with anyone at
8 Microsoft about providing the full documentation?

9 A. Yes, we did. Well, there was the meeting that we
10 had where we asked about having both this and the full
11 documentation. We also -- at the conference there was
12 discussed that the documentation would be forthcoming when we
13 received the M6 beta. And as a member of Premier Support, I
14 had opportunity to talk with representatives at Microsoft and
15 would have also asked what the update would be on getting the
16 information along with other issues that we would be asking
17 them about at the time.

18 Q. And based on those conversations, did you have any
19 understanding of when WordPerfect could expect to receive a
20 complete documentation?

21 A. The next beta would have been the time that we were
22 told that we could receive that.

23 Q. Let's focus in on the time period before you
24 received the documentation, Exhibit 181. Was the shared code
25 team doing anything in anticipation of receiving this

1 documentation?

2 A. Yes.

3 Q. And what were you doing?

4 A. We were -- because we had been tasked to move the
5 shared code as we were for any installation, we were going
6 over the documentation we had, and we were moving the shared
7 code in anticipation of WordPerfect and presentations of our
8 graphical product and word processing product to move over to
9 Windows 95. We would also be talking with the other groups
10 about the Quickfinder, the spell checker and thesaurus. We
11 would be working with all of those groups to find out what
12 their time frames were to be able to deliver things so that
13 shared code, we would know how much of shared code would be
14 there when the applications were moving.

15 Q. Would there be -- would there have been any work
16 going on prior to receiving this documentation with respect to
17 WordPerfect's file open dialog?

18 A. Well, yes. First of all, we were working from an
19 existing code base. And so we already had a Windows file open
20 dialog, even though we're not talking -- even though I'm not
21 talking about how it's presented, the fact of how to connect
22 to a network drive or how to preview a file, those are things
23 that we were already working on because we knew that those
24 components, those pieces would then be plugged into the
25 graphical framework of Windows 95 once we got ahold of that.

1 Q. Now, after you received this documentation
2 reflected in Plaintiff's Exhibit 181, can you describe
3 generally to the jury what the shared code team was able to
4 accomplish with it?

5 A. So we began a discussion with the other parts of
6 the company that would provide features so that we could, we
7 could then talk to them about details, about how they would
8 interact with the shell and try in an architectural role, and
9 we were having a discussion, how is your software going to
10 move forward given this description now? It also gave us some
11 of the detail that come, what are we going to have to provide
12 to the shell, as we have this discussion about -- we could see
13 that there were -- there were things, it's going to ask us
14 where you want, you know, how much space do you need to
15 display things? So there's this discussion of dealing with
16 it, how we can work with it.

17 At the same time, we began working on the pieces
18 that we contained inside the shared code with the file open
19 and file save as. We were moving to hook these up into the
20 shared code so that when people -- when the engines called the
21 shared code they were getting Windows 95 features, and it
22 would start to give the developers of the applications of the
23 engines an accurate feel of how the product was going to
24 behave in this new environment.

25 The other thing that we were then doing is we were

1 also having a discussion about, with the mail team, the
2 document management team about, and other groups what they
3 were going to provide as far as extensions of what they
4 thought they could provide.

5 Q. And what, if anything, did this documentation add
6 to that process that you're talking about?

7 A. It gave us the ability -- it gave us the ability to
8 actually not just talk about but see how it behaved. So we
9 were actually -- we were actually hooking in WordPerfect code
10 and having -- or shared code and having it -- we could see how
11 it behaved. So it wasn't just now -- we weren't just talking
12 about how we think it should behave once you learn something
13 about -- it's like if I want to learn about rock climbing, I
14 can read books on it. But once I tried it the first time I
15 have a whole set of questions because I am now smart enough to
16 ask stupid questions about it.

17 And so it's the same thing with the APIs. Now that
18 we could actually hook things in, we had, you know, a whole
19 new set of questions. We were continuing down -- we were
20 getting down to the details to be able to get us to the end to
21 deliver us.

22 Q. When you talk about hooking things in, are you
23 referring to hooking into the beta that have been provided by
24 Microsoft?

25 A. Yes.

1 Q. And for how long did you get in that process?

2 A. For the shared code or for everything?

3 Q. Shared code.

4 A. For shared code we were about 80 percent of the way
5 through -- well, in that process to what point?

6 Q. Let's talk up to October of 1994.

7 A. We were about 80 percent of the way through hooking
8 up the shared code pieces into the Windows 95 system.

9 Q. What, if anything, was holding you back from
10 completing the shared code portion of the development?

11 A. We -- we had a lot of information and experience
12 with the file system. We were needing more information on the
13 new pieces of Windows 95, the NameSpace that were provided we
14 needed. Traditionally WordPerfect would try to present the
15 network. Windows 95 had a way to present the network now, so
16 we needed to have details on how that was behaving and how we
17 could merge that with what people had already done or had --
18 or had expectation with the previous products. The recycle
19 bin. Mostly the NameSpaces were the ones that we needed.

20 Also even in the regular file system when somebody
21 says to copy something in the file open dialog box through the
22 context menu, so right click on an item, we -- or deleting,
23 there were things that we might keep track of, like the
24 Quickfinder might want to know that that file is gone and then
25 no longer need for us to tell you that it's not there when

1 it's not there.

2 So all of these things that we had in shared code
3 we had to evaluate in terms of how the new code was acting so
4 that we could represent accurately what our users expect from
5 WordPerfect.

6 Q. Let me ask you, then, hypothetically speaking, if
7 you had received the final documentation from Microsoft with
8 respect to the NameSpace extension APIs, how long do you think
9 it would have taken the shared code group to complete the
10 process?

11 A. It probably would have been before December of that
12 year.

13 Q. December of 1994?

14 A. '94.

15 Q. I think you may have answered this before. But do
16 you recall approximately when WordPerfect merged with Novell?

17 A. It was in 1994. I don't remember the month. It
18 was mid.

19 Q. Would that have been around the time that
20 WordPerfect received the M6 beta?

21 A. Yeah. I think it was, because it was, the M6 was
22 in the summer.

23 Q. You need to keep your voice up.

24 A. Sorry.

25 Q. That's all right. Did the merger affect your

1 day-to-day job as a software architect in any way?

2 A. The only impact it had was that there were a couple
3 of meetings with Novell architects to see, one, how we could
4 have shared code technology available to Novell, which would
5 have been the same for any customer that we might be asked to
6 do; and for us on the same side seeing if there were ways that
7 we could in the future leverage Novell technologies and our
8 products. There were only one or two meetings that I can
9 recall with that. That was really the only impact that I had
10 that was needed for that.

11 Q. To your knowledge, did the merger with Novell
12 affect in any way the development schedule for the Windows 95
13 products you were working on?

14 A. No. The -- we had schedules beforehand. Novell
15 was very -- was very hands off about that for -- they didn't
16 want to disturb what was happening. And I've been involved
17 with mergers for many companies, actually. And this was a
18 very hands off kind of acquisition. They just wanted
19 things -- they wanted to do what it was always doing, that was
20 shipping product.

21 Q. Could you turn now to Plaintiff's Exhibit 369 in
22 your binder. And, Mr. Harral, can you tell us what this
23 document is?

24 A. Let me --

25 Q. Take your time.

1 A. Okay.

2 (Time lapse.)

3 THE WITNESS: This is the shell exploration and
4 integration document for the applications for the suite for
5 Windows 95 and WordPerfect.

6 Q. BY MR. JOHNSON: At the top of Page 1 you see a
7 revision history there. As of September 30th, 1994, were
8 you -- did you continue to be the lead architect for the
9 shared code group?

10 A. I did.

11 Q. And who is Sid Cragun listed here with respect to
12 these revisions?

13 A. He was the maintainer of the document. He was the
14 shell integration developer for WordPerfect word processor.

15 Q. Was he part of the shared code team?

16 A. He was not.

17 Q. If you'll look at the next page of this document,
18 Bates stamp ending 715. And it says, these requirements were
19 formally reviewed as follows. And down this list there's
20 three meetings, August 31, September 23 and September 30.
21 Were you an attendee at these requirements meetings?

22 A. Yes, I was.

23 Q. And do you recall attending these meetings in the
24 summer/fall in 1994?

25 A. I remember some of these meetings, yes.

1 Q. There's a lot of large number of attendees at these
2 various meetings. Can you tell us generally what product
3 groups are represented here by the attendees?

4 A. So I see representatives from the printing group,
5 Leonard Shoell. I see a representative from the WordPerfect
6 mail product, and people from WordPerfect, from shared code,
7 Bryce Pool, that would be writing tools. And there's also
8 upper management in some of the later meetings.

9 Q. Well, why was shared code at a meeting dealing with
10 those products?

11 A. Because we had already had significant work done in
12 the shell extensions. We were bringing together those shell
13 extensions. So the applications, when they got to the point
14 where they had their -- the engine working, then the question
15 came to, okay, how do we do the other piece now that we can
16 edit a document? How do we do the things that we promised in
17 the first wave of making sure that we have shell integration
18 and property pages that say, this is a word printed document,
19 here's who types it, and making sure that our program is
20 behaving the way it -- so the applications wanted a forum that
21 would be unified so that they were all understanding the same
22 way that they were going to do it. And this document was the
23 means of being able to get that forum to happen so that
24 everybody understood the same way that the applications would
25 evolve.

1 Q. All right. So what shell integration, if any, was
2 the word processing WordPerfect doing?

3 A. It would have been interested in the property
4 sheets for the files. And it would be interested in knowing
5 that the other shell extensions that it might rely upon like
6 the document management system, et cetera, were going to be
7 there. But there wouldn't be anything more that they would
8 need to do for that because it would share a code that had
9 already provided the means of accessing that.

10 Q. So the shell integration being talked about in this
11 document with respect to WordPerfect, the word processor --

12 A. Uh-huh (affirmative).

13 Q. -- did that have anything to do with the NameSpace
14 extension APIs?

15 A. I don't know anything that WordPerfect word
16 processor needed to do for a NameSpace extension. They did
17 have shell extensions, but I don't recall a NameSpace
18 extension that they needed to do.

19 And there could be other -- there were other parts
20 represented here, too, and I would have to look at each one of
21 them. But that one didn't need anything, that I know of.

22 Q. You previously testified that you were one of the
23 liaisons for WordPerfect with Microsoft Premier Support?

24 A. Yes.

25 Q. And did that continue when you merged with Novell?

1 A. It did.

2 Q. You may have touched upon this earlier, but can you
3 describe again how Premier Support works?

4 MR. TULCHIN: Is this present tense, Your Honor, or
5 meant to refer to that period?

6 THE COURT: I think it was present tense, but I'm
7 sure it was meant to refer back then.

8 MR. TULCHIN: Thank you, Your Honor.

9 MR. JOHNSON: It was, Your Honor. Thanks.

10 THE WITNESS: So in Premier Support at Microsoft,
11 we would have access to a representative that as we had
12 technical concerns or maybe other concerns, like how we were
13 supposed to behave under a certain circumstance in
14 WordPerfect -- or WordPerfect would behave or some other
15 application.

16 As issues came up inside of WordPerfect Corporation
17 or Novell, one of the three, there were three people who were
18 designated as support people, they would hold that conference
19 basically with the people from Microsoft and work out -- they
20 were there to help so that products could move forward. And
21 they could work out any issues that they had.

22 So at WordPerfect there were about 1200 people in
23 the software division. I had responsibility for about
24 400 people that would raise questions in Windows. The reason
25 they selected me for being a Premier Support liaison is that I

1 had a lot more experience in graphical operating systems
2 across different platforms. And I actually spent a lot of
3 time, being in Windows before, I had spent a lot of time
4 keeping up with the technologies, so requests would come to
5 me, so that -- so that Microsoft engineers would concentrate
6 on the issues that were very important to us. Usually 9 out
7 of 10 of the issues that came to me I would answer or I would
8 find somebody in the company to answer. And so only the ones
9 that -- so they knew that when we talked to them, only the
10 ones that were really difficult were the ones that we were
11 trying to consume our time with. And that's kind of the role
12 that I had with them.

13 Q. BY MR. JOHNSON: All right. Did you ever talk to
14 Premier Support about the NameSpace extension functionality?

15 A. I did.

16 Q. Do you recall when you first spoke with Premier
17 Support about this functionality? And we can put a time frame
18 on it. Did you talk to Premier Support about this
19 functionality prior to receiving the M6 beta?

20 A. I did not -- did I talk to them about it prior to
21 receiving the M6 beta? There wouldn't have been any
22 discussion with them prior about the beta except for probing
23 for information on the extension. When we got M6, that we
24 finally got the information that we had been told that we
25 would have somebody compile against, build our code against.

1 So there would have been only small queries about having the
2 documentation so we could proceed and hook in what we had
3 already been working on.

4 Q. And how about after you received the M6 beta? Did
5 you have conversation with Premier Support after about the
6 NameSpace extension functionality?

7 A. Yes. Because of the lack -- we were not as
8 concerned about the lack of documentation over a short period
9 of time because having -- that was part of the reason for the
10 Premier Support. In the past I had -- when we had things that
11 needed clarification from Microsoft, we would call them, and
12 sometimes they would get the developers who had actually
13 worked on the Windows features together with us so that we
14 could talk directly.

15 I remember one time that I spent a lot of time
16 working on the presentation of menus. That was one of the --
17 as well as an architect, we had our own features that we
18 worked on, as well. And I was working on menus, and the
19 liaison that I had at the time I was discussing with the
20 developer of Microsoft the things I was trying to solve. My
21 Premier Support liaison said, this is really interesting to
22 me. And he says, I'm taking notes on this.

23 And later on, he published an article in Microsoft
24 Systems Journal. And so it was really neat that the liaisons
25 were also a means of disseminating a lot of information about

1 how to solve problems in the operating system.

2 And so that was -- after we had M6 we were not too
3 concerned over the short-term because we had this access to
4 Premier Support where we could engage them and try and solve
5 any immediate issues that we had until we had the
6 documentation.

7 Q. Can you give us any kind of estimate for how many
8 times you personally spoke with Premier Support regarding the
9 NameSpace extension functionality prior to October of '99 --
10 1994?

11 A. I remember three times because I wasn't the only
12 liaison. But I remember three times.

13 Q. Were other liaisons to your knowledge having
14 similar conversations?

15 A. Yes. Especially one of the liaisons would have
16 been, was in the WordPerfect mail group, Lynn Monson, and he
17 was also a liaison. And the WordPerfect mail group was very,
18 very interested in the extensions, as well. I know that he
19 was having conversations with them.

20 Q. Prior to the launch of Windows 95, which occurred
21 in August of 1995, did Microsoft ever provide the full
22 documentation with the NameSpace extensions to Novell?

23 A. No, they did not.

24 Q. When did you find out, if you did, that the
25 NameSpace extension functionality which was, had been

1 partially provided in the M6 beta would no longer be provided
2 by Microsoft?

3 A. I found out on a call to Microsoft to the Premier
4 Support in around the October time frame. I -- we were -- we
5 had a couple of issues that we needed clarification on, and
6 one of them had to do with our file open dialog and some of
7 the NameSpaces. And we approached Premier Support and asked
8 the question, and they told us that the NameSpace extensions
9 and what we were asking about was no longer something that
10 they could discuss through Premier Support at Microsoft.

11 Q. Let me show you what has been marked Plaintiff's
12 Exhibit 227, which is in the binder in front of you. Can you
13 tell us what this document is?

14 A. This is the same terse document that we were
15 looking at before. But it's from the next release of the
16 beta.

17 Q. That would have been the M7 release?

18 A. I think it's the M7 release because it says at the
19 top it's for the 10-28-1994.

20 Q. And did you review this documentation when it was
21 provided by Microsoft?

22 A. Yes, we did. I did.

23 Q. And did this documentation provide the full
24 documentation that Microsoft had told you would be coming in
25 M7?

1 A. It did not. It, in fact -- some of the pieces that
2 we had had been removed from it.

3 Q. What do you mean some of the pieces had been
4 removed from it?

5 A. The ability for us to present our NameSpaces to
6 Windows 95 shell for it to negotiate where we were going to
7 place our NameSpace items, being able to store what the user
8 did when they interacted with our NameSpace and being able to
9 enhance the common dialogs were all missing.

10 Q. And can you with reference to this document -- and
11 this may be too difficult. But with reference to the
12 document, can you tell us what had been taken away in terms of
13 the APIs we had been discussing earlier?

14 A. So I guess in terms of what -- what was impacted?

15 Q. Yes.

16 A. Okay. So shared code would no longer be able to
17 use the Windows 95 common dialogs to provide the features for
18 all of the products that we were providing for and for the
19 third-party people that were also licensing the technology.
20 We would not have the ability to integrate the e-mail product,
21 the image browser for showing graphics from our presentation
22 product into the -- into the shell so everybody, everybody who
23 would have lived in the shell would not have access to our
24 features like they had in our -- in our file open dialog and
25 places that we had inside of our product. And so if people

1 were living outside, they wouldn't gain the advantage. If
2 they were living inside, they would have those things.

3 But also because you couldn't provide the common
4 dialogs the other question is, then, that also put at risk us
5 being able to talk to Windows 95's regular shell extensions
6 that it provided.

7 So now the question was, how do I get the recycle
8 bin to show up? It's not just a directory. It's actually a
9 place across multiple places. Am I going to have to rewrite
10 the recycle bin and duplicate exactly what it does? Network
11 neighborhood was a bringing together of all the networks. And
12 now if I have -- I have code and shared code that can talk to
13 a network, but how do I present those networks? How do I know
14 what ones even the user has access to because all of that is
15 already defined in the shell in that NameSpace. So I've got
16 to go talk to that NameSpace to be able to represent the same
17 view that they have out of the shell in my product.

18 And so we had a twofold problem. One was we
19 couldn't expose what we had out to the customers who had lived
20 in the shell; and we were having a problem getting all the new
21 Windows 95 pieces from the shell into our product. And we
22 became an either/or kind of world.

23 Q. During Microsoft's opening in this case to the
24 jury, Microsoft's lawyer describes -- described the NameSpace
25 extension APIs, as quote, four little APIs, close quote, out

1 of approximately 2500 APIs within Windows 95. You've heard
2 this stated that the NameSpace extension APIs were, quote,
3 just a very small piece of what the operating system was being
4 written to provide to companies like Novell, close quote.

5 Do you agree with Microsoft's lawyer that the
6 NameSpace extension APIs were just four little APIs?

7 A. No; because when we were looking through the APIs
8 before, we talked about -- I pointed out initialize shell
9 extension. That's how you start up something that wants to
10 live in the shell. It's one API. If you remove that, there
11 would be no way to start up a shell, okay. So there are
12 different weights to the importance of things.

13 We're not talking about changing the color that's
14 the background of a picture, you know, of a little image on a
15 desktop here. The browser APIs stopped anybody from finding a
16 place to put things on the shell. The view APIs stop them
17 from showing anything from the shell. The common dialog APIs
18 stopped them from getting at those things in the common dialog
19 and adding things for people beyond what the shell provided.
20 And the persist just made sure they couldn't -- even if they
21 could do that, they wouldn't be able to save it so that the
22 user would have that same consistent view from one time to the
23 next.

24 Those were -- the four removed APIs, that's the
25 impact that we saw in removing those four little APIs. You

1 can do something to my house, but if the thing you decide to
2 do is remove the door and close it up, that's a pretty
3 significant thing to do to your house.

4 Q. How long have you worked as a software engineer?

5 A. 31 years.

6 Q. In your 31 years, have you ever experienced an
7 operating system vendor remove a major feature from a
8 published beta?

9 A. No. The designation of beta in the software
10 industry is that it is for ferreting out problems to be fixed,
11 not for changes in the features. That's what alpha is for.
12 So no.

13 Q. In your opinion, based upon your 31 years of
14 experience in the software industry, would the removal of a
15 major feature from a published data be an extraordinary event?

16 MR. TULCHIN: Objection, Your Honor. He's not
17 qualified as an expert, and he shouldn't be asked for this
18 sort of opinion testimony.

19 MR. JOHNSON: He's got 31 years of experience in
20 this industry, Your Honor.

21 THE COURT: Based on your experience. Overruled.

22 Q. BY MR. JOHNSON: Go ahead, Mr. Harral.

23 THE COURT: You can answer it.

24 THE WITNESS: Okay. Say it again. Sorry.

25 MR. JOHNSON: Sure.

1 THE COURT: And there'll be an objection at the
2 end, but it's overruled.

3 THE WITNESS: Okay. That's fine.

4 Q. BY MR. JOHNSON: In your opinion, Mr. Harral, based
5 on your 31 years of experience in the software industry, would
6 an operating system vendor removing a major feature from a
7 published beta be an extraordinary event?

8 A. It would. May I speak to why I feel that way?

9 Q. Why?

10 A. Okay. One -- as an example, one of the things that
11 I had occasion to do with IBM is that they were also thinking
12 about removing APIs from the OS2 operating system. And they
13 selected a half dozen people from across the industry to come
14 in and counsel with them on what APIs should be removed so
15 they could reduce the size of OS2 and make browser smaller
16 computers. As we went into that and started talking about
17 what we could remove, they started to go through the list.
18 And even though they pared out a small portion of them to try
19 and remove it, they realized that the impact and the perceived
20 impact of their industry was so great that they did not dare
21 do it. And so instead, what they did is -- so that's one
22 approach which they could do. They could just remove some
23 things and cut it out and say, okay, this is our light
24 version.

25 But what they decided instead is that was so

1 unacceptable that they tasked a brand-new team, and they went
2 back in and rewrote the operating system to remove it so that
3 it would be smaller. That was how damaging they felt it was
4 to try and remove APIs. And so they tasked an entire team to
5 go back and fix that problem.

6 MR. TULCHIN: Your Honor, I move to strike the
7 extensive testimony about what IBM was thinking and what IBM
8 was feeling.

9 MR. JOHNSON: Your Honor, it was based on his
10 personal knowledge.

11 THE COURT: I don't see how he can because he
12 didn't work for IBM.

13 Or did you? Were you at IBM at the time?

14 THE WITNESS: I was at WordPerfect, and they had us
15 working with them to decide whether or not to do this or not.
16 And so this is what they told us.

17 THE COURT: Sustained.

18 Q. BY MR. JOHNSON: Based upon your 31 years of
19 experience in the software industry, Mr. Harral, an operating
20 system vendor publishes an API and provides you a code and
21 beta release, what does that mean to you, if anything, with
22 regard to your expectation that the APIs will continue to be
23 supported above now and in the future?

24 A. So the answer is because it's a beta that they have
25 decided and they have already talked with their main partners

1 that this is what needs to be there --

2 MR. TULCHIN: Same objection, Your Honor, to what
3 they have decided. Again, the witness is just --

4 THE COURT: The problem is, just make sure --

5 THE WITNESS: I'm sorry.

6 THE COURT: I know you know because what they told
7 you. The problem is in court unless they're here, what they
8 told you I just can't let in because it's for the truth of
9 what was said. It's a legal issue. It's nothing wrong with
10 you. But that's the problem.

11 THE WITNESS: Okay.

12 THE COURT: So if you were told something, for some
13 purposes it is admissible. But it's not admissible for like
14 IBM did this because of this. They have to be here to answer
15 that.

16 THE WITNESS: Okay. Okay.

17 Q. BY MR. JOHNSON: If you could give us your
18 understanding based upon what you know from 31 years of
19 experience.

20 A. Okay. All right. So in dealing with betas for
21 operating systems for Apple, for Microsoft, for billings, when
22 we are given a beta, that is because that's what they intend
23 for us to build our application on. We are on a schedule. We
24 have made commitments to companies that we are going to
25 provide them with things that they do, you know, that they run

1 their business on. And we also have vendors who are going to
2 sell our products, and they're going to start marketing
3 campaigns months in advance, you know, in the event of these
4 things coming out.

5 And so we rely very heavily, that is why in the
6 software industry it's termed beta, is because the state of
7 the software development is that this is what people are going
8 to rely on. This is what people are going to make marketing
9 decisions upon and company purchase decisions based upon.

10 So it's a -- I know that between the releases of
11 operating systems that what is provided might evolve. But
12 that's what different versions of operating systems are for,
13 is you evolve it. That's why you release a different version
14 of it. You're saying things have changed. That's not the
15 practice for a beta.

16 Q. Did Microsoft ever inform you why they decided to
17 de-document this functionality?

18 A. I was never informed why by them.

19 Q. Did you have any understanding of why they did that
20 at all?

21 A. I guess the answer is that I was never given a
22 reason by them why.

23 Q. In your opinion, was there anything incomplete
24 about these APIs?

25 MR. TULCHIN: Same objection, Your Honor. Again

1 he's not an expert and hasn't been qualified.

2 THE COURT: From his perspective. He worked with
3 the APIs.

4 You know, from your perspective, would you have
5 been able to work with them?

6 THE WITNESS: Was I able to work with them for what
7 I was needing to do? No.

8 Q. BY MR. JOHNSON: Okay. Microsoft's lawyer said in
9 its opening that there were three reasons why Microsoft and
10 Mr. Gates in particular chose to withdraw the NameSpace
11 extension APIs. The first reason -- could we put that up?
12 The first reason proffered by Microsoft lawyer was a program
13 written to use those APIs could potentially crash the whole
14 shell.

15 Based upon your years of experience as a software
16 developer, do you believe that reason justifies Microsoft's
17 decision to de-document the NameSpace extension functionality?

18 MR. TULCHIN: Same objection.

19 THE COURT: I'll overrule that, also. That's a
20 call for Microsoft to make.

21 MR. TULCHIN: I'm sorry, Your Honor?

22 MR. JOHNSON: I'm sorry?

23 THE COURT: It's overruled, because as far as I'm
24 concerned, that is a decision for Microsoft to make, not for
25 him to make. I don't care whether he's an expert or whatever,

1 but Microsoft decides that. You know, it's crazy, but if you
2 want a real expert in there just saying it makes no sense,
3 that's one thing. But the way the question was phrased, the
4 objection is sustained.

5 MR. JOHNSON: Thank you, Your Honor.

6 Q. BY MR. JOHNSON: Faced with Microsoft's decision to
7 de-document the NameSpace extension functionality, what
8 options, if any, did Novell have for continuing to develop its
9 products for Windows 95?

10 A. One option would be to continue to use the
11 documentation that we had for the APIs and be relied upon our
12 ability to ferret out all of the issues we would have had help
13 from their support to do. So basically we could do it on our
14 own with something that we were told we shouldn't be using.
15 That was one option.

16 The second option would be to see if we could
17 somehow fit within the framework that they had given us and
18 reduce functionality. And then there would be the question of
19 the impact to our customers, if those changes would be viewed
20 as inconsequential or if they would be significant or even
21 dire.

22 The third option we had was to try and recreate
23 what was missing or what we yet did not have access to. That
24 could -- that would be a significant commitment in resources
25 and a dangerous way to go and would probably be our least

1 favorite choice, because as the -- as the operating system
2 nears its release, there are things that they would fix at
3 Microsoft in the product before it released. There are --
4 there were really -- there were NameSpaces in the product
5 already. And if we were going to -- as the slide from
6 Microsoft said, if we were going to exactly reproduce the
7 abilities and functionality of the NameSpace then any change
8 that happened we would be reacting to at WordPerfect so that
9 we could release, it would be -- it would be a difficult thing
10 clear up to the day of release to make sure we had everything
11 we possibly could get in.

12 We did know, however, that no matter what option we
13 took we wanted this going forward. And we were going to write
14 our system based upon the definitions that they had given us.
15 So even if I -- we went through all the computerease for
16 talking to these libraries, the shell. If we didn't want to
17 rewrite our product once they did document them because we had
18 written our own to make it -- because we could make it look
19 exactly like potentially, but that didn't mean it had to be
20 exactly like underneath. And if we decided later that we were
21 going to move to what they documented, we could force an
22 entire rewrite of most of the shared code to be able to come
23 into compliance with that documentation.

24 And so in order to minimize that, what we would do
25 then is we were going to -- we would have to look at what they

1 had -- what Microsoft had given us in the beta, and we were
2 going to have to -- if we wrote our own system we not only had
3 to mimic what people saw on the outside, we had to mimic what
4 was happening on the other side. So at that point we were
5 almost literally rewriting every access point into that
6 system. So that would be the most undesirable of the three
7 options that I mentioned.

8 Q. So what did Novell decide to do?

9 A. The first option that they decided to do was to use
10 the APIs and try to explore -- use what was there and try to
11 build that up. We had access to the NameSpaces, and we -- if
12 we had leverage -- if we could leverage the existing code,
13 then we could provide the functionality that the operating
14 system gave us, we could maybe back off on some of the
15 NameSpaces and present them as installed folders. But the key
16 issue for the shared code group -- I can't speak for the other
17 parts of WordPerfect that were providing their own parts. It
18 was their decision, as well, what they thought was the best
19 way to do this. But for the shared code group, trying to
20 build a file open dialog on top of what we already knew about
21 the NameSpace, because if Microsoft were to rewrite that, that
22 would cause them to have to go through more testing. If you
23 understand the software development process, if you're going
24 to change things you're going to revalidate your testing,
25 you're going to have to go back and revalidate that. So that

1 didn't seem like a likely avenue for them to go on.

2 The question would be, could we get access to the
3 NameSpaces and represent them in our system appropriately so
4 that -- so that when people saw our file open dialog they
5 didn't feel like it was missing all the Windows 95 systems
6 that were present. And so that's the approach that we
7 originally took.

8 Q. And how did that work out?

9 A. We found that as we went down that road that it was
10 difficult through Premier Support to get help on the shell in
11 general. And so -- because icon text menu is documented. But
12 when we asked, how is the -- how do we invoke this feature in
13 the shell? If I get on the menu and it says map and drive,
14 how do I invoke this? Or what's supposed to happen here?
15 That's not a documented APIs, but there was no explanation
16 forthcoming.

17 So we were -- because of the trepidation around
18 whether you should be talking about the shell or not, our
19 interaction with Premier Support was that they were starting
20 to give us less and less information about the shell in
21 general. And so at that point we realized that we really
22 could not continue trying to explore the NameSpaces because we
23 were not going to -- even on documented APIs we were not
24 getting the level of help and it was diminishing, so we were
25 going to have to move to something else.

1 Q. I want to make sure we understand this right. You
2 were calling Premier Support and seeking information on this
3 shell with respect to documented NameSpaces -- documented
4 APIs, excuse me.

5 A. Documented APIs.

6 Q. And what was the response?

7 A. They were not providing the answers that -- or the
8 answers about things like they had in the past, so we were
9 getting less and less help.

10 Q. And that's with respect to the entire shell?

11 A. The entire shell.

12 Q. So what did you do at that point?

13 A. So, okay. So always, whenever we had -- when we
14 came up to what we thought was an intractable problem, we
15 always came back and said, okay, do we now know enough about
16 the common dialog so we could use them and try to work it some
17 way? So that issue always came up on the table every time we
18 looked at it. And in talking with our customers, you know,
19 losing features that they had used for 10 years was not going
20 to be an option. If we -- they bought our product because of
21 the enhanced things that we gave them in file management. And
22 the concept of where you live was a big deal to them.

23 And so we looked at that option and again discarded
24 it. And at that point we said, okay, what would it take for
25 us to -- we have network code. We have -- we know where -- we

1 know where the recycle bin is at. Is there some way, then,
2 that we can imitate the NameSpace inside of what we're doing
3 so that we can give that same view in our file open dialog
4 would look, like I said look exactly like the common dialogs?

5 Q. And you've heard the term reverse engineering?

6 A. Yes, I have.

7 Q. And was this a form of an attempt at reverse
8 engineering?

9 A. Yes, it is; because we have to act exactly like it
10 by their -- by them telling us we had to. If we were -- they
11 said it. If we were to reproduce it, we had to act exactly
12 like it.

13 Q. And how long -- I think you testified earlier that
14 was the least attractive of the options. How long did it
15 take?

16 A. For the file open dialog? Okay. It took the
17 shared code group, once we made that decision, it was almost a
18 year.

19 Q. Microsoft said during its opening that, quote,
20 there were alternative ways that Novell could have gotten the
21 same functionality that the NameSpace extension APIs would
22 have given them, close quote.

23 Have you ever heard of something called CHICOAPP?

24 A. I have heard of it.

25 Q. Could you turn to Defendant's Exhibit 134.

1 Mr. Harral, have you seen this document before?

2 A. Hold on.

3 Q. Sure.

4 (Time lapse.)

5 THE WITNESS: Yes, I have this document before.

6 Q. BY MR. JOHNSON: Can you tell the jury what this
7 document is?

8 A. This is a sample that was published through the
9 Microsoft developer network to demonstrate how you might put a
10 tree view up and tie it to a list view and tie the two
11 together.

12 Q. And is that what CHICOAPP was?

13 A. I have never run CHICOAPP, so in the reading of the
14 documentation that's what I understand it to be.

15 Q. And based upon the documentation that you reviewed,
16 would that be a substitute for the NameSpace extension APIs?

17 A. No. The NameSpace -- there is a difference between
18 window dressing and file management. If I buy a fender kit
19 and screw a jaguar on the front of my car it's not going to
20 make it go from zero to 60 in four seconds.

21 In file open, we in shared code didn't just control
22 file open dialog, save as dialog. We controlled all of the
23 file operations of WordPerfect. The shell in Windows 95 had
24 the -- had a knowledge of certain document formats, and it
25 could detect them, and they had property sheets that were

1 already available for those formats. We were planning on and
2 had done implementation to write our document out in some of
3 those formats that were native on Windows 95. We were using
4 the shell to -- because it had the implementation -- if you
5 want -- I talked about how you can see the object in the
6 program and can touch the object. Just because I can display
7 something that looks like a shell doesn't mean I'm touching
8 the object. If I wanted -- I can see that there's a graphic
9 there, I can't tell it to bring back the information that is
10 behind that item then I can't get it. It does no good to show
11 it and not do anything with it.

12 CHICOAPP is saying that here's a tree and here's a
13 view, and you can put them together and you can put up menus,
14 and here's how you put up menus. But it's not tied to the
15 NameSpaces. If there had been a sample there to show me how
16 to talk to the NameSpace and put it in that app, then that
17 would have been comparable. But it's just window dressing
18 from our perspective.

19 Q. Did you continue to seek the assistance of
20 Premier Support on any of these issues?

21 A. I know that there were efforts that were through
22 management to resolve the issue. I do know that the other
23 liaisons with Premier Support also -- as I said, the mail
24 product was even more frustrated because they, unlike shared
25 code where we're bringing in answers and pieces, they were

1 talking about putting up their whole applications through this
2 shell extension -- shell case mechanism. So they were much
3 more animated as I talked to the Premier Support liaison with
4 them.

5 So there were efforts. I did not have many more
6 opportunities to interact with them on it because we were so
7 entrenched in trying to reproduce this functionality.

8 Q. And what kinds of resources did you bring to the
9 task within shared code?

10 A. Well, shared code, there were different teams on
11 shared code for pre-scripting. They had a team that
12 interfaced with printing. They had a team that worked on all
13 of the file system, file open, file save as. They had another
14 team that worked on internationalization and menus and
15 keyboards.

16 In the beginning we -- in 1994 October, we had, the
17 developer had moved us 80-percent there. He was -- he first
18 was looking at the -- trying to move. And then in January we
19 are now trying to move to a reproduction mode of trying to
20 reproduce all of this. At that point, we start reassigning
21 people because other people are freeing up. They've completed
22 their tasks, and we're still -- we have not -- we're trying to
23 reproduce the NameSpaces and assign one person to each of the
24 NameSpaces. One person for the recycle bin, one person for
25 network neighborhood, one person for briefcase, trying to

1 split the problem up so we can move through it as quickly as
2 possible. The harder problem is without access to the file
3 system, being able to open up the files, because in Windows 95
4 you could open up what is called a DOC file, which is the,
5 which is similar format to what Word uses. And it's a
6 standard format that Windows 95 recognizes.

7 So WordPerfect, also one of the commitments we had
8 made is that we were, to our customers is that we were going
9 to allow for our documents to either be saved in our old
10 Windows or old WordPerfect format or to save it in the new DOC
11 file format in Windows 95. So by not having access in the
12 shell to touch those objects and open them up and do things,
13 we were now having to rewrite all the file maintenance
14 functionality of being able to interact with those files. And
15 so we had actually -- we had a person originally and then two
16 people assigned to that task in an effort to try and move this
17 forward. And this was originally not a big deal for the
18 applications because they could still use the WordPerfect file
19 format. I mean, it had the dialog 80 percent of the way. So
20 as long as they opened files on the C drive, they were able to
21 operate.

22 But as it got closer to the release time and we
23 weren't able to bring in the outlying issues of, can I get
24 to -- can I get to the recycle bin? Can I get to network
25 neighborhood adequately and represent it? These are not --

1 all of a sudden these things that were ancillary. These are
2 the last things that are available, and they're holding it up,
3 holding up the product.

4 Q. In your opinion would more resources have
5 translated into an earlier release date?

6 A. No. It would have led it even more.

7 Q. Why do you say that?

8 A. Because in the shared code group we already did
9 what's called cross training. So we already had people -- you
10 assign somebody as an expert to a particular area, and you
11 cross-train somebody else so that if somebody wants to go on
12 vacation you let them. And the person who then is
13 cross-trained, they then can come in and they can maintain and
14 take up the slack where there -- that's made by the person who
15 is missing.

16 And at the same time, the shared code group was, as
17 I said before, I would go around and visit with people. We
18 were all in the habit of working on and jumping in as people
19 needed. So we all had familiarity with each other's projects.
20 We had a -- we had established a common coding style so that
21 when we looked at each other's code we could easily ascertain
22 what was going on. In fact, we had an instance where somebody
23 had left our team, and we had him -- and I had left the team
24 and we had come back together. It was four years later, and I
25 could still read his code just because his coding style was

1 the same. It was the one that we had always used.

2 So we had the discipline in place to be able to
3 handle this. The problem you have is when you bring people
4 who are not -- so we could all jump in. In fact, we ended up
5 eventually with six of the people working on different aspects
6 of just the file system trying to get through this problem.
7 So that's half of our team.

8 The problem is that if you bring in somebody to
9 train, you aren't doing your work. You've got to train them.
10 So usually if you've got one more person in there that you're
11 training, you've gone down, you're lucky if you've gone down
12 to three-quarters productive. If you bring two people in to
13 train, you go from three quarters to nothing, because you're
14 spending all the time -- because they're going to ask
15 questions as they learn. So you've got to dump all that --
16 sorry -- dump all that information for them so that they can
17 be productive. If we were to double the shared code team, it
18 wouldn't have taken a year. It would take two.

19 THE COURT: It sounds like the summer associates
20 program.

21 MR. JOHNSON: It does, Your Honor.

22 Q. BY MR. JOHNSON: You mentioned vacations in that
23 answer. Were any vacations being taken during this period?

24 A. I can only speak for myself and my teammates. And
25 the answer is no. I can't speak for everybody.

1 Q. Is it fair to say you were working around the
2 clock?

3 A. We had -- I had weeks where I was working -- I was
4 110 hours in that week. There were two weeks that that
5 happened. 80 hours was common.

6 Q. Microsoft said in its opening, quote, at the time
7 Novell never complained about Mr. Gates' decision to withdraw
8 the NameSpace extension APIs, close quote.

9 Is that true, Mr. Harral, that you never complained
10 to Microsoft?

11 A. I complained to Premier Support, and that's the
12 avenue that I had. There were other people who had access.
13 And my manager said that they had complained, but I can't
14 speak --

15 MR. TULCHIN: Objection, Your Honor, hearsay again.

16 THE COURT: That's sustained.

17 Q. BY MR. JOHNSON: Just with respect to you.

18 A. Just with respect to me, I talked to Premier
19 Support about that. Well, and we talked -- actually when we
20 had the M7 conference, we also raised that at the conference,
21 too, with people there.

22 Q. The what conference?

23 A. The M7 conference, when the APIs were first
24 removed, we complained then, as well.

25 Q. So there was a conference devoted to M7?

1 A. No. But we had a discussion with them about it
2 when we got the beta. Conference is, whether it's a public
3 conference for everybody or whether it's one that's called
4 privately by Microsoft and some company, they would, Microsoft
5 would come out, that I know of, at least twice a year that we
6 would have them on our premises.

7 Q. Did Microsoft's decision to withdraw the NameSpace
8 extensions affect the functionality that Novell and ultimately
9 Corel was able to provide in these products?

10 A. I've said this before. From an architectural
11 perspective and from what I worked on, we released a product
12 for Windows 98, which was the next version of Windows. The
13 version that we released for Windows 98 was the version of the
14 part that we envisioned that we would release on Windows 95.

15 Q. To your knowledge, Mr. Harral, did Microsoft ever
16 publish full documentation for the NameSpace extensions?

17 A. I know of documentation that was published for the
18 NameSpace extensions.

19 Q. And can you tell us approximately when that
20 occurred?

21 A. My recollection is sometime mid '96.

22 Q. Could you turn to Exhibit 355, Plaintiff's
23 Exhibit 355.

24 Have you seen this document before?

25 A. I have.

1 Q. Can you, please, tell the jury what this document
2 is?

3 A. This is a document that I know of where the
4 NameSpace extensions are being published.

5 Q. Did you review this document when Microsoft
6 published it apparently in July of 1996, according to the
7 document?

8 A. I did review this document.

9 Q. To your knowledge, did this documentation change
10 the functionality of the NameSpace extensions in any way?

11 A. Being that I only had access to the computer
12 version of the application program and the interfaces from
13 what is represented here and those documentations, we could
14 not find any differences in them.

15 Q. Did this documentation coming out in July of 1996,
16 almost a year after Windows 95 was released, did this
17 documentation affect your development efforts to produce a
18 suite for Windows 95?

19 A. Yes.

20 Q. How so?

21 A. Because we had planned to use the APIs we knew
22 about in -- I guess that's the best indication that things had
23 not changed, because we knew about the APIs back in M6, and we
24 had tried to meticulously recreate them, we were able to
25 quickly switch over and use the documentation to tap into what

1 was inside of the shell instead of using our own
2 implementation.

3 Q. And this would have affected later versions of
4 WordPerfect that were being produced by Corel?

5 A. Every version after that would have been using --
6 would have been written on top of the shell and anything we
7 did in shared code, and all the other products, as well. All
8 of them going forward would have done that.

9 Q. And all these products going forward would have
10 used these NameSpace extensions after Microsoft de-documented
11 them in '94 and then republished them in '96?

12 A. Yes.

13 MR. JOHNSON: Do you want me to continue, Your
14 Honor?

15 THE COURT: How much longer do you have before you
16 finish the direct? It would be great if we finish the direct.

17 MR. JOHNSON: It could take a while.

18 THE COURT: We won't finish the direct.

19 Have a very nice weekend. This is the time when
20 it's very hard not to talk about the case when you've devoted
21 a lot of time to it. You're going to be out with family and
22 friends over the weekend, over the extended weekend. They're
23 going to say, hey, I understand. You're perfectly okay to say
24 I told you don't talk about the case to anybody, okay?

25 Have a great day. See you at 8 o'clock on Monday

1 morning, and I'll stay with counsel.

2 (Whereupon, the jury left the court proceedings.)

3 THE COURT: Mr. Johnson, if you want to be heard.
4 I'm not sure how pertinent that matter is in the --

5 MR. JOHNSON: Your Honor, we withdraw our
6 objection. If I want to make that extra -- frankly, we're
7 trying to keep the amount of stuff --

8 THE COURT: I appreciate that.

9 MR. JOHNSON: -- to give to the jury. These videos
10 are long.

11 THE COURT: I understand. And it was perfectly --

12 MR. JOHNSON: And sometimes rather boring.

13 THE COURT: It was a perfectly appropriate
14 objection under the circumstances. I actually came in
15 deciding the other way, and I thought I better read the rule,
16 and that's when I changed my mind.

17 MR. JOHNSON: And where we really get, we think
18 it's a little more important to focus on is when it's the
19 deposition of somebody that they're going to bring in live,
20 anyway.

21 THE COURT: Absolutely.

22 MR. JOHNSON: And in that case, I think there's
23 just no reason to have additional --

24 THE COURT: I understand. And I'm sure they'll be
25 reasonable about that.

1 MR. JOHNSON: Let's hope so, Your Honor. Thank
2 you.

3 THE COURT: Anything else we should prepare for for
4 Monday?

5 MR. JOHNSON: Have a wonderful weekend, Your Honor.

6 THE COURT: You all come back here with me.

7 MR. TULCHIN: Thank you, Your Honor. Have a nice
8 weekend.

9 THE COURT: Can you walk back with me?

10 MR. JOHNSON: Sure.

11 (Whereupon, the court proceedings were concluded.)

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1 STATE OF UTAH)

2) ss.

3 COUNTY OF SALT LAKE)

4 I, KELLY BROWN HICKEN, do hereby certify that I am
5 a certified court reporter for the State of Utah;

6 That as such reporter, I attended the hearing of
7 the foregoing matter on October 20, 2011, and thereat reported
8 in Stenotype all of the testimony and proceedings had, and
9 caused said notes to be transcribed into typewriting; and the
10 foregoing pages number from 317 through 359 constitute a full,
11 true and correct report of the same.

12 That I am not of kin to any of the parties and have
13 no interest in the outcome of the matter;

14 And hereby set my hand and seal, this ____ day of
15 _____ 2007.

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KELLY BROWN HICKEN, CSR, RPR, RMR

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