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FEDERAL TRADE COMMISSION
I N D E X (PUBLIC RECORD)

WITNESS:	DIRECT	CROSS	REDIRECT	RECROSS
Wiggers	10576	10594	10601	10605
Teece		10609	10789	10823

EXHIBITS FOR ID IN EVID

- CX
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UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION

In the Matter of:)
Rambus, Inc.) Docket No. 9302
-----)

Friday, July 25, 2003
9:02 a.m.

TRIAL VOLUME 50
PART 1
PUBLIC RECORD

BEFORE THE HONORABLE STEPHEN J. McGUIRE
Chief Administrative Law Judge
Federal Trade Commission
600 Pennsylvania Avenue, N.W.
Washington, D.C.

Reported by: Josett F. Hall, RMR-CRR

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P R O C E E D I N G S

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3 JUDGE McGUIRE: Counsel, good morning.

4 We had talked somewhat on Thursday as to how
5 we intended to proceed this morning.

6 Mr. Stone, it's still your case, though we're
7 on cross-examination of the prior witness. Perhaps you
8 can give me some idea of how we want to go about our
9 affairs this morning.

10 MR. STONE: Certainly. I think Mr. Perry --

11 JUDGE McGUIRE: Mr. Perry?

12 MR. PERRY: Yes, Your Honor. It was our
13 intention to call a very short witness,
14 Mr. Hans Wiggers, a retired employee of
15 Hewlett-Packard, and take no more than 30 minutes is my
16 guess.

17 JUDGE McGUIRE: Mr. Swindell, any objection?

18 MR. SWINDELL: No objection, Your Honor.

19 JUDGE McGUIRE: All right. At this time call
20 your next witness.

21 MR. PERRY: Rambus would call Mr. Hans Wiggers
22 to the stand.

23 JUDGE McGUIRE: Mr. Wiggers, will you please
24 come to the bench and you'll be sworn in by the court
25 reporter.

1

- - - - -

2 Whereupon --

3

HANS WIGGERS

4 a witness, called for examination, having been first
5 duly sworn, was examined and testified as follows:

6 MR. PERRY: And Your Honor, I've placed his
7 deposition transcript in this proceeding on the bench
8 and I've given a copy to complaint counsel and there's
9 a copy on the table in front of the witness.

10

DIRECT EXAMINATION

11

BY MR. PERRY:

12

Q. Mr. Wiggers, are you currently employed?

13

A. No. I'm retired.

14

Q. And when did you retire?

1 until you retired in 2000?

2 A. Okay. I started in Hewlett-Packard
3 laboratories. I was a project manager in charge of
4 investigating a new workstation, and in particular I
5 was focused on memory aspects of that workstation.

6 I did that until about '92, and then I
7 transferred to the corporate purchasing department
8 because I was very interested in all memory component
9 issues and thought I could help there.

10 So my whole background is always focused on
11 technical issues and not commercial issues.

12 Q. At some point in the early 1990s did you start
13 attending JEDEC meetings?

14 A. Yes. After I transferred to the corporate
15 organization, I started attending JEDEC as part of my
16 duties there.

17 Q. And were you attending JEDEC meetings on behalf
18 of HP?

19 A. That is correct.

20 Q. Why were you attending JEDEC meetings?

21 A. HP was a very large user of memory components,
22 and it was very important to us to make sure that we
23 get -- that the industry provided components that would
24 work with our equipment, so we were basically trying to
25 make sure we influenced the industry in whatever way we

1 could to make sure that the components were most
2 suitable for our equipment.

3 Q. Now, is it correct that before you started
4 attending JEDEC meetings you were active in the RamLink
5 work being done --

6 A. I was active in the, yeah, RamLink and before
7 that the thing called SCI, scalable coherent
8 interface.

9 Q. Scalable?

10 A. Coherent interface.

11 That was the initial work that the other things
12 came out of.

13 Q. And the RamLink work was being done under the
14 IEEE?

15 A. That is correct.

16 Q. And in connection with your RamLink work, did
17 you have a meeting or meetings with Rambus?

18 A. As chairman of the RamLink committee, I had one
19 meeting with Rambus people to discuss how we could
20 coordinate our efforts, if at all possible.

21 Q. And that meeting with Rambus, was that before
22 you started attending JEDEC meetings?

23 A. That was way before I started attending JEDEC.

24 Q. Did you understand from that meeting with
25 Rambus that their business model was to gather

1 intellectual property and license it?

2 A. Okay. I think that that came out in the
3 meeting. The purpose of the meeting was, from our
4 viewpoint, to see if we could work together with
5 Rambus, and it became clear at the end of the meeting
6 that although we did go through a comparison of, you
7 know, the different aspects of the things, it became
8 clear at the end that Rambus said, We are in this for
9 the business model and we are not interested in working
10 with you guys in the public domain.

11 Q. And when you refer to the business model, what
12 do you mean by that?

13 A. They were trying -- they had a design that they
14 were trying to get the industry to accept.

15 Q. And did you understand the business model to be
16 to gather intellectual property and license it?

17 MR. SWINDELL: Objection, Your Honor.
18 Leading.

19 JUDGE MCGUIRE: Sustained.

20 MR. PERRY: Your Honor, I'm happy to -- I
21 understand that was leading. I'm happy now to make a
22 showing that I can lead the witness, and I have
23 prepared an examination on that if I'm going to be
24 getting those objections. I'll go ahead and do that
25 now.

1 JUDGE McGUIRE: Okay.

2 BY MR. PERRY:

3 Q. Mr. Wiggers, you have in the past referred to
4 Rambus as the dark side; correct?

5 A. Yes. I did that in one e-mail, correct.

6 Q. And let me show you that e-mail, which is
7 Exhibit RX-1060.

8 May I, Your Honor?

9 JUDGE McGUIRE: Yes.

10 BY MR. PERRY:

11 Q. Is this an e-mail that you prepared in November
12 of 1997?

13 A. Yes.

14 Q. And if you'll just look if you could in the
15 first paragraph of the e-mail -- well, tell me, who
16 were you writing this e-mail to, just generally? What
17 does this group of people represent?

18 A. They were a group of people that were I
19 think -- and I'm not sure, but I think we were defining
20 the next component after the SDRAM, which was called
21 the DDR, the double data rate DRAM, and we were
22 concerned about how to design the chip.

23 The issue was whether or not to put a PLvtwst pe 8a(

1 And so although the technique of using DLLs was
2 well-known by the industry at the time, there may have
3 been some hesitance on the part of the chip designers
4 of memory chips to put it on there because memory
5 chips -- they tried to keep everything as simple as
6 possible.

7 Q. Thank you.

8 And you say in this e-mail, starting in the
9 fourth sentence I believe, "Most suppliers are capable
10 of doing a DLL. There is some nervousness about the
11 required accuracy, but in principle, they all know how
12 to do DLLs since they have a license for the dark
13 side."

14 Did I read that correctly?

15 A. Yes.

16 Q. And that's something you wrote in November '97?

17 A. Yes.

18 Q. And why did you refer to Rambus -- well, strike
19 that.

20 Was that a reference to Rambus, the dark side?

21 A. Yes.

22 Q. Why did you refer to Rambus as the dark side in
23 November 1997?

24 A. The basic issue at that time and really
25 throughout this whole period was that Rambus was trying

1 to force down one particular memory model almost down
2 the throats of the industry. Most of us wanted to have
3 a public, open standard that was going to be
4 contributed by by different companies. The last thing
5 we wanted was innovation to be stifled, license fees to
6 be imposed, and basically the whole notion of an open
7 standard to be taken away because one company was
8 controlling that whole issue.

9 Q. Well, is it fair to say that you personally
10 viewed Rambus as the dark side?

11 A. I personally viewed Rambus as the dark side in

1 JUDGE McGUIRE: Yes.

2 BY MR. PERRY:

3 Q. Is this an e-mail that you prepared and sent to
4 Art Kilmer in June of 1997?

5 A. Uh-huh. We're not talking about suing here --

6 Q. Let me ask a question.

7 A. Sorry. Yes.

8 Q. And you need to answer either yes or no to that
9 question. I think you said "uh-huh" and it might be
10 tough for the reporter to get it.

11 Is this an e-mail that you prepared and sent to
12 Art Kilmer at IBM in June of 1997?

13 A. That is correct.

14 Q. Thank you.

15 And was the general issue some kind of industry
16 group that was being formed?

17 A. Yes.

18 Q. And you said in your e-mail: "Keeping it as
19 an IBM user forum is a good idea. That way we don't
20 step on JEDEC, and if Rambus sues, they'll go after
21 IBM."

22 Do you see that?

23 A. Yes. You see that little smiley behind that?

24 Q. Yes. That's an emoticon I believe.

25 You've heard that referred to as an emoticon?

1 A. Yes. We call it a little smiley.

2 Q. And you were suggesting that Rambus might sue
3 because they weren't going to be invited into this
4 industry group?

5 A. Yes. Exactly.

6 Q. And it's still your view that Rambus' patents
7 are invalid?

8 MR. SWINDELL: Objection, Your Honor.
9 Leading.

10 BY MR. PERRY:

11 Q. Have you formed an opinion as to whether or not
12 Rambus' patents are invalid?

13 A. No.

14 Q. Have you formed an opinion as to whether
15 Rambus was trying to stifle the standardization
16 process?

17 A. They were definitely trying to convince the
18 industry that their solution was better than the JEDEC
19 solution, and so they were making many efforts on that.
20 I don't know what they did in talking to the different
21 managements in Asia, but I definitely got the
22 impression that they were behind talking to those
23 people and trying to sort of further their cause and at
24 the detriment of the open standard.

25 Q. Well, let me ask you to look at your

1 deposition, please, at page 174. It's that big
2 document in front of you. And I'll give you a chance
3 to read what I refer you to before I ask you a
4 question.

5 And there should be line numbers down the left
6 side. Do you see that?

7 A. Yes.

8 Q. And if you could look at lines 17 through 23
9 and just read that to yourself, then I'll have a
10 question.

11 A. Yes.

12 Q. Is it correct -- well, let me ask you.

13 Did you say in the deposition that you referred
14 to Rambus as the dark side because, quote, "Rambus was
15 trying to stifle the whole open standardization process
16 and trying to do a grab for controlling the whole
17 memory controller business"?

18 A. Yes.

19 Q. And that was a true statement at the time?

20 A. Yes. And I think I just said the same thing.

21 Q. And you thought that would be bad for HP;
22 right?

23 A. Yes.

24 Q. Now, let me go back to the question I was
25 asking you before, which was your understanding of the

1 business model of Rambus as a result of your meeting in
 2 connection with the RamLink work before you started
 3 going to JEDEC.

4 Did you have an understanding from that meeting
 5 that Rambus' business model was to gather intellectual
 6 property and license it?

7 A. You know, at some point I became aware of that.
 8 I would not be able to tell you exactly when that

911 A.Q YoA yoright YoLemeets akou exthis

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425 DiMR. SWINDELL: Objtion w,ou kr BTt Rgs2,ou kr MR.s 4

1 THE WITNESS: Actually I did not.

2 MR. SWINDELL: I still don't think we've
3 established that Mr. Wiggers is a hostile witness. I
4 still think the questions are leading.

5 MR. PERRY: I think that question was not
6 leading. He said "no" to it.

7 JUDGE McGUIRE: That's not what he said.

8 MR. PERRY: It's not leading and I have
9 established that he's a hostile witness.

10 JUDGE McGUIRE: On that basis, you may proceed,
11 Mr. Perry.

12 BY MR. PERRY:

13 Q. Let's just make sure that it's a clear record.

14 When you learned about that aspect of Rambus'
15 technology, did you think that the use of both edges of
16 the clock in that manner was something novel?

17 A. The answer is no. We were doing this in SCI.
18 It was being done in static RAM components. It was a
19 well-known technology.

20 Q. And if you had heard Richard Crisp say in a
21 JEDEC meeting that he believed that Rambus had

1 Hypothetical.

1 and learned about SDRAMs, I was able to take some of
2 the concepts of the SDRAMs and suggest that as
3 improvements to the RamLink.

4 Q. At some point did you hear Richard Crisp make
5 any statement about RamLink or SyncLink violating
6 Rambus' intellectual property rights?

7 A. Yes. He may have made that clear -- yes -- no.
8 He may have made that clear.

9 Q. And did you say anything in response?

10 A. Probably the same thing I just said now, that I
11 did not believe that he had any ground to stand on.
12 That this is public domain information.

13 Q. Did you make the statement in response that
14 everything we had done in SyncLink was in the public
15 domain and could not possibly be covered by Rambus'
16 patents?

17 A. Correct. That was my conviction.

18 Q. Did you think at the time that Mr. Crisp was
19 trying to torpedo the SyncLink standard?

20 A. He was trying to torpedo anything that was not
21 Rambus.

22 Q. What do you mean by he was trying to torpedo
23 the standard with his statements about intellectual
24 property?

25 A. Again, Rambus was out to make the Rambus

1 component to be the sole memory component for the
2 whole industry, so anything that was out there that
3 was not Rambus they were trying to discredit or work
4 against.

5 Q. Now, after you started to go to JEDEC meetings,
6 did you come to understand that Mr. Crisp was trying to

1 was going on. Even if I had known what patent was
2 going on, I would not have been able to disclose that
3 because it's not mine to disclose.

4 But I can do that because we were as a company
5 going to comply with the basic JEDEC rule that we would
6 make any such patents available at no cost or whatever
7 the JEDEC rule was which was a very reasonable cost to
8 anybody.

9 Q. Was it your understanding of the patent policy
10 that as long as a company offered their patents after
11 they issued on reasonable and nondiscriminatory terms
12 to everybody that it had no obligation to disclose
13 their patent applications?

14 A. That was my understanding. It may have been
15 wrong, but that was my understanding.

16 Q. Now, going back to what you heard Mr. Kelley
17 say from IBM, what did you understand Mr. Kelley said

1 Q. Did you hear him say that his company would
2 not let him disclose the patents that IBM is working
3 on?

4 A. I just told you I don't remember the exact
5 words. It may or may not.

6 Q. Let me ask you to look at your deposition at
7 page 57. This will just take a second.

8 A. Okay. 57.

9 Q. Yes.

10 A. Yes.

11 Q. And do you see -- why don't you read to
12 yourself line 7 through the end of the page.

13 (Pause in the proceedings.)

14 A. Yes.

15 Q. And do you see that I asked you, "Do you
16 remember anything that Gordon Kelley ever said about
17 IBM's position with respect to the JEDEC patent
18 policy?" Do you see that?

19 A. Yes.

20 Q. And part of your answer at line 19 says,
21 "Gordon Kelley said, Look, I cannot disclose -- my
22 company would not let me disclose all the patents that
23 IBM is working on because, you know, I just can't do
24 that. The only thing we will do is we will follow the
25 JEDEC guidelines and -- or rules on whatever and we

1 will make them available."

2 A. Yes.

3 Q. Was that your best recollection at the time of
4 the deposition?

5 A. So basically at that deposition I gave my
6 impression what -- which is the way I interpreted -- I
7 maybe have put the words in Gordon Kelley's mouth, but
8 yes, that's how I remembered it and interpreted what he
9 said.

10 Q. Was that the best you could do at the
11 deposition --

12 A. Yes.

13 Q. -- to give us your understanding of what he
14 said?

15 A. That is correct. You know, I felt that's what
16 he said.

17 Q. That's fine.

18 A. Okay.

19 Q. That's fine.

20 And is it correct that you spoke up at that
21 point in the JEDEC meeting and said something about
22 HP's position?

23 A. Yes.

24 Q. And what did you say at that point in the
25 meeting?

1 A. Basically that I agreed with that viewpoint and
2 the same answer that I just gave a few minutes ago.

3 Q. Did you form an understanding at the time as to
4 whether or not the other JEDEC members thought that
5 your position was a reasonable one?

6 MR. SWINDELL: Objection, Your Honor.
7 Foundation.

8 MR. PERRY: I'm just asking for his
9 understanding. He was in the meeting. He may have
10 gotten an impression from --

11 MR. SWINDELL: But there's no --

12 JUDGE McGUIRE: Sustained.

13 BY MR. PERRY:

14 Q. Did anyone say to you at the meeting that HP's
15 position was in violation of the JEDEC patent policy?

16 A. I don't think so, but I can't remember for
17 sure, but I don't think so.

18 MR. PERRY: Thank you, Mr. Wiggers. I have
19 nothing further for you at this point. It's complaint
20 counsel's turn.

21 JUDGE McGUIRE: Okay. Cross-examination?
22 Mr. Swindell?

23 CROSS-EXAMINATION

24 BY MR. SWINDELL:

25 Q. Good morning, Mr. Wiggers.

1 A. Good morning.

2 Q. There was some discussion in your earlier
3 testimony about information you learned about Rambus
4 claims of patent coverage. Do you recall that?

5 A. Yes.

6 Q. And at the time you learned about Rambus claims
7 of patent coverage, you took that seriously, didn't
8 you?

9 A. At the time that I learned -- oh. There was
10 this IEEE standard, and because I was the chair, I had
11 to take serious any claims of patents by anybody.

12 Q. And so when Mr. Crisp informed you of his views
13 on Rambus patent coverage of RamLink, you took that
14 seriously?

15 A. Yes, I did.

16 Q. And you in fact informed other people at IEEE;
17 is that right?

18 A. That is correct.

19 Q. And they wrote a letter, to your understanding,
20 to Rambus; is that correct?

21 A. Yeah. Yes.

22 Q. And the letter requested clarification of
23 Rambus' patent claim?

24 A. That is correct.

25 Q. Now, in your understanding, did you ever

- 1 receive any clarification of Rambus patent claims
- 2 relating to RamLink?

1 where we compared, you know, pros and cons of the two
2 technologies.

3 Q. Now, at that time in 1992 did you think that
4 RamLink and Rambus were enemies?

5 A. Then I would not have invited them, so no, I
6 did not think they were enemies, or maybe I didn't know
7 that they were enemies.

8 MR. SWINDELL: One moment, Your Honor.

9 (Pause in the proceedings.)

10 BY MR. SWINDELL:

11 Q. Mr. Wiggers, you also mentioned or talked
12 earlier about your experience, some experience with the
13 JEDEC patent policy.

14 A. Yes.

15 Q. Now, while you were a JEDEC representative for
16 Hewlett-Packard, did you take patent disclosures in
17 JEDEC seriously?

18 A. Only in the sense that as I represented, I
19 would make sure that HP would not get -- that HP
20 patents would not get in the way of the standard.

21 So if I had -- and this is just supposition, so
22 maybe it's not right -- if I had found out about
23 something that was in the standard that had an HP
24 patent, I would have gone back to my management and

1 Q. And after going to your management to tell them
2 about the potential conflict --

3 A. Well, let me give you a tangible point if that
4 helps.

5 Q. Okay.

6 A. I was in charge of the -- a group that was
7 defining a memory module, which is a little PC board
8 that has multiple memory components on it. This was a
9 JEDEC effort. And in doing that work, we found out it
10 would be very useful to put little resistors in each
11 one of the data lines.

12 Well, it turns out that this was actually a
13 technique that I had learned from one of the project
14 managers in one of the HP divisions.

15 So I went to the project manager --

16 JUDGE MCGUIRE: Okay. Sir, you're getting a
17 little far afield. I'm going to give you a chance to
18 testify on the point you're trying to make, but I'm
19 going to ask you to cut through the entire, you know,
20 historical aspect of this and get to where you need to
21 go.

22 THE WITNESS: Sure. Yes, sir.

23 So basically I went to the project managers and
24 said can we use this technology in the standard, and
25 the answer was yes, go ahead, we'll release it to the

1 standards group.

2 BY MR. SWINDELL:

3 Q. Now, was that the technology that you're
4 discussing on the -- you said it was a DIMM?

5 A. Yes.

6 Q. Was that technology already in an issued
7 patent?

8 A. We never even went for a patent on it because
9 we made it available.

10 Q. During your time -- well, let me ask, when did
11 you start attending JEDEC?

12 A. I started attending JEDEC I think it was
13 around '92.

14 Q. Did you immediately become the JEDEC
15 representative for HP?

16 A. No. For a while it was my boss and then I was
17 it for a while.

18 Q. Was there a period of time when you were the
19 official Hewlett-Packard representative?

20 A. Yes.

21 Q. What period of time was that?

22 A. I really can't remember it. It was sort of on
23 and off. I think when Tom Landgraf started attending
24 JEDEC, I sort of turned it over to him.

25 Q. Do you know when Mr. Landgraf started attending

1 JEDEC?

2 A. Around about the same time, maybe '93.

3 Q. Did you ever discuss with Mr. Landgraf the
4 JEDEC patent policy?

5 A. I really cannot say. It may have come up.

6 Q. Well, let me ask, in the way Hewlett-Packard
7 addressed JEDEC issues, was there some division of
8 labor such that the official Hewlett-Packard
9 representative was more responsible for dealing with
10 the patent issues?

11 A. That was really not -- the whole patent issue
12 was not very important to HP and it didn't really rise
13 above anything else that we were interested in, so it
14 may have -- we may have talked about it, but it wasn't
15 really a very important issue to us.

16 Q. So --

17 A. We were a user of components. We were not
18 designing components, so we didn't really care what was
19 involved in implementing them.

20 MR. SWINDELL: No further questions.

21 JUDGE McGUIRE: All right. Thank you,
22 Mr. Swindell.

23 Mr. Perry, any further redirect?

24 MR. PERRY: Just one follow-up on the point
25 that was raised.

1 REDIRECT EXAMINATION

2 BY MR. PERRY:

3 Q. After Mr. Crisp made his statements about
4 RamLink and SyncLink possibly violating Rambus
5 intellectual property, did you ever hear from
6 Mr. Gustavson that he had actually spoken to Mr. Crisp
7 about those statements?

8 A. I can't remember.

9 Q. Let me refresh your recollection with an e-mail
10 that you received I believe from Mr. Gustavson, or
11 Dr. Gustavson, that was produced by you, RX-593.

12 May I?

13 JUDGE MCGUIRE: Yes.

14 BY MR. PERRY:

15 Q. I can represent to you, Mr. Wiggers, that this
16 collection of e-mails was produced from your e-mail
17 files at Hewlett-Packard.

18 A. Okay.

19 Q. It bears the initials in the lower right corner
20 that were placed there in connection with the
21 production of the documents to us, it bears your
22 initials.

23 I'm going to ask you to look at the portion
24 that's now highlighted on the screen that begins at the
25 bottom of the first page and the top of the second

1 page. You can read it either on the screen or --

2 A. I'll read it here.

3 Q. I know it's been a while I suspect since you've
4 seen this, so why don't you go ahead and read that
5 portion that starts with the e-mail to you from
6 Dr. Gustavson at the bottom of the first page and go
7 over -- not the entire e-mail, but go over to the top
8 half of the next page, and then I'll have just a couple
9 of questions.

10 (Pause in the proceedings.)

11 A. Okay.

12 Q. Is this an e-mail that you received from
13 Dr. Gustavson in February of 1996?

14 A. Yes. I accept the evidence.

15 Q. And he begins by describing a call from Rambus'
16 Richard Crisp; correct?

17 A. Uh-huh. Yes.

18 Q. And do you see that at the bottom of the first
19 page it says, "I had heard conflicting reports from the
20 IEEE as to whether Rambus had responded to their
21 request for a clear statement whether Rambus felt the
22 standard conflicted with their patents"?

23 Do you see that?

24 A. Yes, sir.

25 Q. And did Dr. Gustavson tell you in this e-mail

1 that Mr. Crisp had explained that Rambus did respond
2 but their response was basically to the effect that
3 they were not able to determine at this time whether
4 there was a conflict? Do you see that?

5 A. Yes.

6 Q. Does that refresh your recollection that the

1 Q. Feel free.

2 A. This whole issue had to do with RamLink and
3 this was when the RamLink work was completed and the
4 RamLink was now turned over to the standards body in
5 IEEE to become a standard.

6 So that whole resolution -- and I think I
7 vaguely remember a memo from -- I think you alluded
8 to -- that Rambus came back and said we cannot comment
9 one way or the other, and I'm trying to remember
10 this -- so basically RamLink was done. Okay.

11 And so now the SyncLink work went forward, yes,
12 based on the fact that we still felt we were in the
13 public domain, that everything we had done was, you
14 know, based on things that had been done in the public
15 domain, and so -- and I can only speak for myself -- I
16 just did not take the Rambus patent position very
17 seriously.

18 MR. PERRY: All right. I have nothing further.
19 Thank you.

20 JUDGE McGUIRE: Any other recross,
21 Mr. Swindell?

22 MR. SWINDELL: Yes, Your Honor.

23 RECROSS-EXAMINATION

24 BY MR. SWINDELL:

25 Q. Mr. Wiggers, if you would pick back up RX-593,

1 the e-mail that we were just looking at, and going
2 back to the second page, and the first paragraph
3 reads: Crisp explained that they did not, but their
4 response was basically to the effect that they were
5 not able to determine at this time whether there was a
6 conflict.

7 Do you see that?

8 A. Yes 6 conflict.s/fhre k 8 j-Eas a

1 A. That Mr. Crisp believed that these patents
2 covered SyncLink?

3 Q. And this was in February of 1996.

4 A. And there's -- and I'm not sure how much later
5 that was. There was a -- there was a presentation at
6 JEDEC by a group of people called the
7 SyncLink Consortium, and at that point Mr. Crisp --

8 Q. Well, let me just represent to you that that
9 was in 1995.

10 A. Oh, '95. Time flies.

11 Yes. So there was a presentation made by the
12 SLDRAM people and Mr. Crisp at that point says
13 something to the effect that that was not -- that that
14 was violating Rambus patents, so that's the first time
15 he made that claim that I remember.

16 Q. But do you recall anything after receiving this
17 e-mail in February of 1996?

18 A. Oh, no. No.

19 Q. Were you ever told that Mr. Crisp thought that
20 Rambus could get claims to shoot SyncLink in the head?

21 A. No.

22 Q. Were you ever told that Rambus believed that
23 Rambus could get patent claims covering SDRAM?

24 A. No. I was totally surprised.

25 Q. And in any e-mail that Mr. Crisp sent you or

1 any conversation that you had with Mr. Crisp, did he
2 ever tell you that Rambus had patents or patent
3 applications on programmable CAS latency?

4 A. No.

5 Q. In any contact you had with Mr. Crisp did he
6 ever tell you that Rambus had patents on programmable
7 burst length?

8 A. Absolutely not.

9 Q. In any conversation or communication that you
10 had with Mr. Crisp did he ever tell you that Rambus
11 believed it had claims on on-chip PLL or on-chip DLL?

12 A. No. Mr. Crisp never discussed any details of
13 the patents. He just made some vague allusions.

14 Q. One last question on that.

15 In any conversation or communication with
16 Mr. Crisp did he ever tell you that Rambus had patent
17 claims on dual-edged clock?

18 A. No. I thought I had a patent on that.

19 MR. SWINDELL: No further questions.

20 JUDGE McGUIRE: Okay. Very good.

21 MR. PERRY: Just one, Your Honor, if I could.

22 JUDGE McGUIRE: One last round and one question
23 each.

24 BY MR. PERRY:

25 Q. SyncLink used dual-edged clocking; correct?

1 A. Yes.

2 JUDGE McGUIRE: You have one question to your
3 credit, Mr. Swindell, if you want to use it now.

4 MR. PERRY: You can give it to Mr. Royall.

5 MR. SWINDELL: No, Your Honor.

6 JUDGE McGUIRE: Okay. Very good.

7 All right, sir. Thank you very much for your
8 testimony. You're excused from these proceedings.

9 As I understand it then, we will continue with
10 the cross-examination of Professor Teece.

11 Do the parties want to take just a very short
12 break now or -- it's up to you all.

13 MR. DAVIS: Yes, Your Honor.

14 JUDGE McGUIRE: Let's take a five-minute
15 break.

16 MR. DAVIS: Can we have slightly more than
17 that? We need to set up.

18 JUDGE McGUIRE: Make it a ten-minute break.

19 (Recess)

20 JUDGE McGUIRE: At this time we will continue
21 with the cross-examination of Professor Teece.

22 Good morning, professor. How are you today?

23 THE WITNESS: Good morning, Your Honor.

24 JUDGE McGUIRE: Good morning, Mr. Royall.

25 MR. ROYALL: Good morning, Your Honor.

1 JUDGE McGUIRE: You may proceed.

2 - - - - -

3 Whereupon --

4 DAVID J. TEECE

5 a witness, called for examination, having been
6 previously duly sworn, was examined and testified as
7 follows:

8 CROSS-EXAMINATION (continued)

9 BY MR. ROYALL:

10 Q. Good morning, Professor Teece.

11 A. Good morning, Mr. Royall.

12 Q. The first thing I wanted to touch on today was
13 this royalty rate chart that Mr. Stone created in your
14 direct examination. This is DX-353.

15 And in that regard, the first thing I wanted to
16 ask you about are the royalty rates, the TI royalty
17 rates relating to Hyundai -- the Hyundai and Samsung
18 licenses. Do you recall that discussion?

19 A. Yes, I do.

20 Q. And I believe that in response to Mr. Stone's
21 questions that you indicated that these royalty rates
22 that we discussed in connection with the published
23 legal decisions that had references to them, those
24 royalty rates are ones that were part of the universe
25 of information that you considered in making your own

1 reasonable royalty conclusions; is that right?

2 A. Correct.

3 Q. But you would agree with me, would you not,
4 that these rates, the Samsung and the Hyundai rates,
5 are not a reasonable benchmark or a number that should
6 be used to benchmark in assessing the value of the
7 Rambus technologies in this case?

8 A. No, I don't think I would agree with you,
9 Mr. Royall, and I'm happy to explain why.

10 Q. Well, let me -- before we go any further, you
11 said that you don't -- you don't agree with that. Let
12 me ask you to --

13 A. Well, they should be taken into account. I
14 don't think, you know, as I testified to yesterday, I
15 don't believe that --

16 JUDGE MCGUIRE: Professor, I'm going to cut you
17 off. He hasn't asked you -- you've answered his first
18 question. I'm going to ask you to pause until he has
19 another question on the floor for you.

20 MR. ROYALL: Thank you, Your Honor.

21 BY MR. ROYALL:

22 Q. Do you still have your deposiLL: 2boc

1 I've got it.

2 Q. Let me ask you to turn to -- I believe the
3 relevant page is 223.

4 Do you find the page 223 of your deposition?

5 A. Yes.

6 Q. Now, page 223 of your deposition, line 15, I
7 asked you the question: "And do you think that that
8 royalty rate, that 9 percent royalty rate, is a
9 reasonable benchmark for the value of Rambus
10 technologies, the Rambus technologies at issue here?"

11 And I'll pause for a moment before going to
12 your answer. You'll see that earlier, at the top of
13 page 223, there's a reference in a prior answer to
14 "Hyundai is paying 9 percent -- excuse me. That
15 Samsung is paying 9 percent."

16 Do you see that in your answer at the top of
17 page 223?

18 A. Correct.

1 MR. STONE: Your Honor, in the interest of
2 completeness, I think he should read -- and I don't
3 know that he did -- the entirety of the answer.

4 MR. ROYALL: No. I read the entirety of that
5 answer. Are you saying -- referring to another
6 question?

7 MR. STONE: The answer was: "And by a
8 'reasonable benchmark' do I think that that should be
9 the number that's used as benchmark? No, I don't
10 believe so."

11 MR. ROYALL: I read the whole answer.

12 MR. STONE: I'm sorry if you read that.

13 BY MR. ROYALL:

14 Q. So that was the answer that you gave to that
15 question in your deposition, and I know you want -- you
16 have something to say, so let me advise you to explain
17 what the point you wanted to make.

18 A. What I say on the next page is that "First of
19 all, you're assuming that I'm trying to pick a single
20 benchmark." And I continue to say, "What I'm trying to
21 do here -- and I thought I made it clear -- is give you
22 as much information as I can find through survey
23 research. Imperfect as it is, I believe it's
24 considerably better than any individual number from any
25 individual license."

1 So in answering you, I believe I was making it
2 clear that no one number is an appropriate benchmark
3 and certainly that number alone would not be an
4 appropriate benchmark. That's not meant to imply that
5 I don't think it has some relevance.

6 Q. Okay. Now, with respect to these Hyundai and
7 Samsung licenses and the royalty rates that they paid,
8 am I right that you yourself were involved in the
9 Texas Instruments litigation that was the subject of
10 the court decisions that we saw yesterday?

11 A. I was involved on certain liability questions.
12 Yes.

13 Q. And I take it that as an expert involved in
14 liability questions you made some effort along with
15 help from your staff to familiarize yourself with the
16 facts of that case?

17 A. As they related to my particular testimony,
18 yes.

19 Q. And what was your testimony on in that case?

20 A. My testimony, if I remember correctly, was on
21 patent misuse questions. There was an allegation of
22 patent misuse and they were the issues that I
23 addressed. From an economic perspective of course.

24 Q. Now, the licenses that we've been discussing
25 that are referenced in those legal decisions and that

1 you discussed with Mr. Stone yesterday, do you know if
2 any of those licenses involved caps, that is, caps on
3 the amount of royalties that the licensees might pay to
4 Texas Instruments under the license?

5 A. I don't know for sure. I do know that they
6 were cross-licenses, however, which means that there
7 would be consideration as well as the cash payment.
8 There would be consideration in kind.

9 Q. Well, getting back to my question, though, if
10 there were caps on the royalties that would be paid by
11 the licensees under those licenses to Samsung and
12 Hyundai, you were not aware of those caps; is that your
13 testimony?

14 A. I'm -- well, are you talking about a cash cap
15 or a cap on the in-kind payment? Because if it's a
16 cross-license, there's also the use of the other
17 party's intellectual property.

18 Q. I am not talking about what theoretically could
19 be the case with these licenses. I'm asking you
20 whether you know of any caps of either of the sorts
21 that you describe that were provisions in those
22 licenses.

23 A. I don't know -- I do know that it was a
24 cross-license. I'm almost positive that there was no
25 cap on the intellectual property that was exchanged.

1 Whether there was a cash cap I'm not entirely sure. I
2 don't know.

3 Q. And you're almost positive of that because you
4 reviewed and studied those licenses as part of your
5 work on that case? Is that why you're almost positive
6 of that?

7 A. Well, I'm almost positive that they're a
8 cross-license because Texas Instruments' strategy and
9 policy in licensing other manufacturers has been to
10 cross-license.

11 Q. But you're not almost positive one way or the
12 other as to whether there were caps in those licenses
13 that specifically limited the amount of royalties that
14 the licensees might have to pay to Texas Instruments
15 under the licenses; is that right?

16 A. I'm not aware of specific caps.

17 Q. Now, if there were caps -- I want you to assume
18 with me that those licenses do impose caps that -- and
19 we don't need for the purpose of my question to assume
20 anything specific about the nature of the caps but
21 that -- other than that they're caps that would impose
22 a limit of the total amount of royalties that would
23 need to be paid, notwithstanding the royalty rates, but
24 that would need to be paid by the licensees under those
25 licenses.

1 Can you assume that with me?

2 A. Sure.

3 Q. Now, would you agree that if there were such
4 caps in those licenses that that in an economic sense
5 could have an effect in altering the effective royalty
6 rate paid under these licenses by the licensees? It
7 could have that effect, couldn't it?

8 A. It could have that effect, but we have to bear
9 in mind here that there's an offsetting effect, which
10 is the fact that there is also additional in-kind
11 payment because Samsung and Hyundai have to give back
12 or make available to TI their intellectual property.

13 So assessing the impact of the cap would be,
14 you know, very complex.

15 Q. I'm not asking you what effect in-kind
16 payments might have on the effect of a royalty, and
17 that's not an issue that I'm interested in asking you
18 about.

19 I'm asking you of what effect a cap would have
20 on the effective royalty. Do you understand that
21 that's the focus of my question?

22 A. Yes. But I don't think that you appreciate
23 that if there is a cap, it would be a cash cap and not
24 a cap on the other piece of the consideration, which is
25 not even counted when you look at the reasonable

1 royalty.

2 Q. But you'll agree with me that if there are caps
3 that that may affect the -- what is the effective
4 royalty rate paid by the licensees?

5 A. The cash cap would affect the amount of the
6 cash that's paid, but it wouldn't affect the amount of
7 the in-kind consideration that comes back as well.

8 Q. But in referring to the royalty rates on these
9 licenses, 8 percent and 9 percent, I'm -- in referring
10 to those rates, you were not taking into account what,
11 if any, effect a cap on the amounts paid might have on
12 the effective royalty rates; right?

13 A. I was not specifically taking that into
14 account, nor was I specifically taking into account
15 the fact that there's -- that this is a cross-license
16 and that in addition to the payment of the cash there
17 is intellectual property that's being paid over as
18 well.

19 Q. As you sit here today, are you certain that the
20 rates identified on DX-353 for those licenses are
21 indeed the effective royalty rates?

22 A. As effective cash -- well, no, I'm not because
23 for sure there is the in-kind piece which would take it
24 obviously up higher, so -- I think I told you yesterday
25 that I believe these were cross-licenses, so there is

1 the fact that it's biased downwards because of the fact
2 that the in-kind stuff isn't included. If there's a
3 cash cap, it would tend to bias it upwards, if you're
4 looking at it purely as a cash amount.

5 JUDGE McGUIRE: All right. Let me interject
6 here before we go any further and ask you, sir, to
7 please define what you mean by the term "effective
8 rates."

9 THE WITNESS: Yes. I think it was Mr. Royall
10 that actually used it. What I think he's trying to
11 suggest is that if you take the royalty rate and the
12 amount that's paid, which is the base times the rate,
13 that at some point if there's a cap, let's say
14 ten million or whatever per year, that the effective
15 royalty, the cash royalty, would come down because you
16 stop paying it at some point, and then maybe it starts
17 again next year.

18 And I'm talking about -- I'm not entirely sure
19 that's the case, but it may be, but that underneath
20 it, if you really want to start adjusting the royalty
21 rate to make it strictly correct, to make it
22 effective, if you want an effective royalty rate, then
23 you've got to add back in the in-kind payment
24 associated with the fact that TI and Samsung are also
25 making available to TI -- excuse me -- that Samsung

1 and Hyundai are also making available to TI their own
2 intellectual property.

3 So to answer Mr. Royall's questions strictly
4 correctly, if you want an effective rate, you would
5 have to adjust both for any cash cap and for the fact
6 that it's a cross-license. Doing one without the other
7 would not be proper.

8 BY MR. ROYALL:

9 Q. And you haven't done any analysis to determine
10 what the effective rate would be in the case of these
11 licenses; is that right?

12 A. No. I suspect it would be -- well, it depends

1 don't know?

2 A. Correct.

3 JUDGE McGUIRE: And that's being noted for the
4 record on DX-353.

5 MR. ROYALL: Thank you, Your Honor.

6 BY MR. ROYALL:

7 Q. Now, I believe you also refer on this chart,
8 Mr. Stone's notes, making reference to Kentron?

9 A. Yes.

10 Q. Do you recall a discussion of that?

11 A. Yes.

12 Q. Now, with respect to Kentron, you have some
13 familiarity with the company Kentron; is that right?

14 A. A little bit.

15 Q. And you agree that in terms of the type of
16 company that Kentron is that it's not a company that is
17 comparable to Rambus; right?

18 A. It's not a pure-play technology company, but
19 you know, it is -- it does have some technology
20 that's -- I believe your case is that it has some
21 technology that's competitive.

22 Q. Let me ask you to turn if you could to your
23 expert report, paragraph 289.

24 A. I'm not sure I have --

25 Q. Do we need to give you another copy of that?

1 A. Actually it's here.

2 Q. Paragraph 289, by the way, is on page 65 of the
3 report.

4 A. Okay.

5 Q. Now, in the first sentence of paragraph 289 do
6 you see where you state, "Moreover, despite
7 Professor McAfee's claim, Kentron as a company" -- and
8 you've italicized the word "company" -- for emphasis I
9 assume -- is not 'comparable' to Rambus"?

10 Do you see that?

11 A. Yes.

12 Q. So you were making the point in responding to
13 Professor McAfee in a way which you felt appropriate to
14 emphasize the word "company" --

15 A. This is in the context of --

16 Q. You were --

17 A. Yes.

18 Q. If you could allow me to finish my question.

19 A. Certainly.

20 Q. You were making the point in responding to
21 Professor McAfee in a way in which you felt it was
2emphara?e that?

9. You were -2whichT?e dew?e A. do Qmpanya
r that?

1 A. Yes. And the paragraph above makes it clear
2 why I'm doing that.

3 Q. Well, you were doing it to draw a distinction
4 between Rambus and Kentron, were you not?

5 A. Well, I say above that I'm not a technical
6 expert and cannot evaluate whether these technologies
7 are comparable.

8 Q. Isn't it right, Professor Teece, that you
9 would tend to discount to some extent the royalty
10 rates charged by companies that were different from
11 Rambus in that they were not pure-play technology
12 companies?

13 A. Would I discount the royalty rates did you
14 say?

15 Q. The royalty rates charged by companies that
16 were different from Rambus in that they were not
17 pure-play technology companies.

18 A. I wouldn't discount them. I mean, I think
19 that, you know, my position is clear from my deposition
20 and from my testimony yesterday that one needs to look
21 at the universe, and obviously some observations are
22 more comparable than others, and it's only by looking
23 at the totality of licensing rates that you can get a
24 fix on what's reasonable.

25 Q. But you would agree that in your view, license

1 rates charged by companies that are not pure-play
2 technology companies are somewhat less comparable to
3 Rambus than license rates charged by pure-play
4 technology companies? That was the very point you were
5 making in your expert report, is it not?

6 A. I was making the point that because Kentron is
7 a manufacturer, its expectations will be different than
8 Rambus', that's correct.

9 Q. Exactly.

10 Now, to your knowledge, has Kentron issued any
11 actual licenses on its technology?

12 A. I don't know for sure.

13 Q. Okay. What I'd like to do, with your
14 permission, Your Honor -- may I approach?

15 JUDGE MCGUIRE: Yes.

16 BY MR. ROYALL:

17 Q. -- is just to write off of here "uncertain if
18 any actual licenses."

19 Now, do you know, Professor Teece, do you have
20 any understanding of specifically what type of
21 technology Kentron's technology is, the technology that
22 you were discussing with Mr. Stone?

23 A. I'm not a technical expert. I think there was
24 two different technologies they had, including one
25 called QBM.

1 Q. And do you have any understanding as to how
2 that technology corresponds, if it corresponds at all,
3 to any of the four Rambus technologies in this case?

4 A. I believe that with respect to QBM that that is
5 something that either you or Professor McAfee say is a
6 possible substitute technology.

7 Q. Do you have an understanding of what it may be
8 a substitute technology for?

9 A. No. For one of Rambus' technologies.

10 Q. You said in response to an earlier question
11 that you're not a technical expert, and by that, by
12 making that point, are you saying that you really don't
13 have the ability to assess how comparable any of these
14 royalty rates are based on what technologies were at
15 issue in the licenses?

16 A. No. I'm saying something a little bit
17 different because I'm not able to specifically
18 evaluate the technologies, but as a licensing expert
19 and as an industrial organization economist, I do
20 think I can say something about royalty rates which
21 depend more on the economic considerations than pure
22 technical ones.

23 Q. You cannot -- am I right that you cannot, based
24 on your knowledge, not being a technical expert, you
25 can't say which of any of these royalty rates that you

1 discussed with Mr. Stone may be more comparable from --
2 in terms of a technical comparison to Rambus'
3 technologies? Isn't that right?

4 A. That's correct.

5 Q. Okay. Has any Kentron technology ever been
6 adopted in a JEDEC standard, to your knowledge?

7 A. I don't know for sure.

8 Q. Would that be a relevant consideration in terms
9 of assessing the comparable -- the extent to which any
10 Kentron royalty rates were comparable to the Rambus
11 royalties that you're trying to determine -- that
12 you're trying to analyze?

13 A. Would the fact that they have or have not been
14 adopted?

15 Q. Would that be relevant to consider?

16 A. That would be a factor.

17 Q. But you haven't considered that factor?

18 A. Well, I have considered the testimony of
19 Mr. Goodman where he's talked about these technologies
20 and said that, you know, that he's got basically what
21 amounts to, you know, an implicit charge for the
22 technology that amounts in that case to 5 percent and
23 in another case to 10 percent.

24 Q. But you don't know whether that technology has
25 ever been adopted by JEDEC; right?

1 A. I don't know for sure.

2 Q. Do you know whether Kentron has ever disclosed
3 patents or patent applications to JEDEC relating to
4 these technologies?

5 A. I don't know for sure.

6 Q. So I take it then you don't know whether
7 Kentron has signed any RAND letters or provided any
8 RAND letters to JEDEC relating to these technologies;
9 is that right?

10 A. I believe I understand that Kentron has pursued
11 a strategy of charging for its intellectual property
12 and its technology through the sale of products, and
13 that was what Mr. Goodman's testimony was, so I
14 wouldn't expect to see license agreements because not
15 being pure-play technology they had the choice to take
16 the money on the charge for the technology on the
17 product rather than as a license.

18 JUDGE MCGUIRE: I'm not sure that answers his
19 question, though, Professor. I believe he asked you
20 about Kentron -- if you have an understanding as to
21 whether they disclosed their patents or applications to
22 JEDEC.

23 Is that the question?

24 MR. ROYALL: Well, and in addition whether they
25 have provided any RAND assurance letters.

1 JUDGE McGUIRE: Right. Right.

2 BY MR. SWINDELL:

3 Q. Are you aware of that?

4 A. No, not for sure.

5 MR. ROYALL: May I approach, Your Honor?

6 JUDGE McGUIRE: Yes.

7 MR. STONE: Your Honor, we're now into an area
8 where I was prohibited from showing him any underlying
9 documents yesterday that would form the basis for any
10 of his opinions. In fact, I was prohibited from
11 showing him the Infineon summary of certain issues
12 relating to RAND letters.

13 I think it's inappropriate now that for the
14 first time he's shown underlying factual evidence on
15 cross when I didn't have the opportunity to do it on
16 direct.

17 I think Mr. Royall should simply phrase his
18 question, I want you to assume that Kentron did or did
19 not give a letter, that the contents of the letter were
20 as follows. Otherwise, he's going to put this witness
21 in a position of interpreting evidence that's in the
22 record -- and I think we all know the Kentron evidence
23 is in the record -- he's going to put this witness in a
24 position of interpreting the evidence, and were he
25 permitted to interpret the evidence, I should have been

1 permitted to inquire --

2 JUDGE McGUIRE: He's not going to be able to
3 interpret the evidence. I think that should be clear
4 by now.

5 So let's inquire as to what -- well, first of
6 all, I'll give you a chance to respond to the
7 objection.

8 MR. ROYALL: Thank you, Your Honor.

9 I could not agree more with Mr. Stone that in
10 conducting cross-examinations of experts that we should
11 all strive, and I think we have strived, to be
12 consistent, but the consistency that's important here
13 is not the consistency between my cross-examination and
14 his direct. It's the consistency between my
15 cross-examination and the closest example would be his
16 cross-examination of Professor McAfee.

17 And in that cross-examination, without
18 objection, Mr. Stone presented documents to
19 Professor McAfee and he asked him if he recalled
20 certain evidence. He asked -- he pointed him to
21 statements in documents, he asked him to read what it
22 says, and then he asked him whether that was consistent
23 with the assumptions that he had made.

24 That's -- those are the ground rules that have
25 been established.

1 JUDGE McGUIRE: All right. Mr. Stone, do you
2 want to respond to that?

3 MR. STONE: I would like to, Your Honor.

4 JUDGE McGUIRE: All right. Go ahead.

5 MR. STONE: I think that the comparison
6 Mr. Royall draws is an inapt one, and let me explain.

7 What we're trying to do is ensure this witness'
8 testimony is treated fairly as to this witness, and I
9 know that's what Your Honor is striving for as well and
10 I don't mean to suggest otherwise.

11 There were ground rules laid down with
12 Professor McAfee which are different in fact than the
13 ground rules laid down on direct with respect to
14 Professor Teece. We filed a motion in limine or a
15 motion with respect to the scope of that. You ruled
16 on it. I think we all complied with it as best we
17 could.

18 His direct was different than the direct of
19 Professor Teece. I didn't come here and argue
20 yesterday that you should let me do something with
21 Professor Teece that several weeks or a month ago you
22 allowed in another coil

1 they affect your opinion, we should treat that
2 treatment of the witness the same on direct or on
3 cross. That's my only argument, not an argument that I
4 got some advantage with McAfee's cross. I don't
5 believe I did. Simply what is appropriate so that this
6 witness' testimony --

7 JUDGE McGUIRE: Having heard all the arguments,
8 I'm going to overrule the objection.

9 MR. STONE: Thank you, Your Honor.

10 MR. ROYALL: Thank you, Your Honor.

11 May I approach?

12 Your Honor, these documents are not on the
13 exhibit list and I merely want to ask whether he's
14 familiar with them.

15 MR. STONE: I object, Your Honor, to the use of
16 documents that are not on the exhibit list.

17 MR. ROYALL: I'm merely asking him -- he's --
18 I can ask him to refresh his recollection. There's no
19 problem with that. And he said that he does not
20 recall seeing any evidence whether they gave a RAND
21 assurance.

22 So I'm simply asking --

23 JUDGE McGUIRE: Only on that basis.

24 MR. ROYALL: Thank you.

25 And I have copies for you.

1 identified as being potentially relevant?

2 A. I'm not sure it refreshes my memory. I mean, I
3 am aware that there has been some testimony on this.

4 Q. What about the next letter, the September 10,
5 2002 letter, referring to quad band memory? It's
6 another Goodman -- Mr. Goodman's letter to Mr. McGhee.

7 Does that refresh your recollection as to
8 Kentron providing RAND assurances to JEDEC relating to
9 this technology?

10 A. I don't have a specific recollection, but it's
11 not inconsistent with my understanding.

12 Q. So it is your understanding that Kentron
13 provided RAND assurances in connection with its
14 technologies to JEDEC; is that what you're saying?

15 A. Well, it's my understanding, as I testified a
16 few moments ago, that they charge for their technology
17 through the product and not directly by granting or by,
18 you know, endeavoring to extract a royalty.

19 Q. Well, you said in response to my earlier
20 question that seeing this letter relating to RAND
21 assurances is not inconsistent with your understanding,
22 and that's what I wanted to ask you.

23 When you said not inconsistent with the
24 understanding, by that do you mean, to convert the
25 double negative, that it's consistent with your

1 understanding that Kentron did provide RAND assurances
2 to JEDEC?

3 MR. STONE: Objection. Asked and answered,
4 Your Honor. It was exactly the preceding question.

5 MR. ROYALL: I believe the preceding answer
6 was nonresponsive. That's why I asked the question
7 again.

8 MR. STONE: He explained exactly what
9 understanding of his it was consistent with.

10 JUDGE MCGUIRE: Sustained.

11 BY MR. ROYALL:

12 Q. Do you have any understanding,
13 Professor Teece, as to what, if anything, JEDEC has
14 done in response to receiving RAND assurance letters
15 from Kentron?

16 MR. STONE: Objection. Assumes facts not in
17 evidence.

18 MR. ROYALL: I'm simply asking --

19 JUDGE MCGUIRE: Sustained.

20 BY MR. ROYALL:

21 Q. Do you have an understanding or have you made
22 any assumption, Professor Teece, as to what JEDEC has
23 done in response to any RAND assurance from Kentron?

24 A. No.

25 Q. Do you have an understanding or have you made

1 an assumption as to whether JEDEC has considered, after
2 a RAND assurance, has considered alternatives to any
3 Kentron technology?

4 A. I don't know for sure as I sit here right now.
5 Are you asking me because of the intellectual property
6 issues or because of technical reasons?

7 Q. For any reason.

8 A. I don't know.

9 Q. Have Kentron's technologies to date been
10 widely accepted or used in the marketplace, or do you
11 know?

12 A. I don't know.

13 Q. And I believe you said earlier you don't know
14 whether there have been any actual licenses issued;
15 right?

16 A. What I said before is that my understanding of
17 the way that they extract value from their technology
18 is through the sale of complementary products and that,
19 if you analyze what Mr. Goodman said, on one technology
20 it's 5 percent and on the other it's 10.

21 MR. ROYALL: Your Honor, I move to strike. I
22 don't believe that answer is responsive to my
23 question.

24 JUDGE McGUIRE: What? The entire answer?

25 MR. ROYALL: Well, I'm simply seeking to

1 confirm that he has no knowledge of any actual
2 licenses.

3 JUDGE McGUIRE: Sustained.

4 BY MR. ROYALL:

5 Q. So let me come back to this because I just want
6 to be clear about this.

7 Am I right that you have -- you're not aware of
8 Kentron issuing any actual licenses relating to these
9 technologies; is that right?

10 A. Correct.

11 Q. So I take it then you're not aware of any
12 actual license rate that has been charged to any
13 company under license relating to these technologies?

14 A. As I tried to say before, there's an implicit
15 license rate embedded in the product price, which in
16 the case of the FEMMA technology I think one we
17 discussed yesterday is about 5 percent and in the case
18 of the QBM it's around 10.

19 Q. The implicit license rates that you're
20 referring to are license rates that Kentron might want
21 to charge but not license rates that you understand
22 anyone has ever agreed to; right?

23 A. Well, to the extent to which people have taken
24 product, they would have. I just don't know for sure
25 whether they have.

1 Q. Now, don't you agree that the extent to which a
2 technology is -- has been widely used or sold in the
3 marketplace, that that's something that's relevant to
4 consider in determining whether any given royalty rate
5 is -- or assessing the weight to any given royalty
6 rate?

7 A. That's one factor, yes.

8 Q. And you don't know, do you, whether Kentron's
9 technologies have been widely used or not; correct?

10 A. No.

11 Q. So you don't know what weight to give to any
12 such license rates with respect to that issue?

13 A. I think there are a couple of factors here.
14 One, I believe these technologies are ones that either
15 Mr. McAfee or yourself has indicated are possible
16 alternative technologies, so in that sense they have
17 some relevance, and to the extent to which they're not
18 used, they have less relevance.

19 Q. Now, moving --

20 A. But so does the fact that they are an
21 alternative.

22 Q. I'd like to move on to another data point on
23 this, on DX-353.

24 A. Sure.

25 Q. At the top left corner there's a reference to

1 DEC, or I believe that's Digital Corporation, former
2 Digital Corporation?

3 A. Yes. Digital Equipment Corporation.

4 Q. And there's a 1 percent number that was
5 identified with that in your discussion with Mr. Stone;
6 right?

7 A. Yes. I believe that was a commitment they made
8 in the context of RAND.

9 Q. Now, what was the technology at issue in that
10 case?

11 A. I don't recall as I sit here right now.

12 Q. Was it a DRAM technology?

13 A. I don't recall.

14 Q. Do you know what committee of JEDEC it related
15 to?

16 A. Not as I sit here right now.

17 Q. Do you know what, if any, JEDEC standard it
18 related to?

19 A. I don't recall as I sit here right now.

20 Q. Do you know whether JEDEC ever adopted a
21 standard using that technology?

22 A. Not for sure.

23 Q. Do you know whether Digital ever collected
24 royalties from anyone at a 1 percent rate?

25 A. Not for sure.

1 Q. I'm sorry. Relating to that technology?

2 A. I don't know for sure.

3 MR. ROYALL: Your Honor, may I approach?

4 BY MR. ROYALL:

5 Q. What I'd like to write here is "not certain if
6 ever paid or used by JEDEC."

7 Do you have an understanding as to whether
8 Digital is a pure-play technology company?

9 A. It's not. Or at the relevant time period it
10 wasn't.

11 Q. Do you have an understanding as to whether
12 this Digital technology was ever widely used or
13 adopted?

14 A. No.

15 Q. Now, with respect to IBM, which is referenced
16 at the top of DX-353, is IBM a pure-play technology
17 company?

18 A. No.

19 Q. Are you aware of any specific IBM technology
20 that was ever adopted as a JEDEC -- into a JEDEC DRAM
21 standard?

22 A. I believe there were a number of offers. I
23 don't know for sure whether anything was actually
24 adopted.

25 MR. ROYALL: May I approach, Your Honor?

1 JUDGE McGUIRE: Yes.

2 BY MR. ROYALL:

3 Q. What I'm going to write here is "uncertain if
4 adopted by JEDEC."

5 Now, you referred to a range of royalty rates
6 in connection with IBM. I think the range was
7 1 percent to 5 percent?

8 A. Correct.

9 Q. Are you aware of any royalty being paid to IBM
10 in that range relating to a DRAM technology?

11 A. I can't give a specific DRAM technology, but I
12 believe that IBM has licensed patents in that area. It
13 has licensed technologies that relate to DRAMs.
14 Typically as part of cross-licensing arrangements.

15 Q. What DRAM technologies do you have in mind?

16 A. I don't have any specific ones in mind. I do
17 know that IBM early on in the industry did have some
18 patents in the DRAM space.

19 Q. I'm not asking you whether they had patents in
20 the DRAM space. I'm asking you whether you're aware of
21 any IBM DRAM-related patents being licensed for rates
22 in that range, 1 to 5 percent.

23 A. Typically, you know, IBM would cross-license.
24 I'm not aware of a specific, individual, stand-alone
25 license that relates to a DRAM.

1 Q. And am I right that you're not aware of any
2 specific cross-license in which there was a specific
3 DRAM technology incorporated that was licensed at a
4 rate in that range (indicating)?

5 A. Well, as I told you, most of IBM's licenses are
6 cross-licenses. I believe, you know, they've licensed
7 other major industry players, so there wouldn't be a
8 cash rate attached to it because with a cross-license
9 you pay in kind rather than in cash.

10 Q. Well, taking that into account, am I right that
11 you cannot identify for us today any particular license
12 or cross-license by IBM in which a rate between 1 and
13 5 percent was paid to IBM in relation to a DRAM
14 technology?

15 A. I cannot identify a specific one.

16 MR. ROYALL: May I approach, Your Honor?

17 JUDGE McGUIRE: Yes.

18 BY MR. ROYALL:

19 Q. I'm just going to write again "uncertain if
20 ever paid for DRAM" --

21 A. If ever paid in cash I think would be fair.

22 Q. I'll write "cash" in parens below "paid for
23 DRAM technology."

24 Now, if I could ask you to go back to one of
25 the demonstrative exhibits that was used with your

1 testimony yesterday, it's I believe 346. And we can
2 try to pull that up on the screen.

3 Do you recall this slide?

4 A. Yes, I do.

5 MR. ROYALL: Your Honor, I did have a request.
6 It may make sense to mention it now. My request would
7 be that since in respect for your rulings Mr. Stone
8 limited his examination on this slide to the
9 semiconductor line, I would ask that for purposes of
10 the record that a new version of this slide be created
11 that only reports the data on that line that Mr. Stone
12 was permitted to ask questions about.

13 JUDGE MCGUIRE: Mr. Stone, do you care to
14 respond?

15 I mean, it's in the record that I'm not going
16 to consider it. I don't know who would be responsible
17 for having to produce this new slide, but if complaint
18 counsel wants to do that, I can allow you to do that.

19 MR. STONE: I think, Your Honor, we made
20 objections to various of McAfee's slides in which you
21 ruled on them. I don't think we asked that any of them
22 be redone. It seems a little bit unnecessary.

23 JUDGE MCGUIRE: I agree. It's in the record.

1 BY MR. ROYALL:

2 Q. Now, you recall discussing this slide with
3 Mr. Stone?

4 A. Yes.

5 Q. And on your chart Mr. Stone wrote a number
6 reflecting the median statistic that you report in this
7 slide. Do you recall that?

8 A. It was either the median or the mean or both I
9 thought.

10 Q. I think it was both. The lower number, the 3.2
11 number, was the median and then the higher number was
12 the mean.

13 Do you recall that?

14 A. Yes.

15 Q. Now, a median rate as is described in this
16 slide, am I right that what that would represent would
17 be of all the data points that were considered that --
18 and if you put them all up and you lined them up, it
19 would be the one right in the middle; right?

20 A. That's correct.

21 Q. And so there -- would it be true that there are
22 likely just as many royalty rates in the sample above
23 the 3.2 percent amount as there are below the
24 3.2 percent amount?

25 A. There should be exactly the same amount above

1 as below.

2 BY MR. ROYALL:

3 Q. And Your Honor, if I might approach, what I'd
4 like to do is just draw an arrow -- well, let me ask
5 you before I do that.

6 And you don't know what the highest royalty
7 rate was that was part of the data sample that was
8 considered in this survey; is that right?

9 A. I believe it was -- I believe it was
10 30 percent.

11 Q. You believe that or that's just your
12 recollection?

13 A. No. It says it in the article.

14 Q. Okay. Do you know what the lowest data point
15 was? Was it zero?

16 A. I would expect so.

17 MR. ROYALL: May I approach, Your Honor?

18 JUDGE McGUIRE: Yes.

19 BY MR. ROYALL:

20 Q. So what I'm going to do here is just draw an
21 arrow in each direction, and then on the left-hand side
22 of the arrow I'm going to write "0 percent" and on the
23 high end I'm going to write "30 percent" and then below
24 that "equal number above/below 3.2 percent."

25 Now, this table, DX-346, am I right that this

1 gives summary statistics for a data set of royalty
2 rates with over -- is it 1700 transactions?

3 You may need to go to your report to answer
4 that.

5 A. What page of my report?

6 Q. I believe it may be page 52, but let me check.

7 It is page 52 where it's discussed. I'm not
8 sure if the answer to that question is evident from
9 page 52.

10 Oh, I see. I think the 1700 number that I was
11 referencing would be simply doing simple arithmetic of
12 the number of observations in the far right.

13 MR. STONE: No, no. I think that would be a
14 mistake.

15 BY MR. ROYALL:

16 Q. Oh. Okay. I see.

17 So it's over 1500 observations that were part
18 of the number of -- part of this survey; is that
19 right?

20 A. Yes.

21 Q. Now, can you tell us whether any of these
22 licensing transactions that were part of this survey
23 were for DRAM technologies?

24 A. Not specifically, no.

25 Q. Can you tell us whether any of these licensing

1 transactions that were part of this survey related to
2 technologies that were ever considered or standardized
3 by JEDEC?

4 A. No, I can't tell you that.

5 Q. You said that --

6 A. But I'm pretty confident, having said that,
7 that there will be some DRAM technologies in there
8 because I just happen to know that there are some in
9 the public domain and they would be captured, but it
10 would include more than DRAMs.

11 Q. Well, when you say that, you're just inferring
12 from the fact that this was a survey that considered a
13 considerable number of licenses and you know that there
14 are DRAM patents out there, you're just inferring that
15 there must have been some DRAM as part of the
16 semiconductor observations?

17 A. Well, that DRAMs are a significant portion of
18 the industry and this is endeavoring to be
19 comprehensive and I would be extremely surprised if
20 there aren't a number of -- quite a number of DRAM
21 licenses in there.

1 A. I think it's more than a guess because I do
2 know that this database was put together by --
3 initially back in the '90s, early '90s, through
4 clipping essentially all news reports, and I do know
5 that a number of the DRAM agreements did make it into
6 the public domain, and so I'm almost certain they would
7 be captured.

8 Q. And you said that you believe that the lowest
9 royalty rate that was part of this sample was
10 0 percent.

11 Do you know how many 0 percent royalties were
12 included as a part of this survey?

13 A. No, I don't.

14 Q. Now, turning to the next slide, which is
15 DX-347, now, again we have a presentation here of,
16 among other things, a median rate. Do you see that?

17 A. Yes.

18 Q. And would that median rate be of the same
19 nature as the median rate that was presented in the
20 other -- in connection with the other survey?

21 A. Yes.

22 Q. So there will be an equal number of rates
23 above and below the median rates that are identified
24 here?

25 A. Yes.

1 Q. And do you know what the highest rate was in
2 this survey?

3 A. No, I don't.

4 Q. Do you know what the lowest rate was, whether
5 it was zero, there were any zero rates?

6 A. I don't know for sure.

7 MR. ROYALL: May I approach, Your Honor?

8 BY MR. ROYALL:

9 Q. What I would do then for this one, PLX, I'll
10 just draw a line down and put arrows going both
11 directions with question marks at each end.

12 And I think the record will reflect re ine, Dn iiyes
11 huAan"will sameecord Yf huAan"will sam7l sarf,m9loit was zero, t
aw8 9loitNo DXv†aw8 77 againw for sure.)Twiboth

1 Q. And --

2 A. Excuse me. What page was it?

3 Q. It's page 53, and I believe it's paragraph 232
4 at the top of that page.

5 A. Okay. Got it.

6 Q. And you say there in that paragraph that of the
7 total of 705 agreements, 238 had payment terms. Do you
8 see that? Or had payment terms available, was your
9 exact words?

10 A. Yes.

11 Q. And of those 238, 111 called for running
12 royalties; right?

13 A. Yes.

14 Q. And your table, DX-347, only reports 106
15 agreements in total; is that right?

16 A. That is correct.

17 Q. So there were 111 in the survey that called for
18 running royalties, but you only reported on 106 in your
19 demonstrative exhibit?

20 A. Yes. There appears to be only 106 there. I'd
21 have to go back to refresh my memory as to why.

22 Q. So you don't know why the other five examples
23 from the survey of running royalties were omitted from
24 your slide?

25 A. I'd have to go back and check. It may -- it

1 may be because they couldn't find the agreement or
2 something. I don't know for sure.

3 Q. When you say "they," you mean your staff?

4 A. Or PLX.

5 Q. Well, PLX reported 111 calling for running
6 royalties, so presumably they had the information to
7 report that; right?

8 A. Without checking, I can't actually presume
9 that.

10 Q. And I take it that you can't confirm for us
11 today that the median rates and average rates that are
12 calculated on this slide included those -- the rates
13 that were associated with those five missing license
14 agreements; is that right?

15 A. As I sit here right now I can't.

16 Q. Okay. And you don't know the royalty rates
17 that were associated with those five missing license
18 agreements as you sit here today, you don't know that;
19 right?

20 A. I would have to check.

21 Q. And they could be zero, couldn't they?

22 A. I don't think so because this database picks up
23 on SEC disclosures, and there's a materiality
24 requirement for SEC disclosure, so if that's the case,
25 I would be surprised if companies would report

1 0 percent agreements, but it's conceivable.

2 Q. Now, do you know what -- of the 705 agreements
3 that were part of this survey, do you know how many of
4 those or if any of those were for DRAM technologies?

5 A. Well, as I pointed out, we did a separate
6 search for DRAMs and there were six agreements, two of
7 which were cross-licenses.

8 Q. When you said you did a separate search, you're
9 talking about a search within the data used in this
10 survey?

11 A. Yes. As we described, there was a search first
12 of all done on SIC code 3674 and there's also one done
13 for DRAMs/SRAMs.

14 Q. So of all 700-some-odd license agreements you
15 found only six did you say that were -- that had
16 something to do with DRAMs?

17 A. No. A separate search, which was just keyed in
18 the words "DRAM" and "SRAM," produced six agreements,
19 or DRAMs and memory I believe it was, produced six
20 specific agreements.

21 Q. And is that something that was done as part of
22 the preparation of DX-347 or are you talking about some
23 other search that you did?

24 A. That was -- there were two searches, and what
25 I'm reporting here is the one for SIC 3674. I do --

1 the document discusses the fact that there are some
2 specific DRAM licenses that are in the public record,
3 some of which I'm already aware of.

4 Q. But going back to my question, you can't tell
5 us specifically whether any of these royalty rates that
6 were considered as part of the PLX Systems survey were
7 for DRAM-related royalties?

1 Q. So it's a mis -- I'm sorry. There's a
2 mistake?

3 A. In the slide, not in my report, but in the
4 demonstrative. It should be E&Y, not
5 Deloitte & Touche.

6 Q. Ernst & Young? Is that who you're talking
7 about?

8 A. Yes.

9 Q. So do you know anything about the circumstances
10 that caused this consulting and accounting firm
11 Ernst & Young to prepare this database?

12 A. Yes, I do.

13 Q. What were the circumstances of that --

14 A. Well --

15 Q. -- to your understanding?

16 A. -- many of the Big Four accounting firms as
17 well as others began building databases on royalties,
18 some going back to the early '90s, some later on,
19 because there was an increasing demand for information
20 on royalty rates, primarily because when companies
21 negotiate license arrangements they need some kind of
22 benchmark and are frequently happy with kind of median
23 or mean for an industry category that's relevant, so
24 there's been a business in providing these data to
25 outside customers for both negotiating royalties and

1 for setting transfer prices and the like.

2 Q. Let's pull that slide down.

3 Now, you mention in that answer that -- I
4 believe you said something to the effect that when
5 companies negotiate royalty rates or licenses, they
6 negotiate them against a benchmark. Is that what you
7 were saying?

8 A. Yeah. Usually because of the reasons that I
9 mentioned yesterday, there's a lot of uncertainty with
10 respect to where these rates should come down. It's
11 not infrequent that executives will search, as I have
12 done, in the public record to find comparable
13 circumstances and to find what sort of the mean and
14 median rate in the industry are in the industry that's
15 pertinent to their transaction.

16 Q. And the exercise that you've conducted there,
17 what you're looking at are what may be comparable to in
18 terms of royalty rates for Rambus' SDRAM and
19 DDR-related technologies; right?

20 A. Well, I'm creating a universe where I believe
21 these summary statistics do convey meaning as to the
22 value of Rambus' technology.

23 Q. Right. But the focus, the focus point, the
24 whole reason that you're looking into this is to come
25 up with something from the standpoint of an expert, an

1 economic opinion about the reasonable rates associated
2 with those Rambus technologies; correct?

3 A. Absolutely correct, yes.

4 Q. Now, you understand that there have been actual
5 licenses negotiated and entered into by Rambus covering
6 those same technologies; right?

7 A. Yes.

8 Q. Have you looked at the factual record to see
9 what, if any, benchmarks Rambus considered when it set
10 the royalty rates or negotiated the royalty rates that
11 were specified in those licenses?

12 A. I may have looked at that in the context of the
13 Infineon case. I just can't recall as I sit here right
14 now.

15 Q. You would agree that that would be a relevant
16 consideration, wouldn't you, to look at what Rambus,
17 which would be one party to any such license agreement,
18 what it would view or what it did view as relevant in
19 terms of a benchmark for assessing the value of its own
20 technologies?

21 A. What Rambus would look at as well as what the
22 other potential licensees would look at would be
23 relevant.

24 Q. But you didn't -- it would be relevant, but you
25 didn't review the factual record in this case to see

1 what it, if anything, it might show you on that issue,
2 did you?

3 A. I didn't do a specific review as I sit here
4 right now. I do recall in the Infineon case being
5 generally familiar with the fact that they were looking
6 externally at, you know, various other companies and
7 transactions in the marketplace.

8 Q. Do you know whether in negotiating the SDRAM
9 and DDR-related royalties that it did negotiate Rambus
10 felt that it was relevant or that Rambus employees
11 involved felt that it was relevant to consider
12 royalties that had been paid for other technologies?

13 A. Do I know that for sure? Is that your
14 question?

15 Q. Yes.

16 A. I didn't interview anyone on that specific
17 point, but from my general knowledge of the way
18 industry executives, in particular licensing
19 executives, think about these things, I would expect --
20 be extremely surprised if they didn't pay attention to
21 external benchmarks.

22 Q. That would be extremely surprising to you; is
23 that right?

24 A. If they didn't pay some attention to external
25 benchmarks? I think I would be surprised, yes.

1 MR. ROYALL: Your Honor, may I approach?

2 JUDGE McGUIRE: Yes.

3 BY MR. ROYALL:

4 Q. Mr. Teece, I've just handed you a copy of the
5 deposition or one of the depositions of Geoffrey Tate,
6 the CEO of Rambus, that was taken in the Infineon
7 case.

8 And you were an expert witness in that case;
9 right?

10 A. Yes.

11 Q. And so the factual record in that case was
12 something that was available to you to review to the
13 extent that you thought that that might be relevant to
14 the issues that you were commenting on; right?

15 A. Yes.

16 Q. And you understand that the record of the
17 Infineon case has also been available to you in this
18 case to the extent that you might have wanted to
19 consult something in the record in that case in
20 relation to the work that you've done here; isn't that
21 right?

22 A. Yes.

23 Q. Let me ask you to turn to page 157 of
24 Mr. Tate's January 16, 2001 deposition in the Infineon
25 case.

1 Do you have that page?

2 A. Yes.

3 Q. Let's blow it up a little bit, focusing on the
4 bottom of the page.

5 Now, starting on -- at the bottom of the page,
6 do you see the reference to "by Mr. Wilkins"?
7 That's -- Mr. Wilkins I believe was the Infineon lawyer
8 doing the questioning in this deposition.

9 Do you see that?

10 A. Yes.

11 Q. This question starting on line 19, he asked the
12 question: "Was the" -- before I go any further on
13 this -- could I confer with Mr. Stone?

14 JUDGE MCGUIRE: Go ahead.

15 (Pause in the proceedings.)

16 MR. ROYALL: I'm just conferring about
17 in camera issues. I don't think we have a problem.

18 BY MR. ROYALL:

19 Q. The question there is: "Was the .75 royalty
20 rate based on other licenses for semiconductors that
21 you were aware of?"

22 Do you see that question?

23 A. Yes.

24 Q. And then starting at the bottom of that page,
25 line 22 and then continuing over to the next page,

1 Mr. Tate answers: "It was actually very little in the
2 public domain about license terms of other
3 semiconductor IP licenses."

4 Do you see that?

5 A. Yes.

6 Q. And then following on, the next question is:
7 "So I mean that wasn't a consideration as far as
8 arriving at the royalty percentages under the SDRAM
9 and DDR licensing agreements, that other license
10 agreements in the semiconductor industry weren't a
11 consideration?"

12 Do you see that?

13 A. Yes.

14 Q. And there's an objection, and then picking up
15 at line 10, Mr. Tate says: "Companies within
16 negotiations would refer to what they said were other
17 agreements, but we had no specific knowledge. And in
18 any case, it's apples and oranges. The royalty rate
19 for one patent and the royalty rate for another
20 patent, even in the industry, can vary tremendously
21 based on the value of the patent and the applications
22 involved."

23 Do you see that?

24 A. Yes.

25 Q. Now, in arriving at -- in conducting your

1 reasonable royalty analysis and in arriving at your
2 conclusions, am I right that you did not take account
3 of this testimony from Rambus' CEO in the Infineon
4 litigation?

1 A. Yes. There is a lot of heterogeneity, and
2 that's why, as an external expert looking at this, I
3 want to look at the totality of information that's out
4 there, recognizing that no one particular number is an
5 ideal benchmark. It is apples and oranges at one
6 level, but I do believe, if you look at an aggregate
7 level, it's not apples and oranges. The means and the
8 medians as well as the ranges for that matter do convey
9 something.

10 Q. But you weren't aware in conducting your
11 analysis that Rambus believed that the situation was
12 so much of an apples-and-oranges situation that it
13 simply wasn't relevant for Rambus to consider other
14 royalties paid on other technologies in assessing the
15 value of its own technology? You weren't aware of
16 that?

17 MR. STONE: Your Honor, I object to the form
18 of the question. It assumes facts not in evidence.
19 He's asking this witness to comment on the evidence.
20 It's argumentative as framed and it's inconsistent
21 with --

22 JUDGE McGUIRE: Sustained.

23 BY MR. ROYALL:

24 Q. Let's move on, Mr. Teece, to another issue.

25 Mr. Perry has just suggested a break. I think

1 that from my standpoint I'm happy to do that at a
2 convenient time.

3 JUDGE McGUIRE: That would be fine. Do you
4 want to go now?

5 MR. STONE: That's fine, Your Honor.

6 JUDGE McGUIRE: All right. We'll take a
7 ten-minute break.

8 (Recess)

9 JUDGE McGUIRE: You may proceed with your
10 cross, Mr. Royall.

11 MR. ROYALL: Thank you, Your Honor.

12 BY MR. ROYALL:

13 Q. Before moving on to another subject, I wanted
14 to touch on one thing relating to DX-347.

15 Do you recall we discussed this a moment ago,
16 Professor Teece?

17 A. Yes.

18 Q. And this was a survey that was done relating to
19 information that was included in a certain SIC code; is
20 that right, for semiconductor and related devices?

21 A. Yes.

22 Q. And you said I believe in response to my
23 earlier questions that you didn't think that companies
24 would report the zero royalty rates, that there was
25 some kind of materiality threshold that was your

1 understanding with SIC codes?

2 A. No, not with the SIC codes. But this database
3 is populated in substantial part from SEC disclosures
4 where, you know, a company will report doing a license
5 with another company in the industry, and frequently if
6 it's a material transaction, they'll have to provide
7 the SEC with a copy of the agreement, which they'll do,
8 and sometimes they white-out -- excuse me -- they erase
9 the royalty rate, but sometimes they don't, and what
10 databases like this capture is those royalty agreements
11 that are disclosed to the SEC where the royalty rate is
12 disclosed.

13 Q. So for the reasons that you've described, am I
14 right that there may be zero royalty rates or
15 de minimis royalty rates that were not deemed material
16 enough to be included in SEC disclosures and therefore
17 didn't make it into this database?

18 A. It wouldn't -- it's possible it wouldn't make
19 it in from the SEC side. But in addition to the SEC,
20 this database, as I understand it, also collates
21 reported transactions that end up somewhere in the
22 public record, so there's some chance that those other
23 ones can be captured from the other feeds into the
24 database.

25 Q. But if that were not the case and if the

1 principal source and only source here were SEC
2 disclosures that didn't include zero or de minimis
3 rates, then that would tend to skew this sample upward;
4 is that right?

5 A. That factor would tend to skew it upward, and
6 the fact that there's cross-licenses would tend to skew
7 it downward.

8 Q. You can pull that down.

9 Now, if we can pull up now DX-332. This is
10 your but-for world decision tree?

11 A. Yes.

12 Q. Now, the first branch of that decision tree at
13 the top relates to the scenario in which Rambus
14 discloses to JEDEC, but JEDEC does not ask for a RAND
15 letter; right?

16 A. Yes.

17 Q. And your testimony yesterday was that that, in
18 your mind or as you understand it, that is a
19 conceivable scenario?

20 A. Yes.

21 Q. That was not your understanding, was it, when
22 you and Dr. Sherry wrote your expert report?

23 A. It was not -- well, at that -- it was
24 conceivable at that time, but I didn't think it was
25 particularly likely. It was other evidence that was

1 drawn to my evidence that I took into account.

2 Q. If I could ask you to refer to paragraphs -- to
3 paragraph 143 of your expert report on page 31.

4 And actually let's -- I've got a number of
5 references, but let's look at paragraph 145. It's the
6 next page, page 32.

7 A. Okay.

8 Q. Do you have that?

9 A. Yes.

10 Q. There's a reference in that paragraph to
11 patented technologies, and then you say, "As I explain
12 in more detail in section IV.A.3 below, JEDEC relied on
13 such technologies," again referring to patented
14 technologies, "on numerous occasions, as long as the
15 patent holder agreed to license on RAND terms."

16 Do you see that?

17 A. Yes.

18 Q. And then in paragraph -- the next paragraph,
19 146, in the first sentence, you refer -- you have the
20 words -- you say "JEDEC's concern" -- you refer to
21 JEDEC's concern and then you say "was not so much in
22 avoiding patented standards as in ensuring that patent
23 holders were willing to license on RAND terms."

24 Do you see that?

25 A. Yes.

1 Q. So at the time that you wrote your -- along
2 with Dr. Sherry, wrote your expert report, it was your
3 understanding or assumption that in order for JEDEC to
4 adopt a patented technology that the patent holder
5 would need to give an assurance that they were willing
6 to license on RAND terms? That was your understanding
7 and your assumption at the time you wrote your expert
8 report; right?

9 A. Yes. If they believed that there was patented
10 technology implicated, that's my understanding then and
11 now.

12 Q. So it continues to be your understanding that
13 if JEDEC understands or believes that there is a
14 patented technology, it's been disclosed to them that
15 there's a patented technology that may relate to their
16 standards, they will not adopt a standard using that
17 patented technology absent a RAND assurance?

18 A. Can I have that read back. I think the answer
19 is yes, but let me have it back.

20 JUDGE MCGUIRE: Will the court reporter please
21 restate it.

22 (The record was read as follows:)

23 "QUESTION: So it continues to be your
24 understanding that if JEDEC understands or believes
25 that there is a patented technology, it's been

1 disclosed to them that there's a patented technology
2 that may relate to their standards, they will not adopt
3 a standard using that patented technology absent a RAND
4 assurance?"

5 THE WITNESS: That's my understanding.

6 BY MR. ROYALL:

7 Q. But despite that being your understanding, you
8 present as a scenario in your decision tree -- let's go
9 back to that, DX-332 -- you present a scenario here,
10 the first scenario, of JEDEC does not ask for a RAND
11 letter; right?

12 A. Correct.

13 Q. And so in that scenario am I right that you're
14 assuming that not only does JEDEC not ask but they
15 don't get a RAND letter; right?

16 A. What I'm assuming is that JEDEC assesses that
17 there isn't intellectual property, either they, you
18 know, believe that there's prior art or whatever, and
19 they essentially proceed because they don't think that
20 there are patent issues and they don't ask for a RAND
21 letter.

22 Q. I see.

23 A. So there may be a difference. You know, this
24 is JEDEC's behavior and it reflects, you know, JEDEC's
25 understanding of the situation.

1 that if patents are disclosed to JEDEC that JEDEC
2 cannot and will not adopt a standard incorporating
3 those absent a RAND letter?

4 A. I wouldn't put it quite like that. It's not so
5 much if patents are disclosed. It's if JEDEC has
6 knowledge that there are patents that are -- that read
7 on the standard that it cannot, absent a RAND letter,
8 go ahead and adopt those standards.

9 Q. That's your assumption?

10 A. Can I have my answer read back, please.

11 (The record was read as follows:)

12 "ANSWER: I wouldn't put it quite like that.
13 It's not so much if patents are disclosed. It's if
14 JEDEC has knowledge that there are patents that are --
15 that read on the standard that it cannot, absent a RAND
16 letter, go ahead and adopt those standards."

17 THE WITNESS: That's my understanding of their
18 behavior, that if there was patents that were
19 implicated by the standard, if they believed there were
20 and they didn't have a RAND letter, then they couldn't
21 proceed absent the RAND letter.

22 BY MR. ROYALL:

23 Q. Now, in describing or referring to this first
24 "do not ask for RAND letter" scenario, you said
25 something about having seen evidence since your report

1 was completed relating to this potential scenario?

2 A. Yes.

3 Q. And is the evidence that you're referring to
4 evidence relating to a company named Echelon?

5 A. Yes.

6 Q. Let's go to the next demonstrative exhibit,
7 DX-333.

8 This is the slide in which you refer to the
9 company Echelon in the first bullet point. Do you see
10 that?

11 A. Yes.

12 Q. What kind of company is Echelon? What do they
13 do? What do they make?

14 A. They're a small technology company. I don't
15 know a great deal about them.

16 Q. Are they a pure-play technology company like
17 Rambus?

18 A. I'm not precisely sure.

19 Q. Do you know what, if any, technologies they
20 have or purport to have that relate to any JEDEC
21 standards process?

22 A. Well, I believe they had technologies that
23 related to certain EIA standards. I forget precisely
24 which ones they were.

25 Q. Okay. So this -- you understand that they had

1 something that related not to any JEDEC standard or
2 standard process but to, rather, an EIA standards
3 process?

4 A. That's my understanding, yes. I think it was
5 the CICA or something like that.

6 Q. But you don't know, do you, what EIA
7 standardization effort Echelon's technology related
8 to?

9 A. I don't know the particulars of it.

10 Q. And so you don't know what, if any,
11 relationship any Echelon technology had to any EIA
12 standards process; is that right?

13 A. Well, I believe the Echelon testimony that I
14 read, I guess take it as an assumption, was that
15 Echelon was trying to insert itself, its own
16 standards, and as an alternative to certain EIA
17 standards.

18 Q. Is it your understanding that someone from
19 Echelon has testified in this case?

20 A. No. I believe it was the EIA general counsel
21 who said that.

22 Q. Okay. And so you reviewed his trial testimony
23 as it relates to Echelon?

24 A. I believe it was trial testimony, yes.

25 Q. And this is Mr. John Kelly. Does that refresh

1 your recollection?

2 A. Yes, it was Mr. Kelly.

3 Q. Now, you recall that Mr. Kelly said -- or do
4 you recall that Mr. Kelly said in his trial testimony
5 that before participating in EIA-related activities
6 that Echelon had communicated a preference that EIA not
7 proceed with whatever standards were at issue? Do you
8 recall Mr. Kelly describing that?

9 A. I believe that's correct.

10 Q. And do you recall Mr. Kelly suggesting in his
11 testimony that Echelon had threatened EIA potentially
12 with spending money to block any EIA standard if EIA
13 were to move forward? Do you remember something along
14 those lines?

15 A. I don't recall that specifically.

16 Q. You said yesterday in reference to EIA -- at
17 least I wrote down what you said -- I'm sorry -- to
18 Echelon, something to the effect that you understood
19 Echelon was trying to throw sand in the gears?

20 A. Well, as I said before, it had its own standard
21 that it wanted to advance and it thought -- I believe
22 Mr. Kelly testified that he thought that what they were
23 trying to do was to derail and that by "derail" I mean
24 throw sand in the gears of the JEDEC process and the
25 JEDEC standard.

1 Q. And do you think that's comparable to the
2 situation of Rambus? Do you think that Rambus was also
3 trying to derail the JEDEC standards?

4 MR. STONE: Objection, Your Honor. A, this is
5 a question that I think is not properly put to this
6 witness because it asks him to say do you think that
7 Rambus was actually doing something, and I think this
8 witness should not be asked to comment on the evidence.
9 I also think it's not clear that we're talking here
10 about the but-for world.

11 JUDGE McGUIRE: Sustained.

12 MR. ROYALL: I can rephrase.

13 BY MR. ROYALL:

14 Q. Now, you said -- you have said in this slide
15 and in your testimony that you find this Echelon
16 situation to be of some relevance here to your own
17 analysis.

18 Is it your understanding or assumption that in
19 the but-for world in which Rambus discloses that Rambus
20 would engage in a similar effort to derail the JEDEC
21 standards?

22 A. No, that's not my assumption. But I think the
23 issue is that JEDEC -- well, many JEDEC members
24 believe that there was prior art out there, that it's
25 unlikely that Rambus would get patents, and that that

1 would be the case that wouldn't be a reason why JEDEC
2 would just continue on. And not ask for a RAND
3 letter.

4 Q. So you're not assuming that in the but-for
5 world Rambus engages in conduct or actions that are
6 comparable to the conduct or actions that you
7 understand Echelon may have engaged in; is that right?

8 A. Well, you know, the Echelon incident I think
9 does demonstrate that the EIA is aware of the fact that
10 companies may sometimes be trying to game the system or
11 that there are multiple reasons. There are specific
12 reasons why JEDEC might not want to orld Rambus enare tryrm I'mh

1 cross-examination he thought this was a possibility,
2 too.

3 MR. ROYALL: Your Honor, I believe that
4 misstates the record.

5 MR. STONE: Well, I think --

6 MR. ROYALL: I would ask that we not have the
7 witness interpreting Professor McAfee's testimony,
8 particularly in a way that misstates the testimony.

9 MR. STONE: He had to -- to honestly answer the
10 question which says "Am I right that the only evidence
11 that you're aware of" is this, he has to state what
12 he's aware of. The interpretation was called for by
13 counsel.

14 JUDGE McGUIRE: Overruled. If it does
15 misstate the witness, you can point it out in your
16 brief.

17 BY MR. ROYALL:

18 Q. What do you recall in this regard
19 Professor McAfee's testimony amounting to?

20 MR. STONE: Your Honor, I think this is a
21 line of questioning that we have no reason to go
22 into. You can read what Professor McAfee said and
23 we'll see what he said and I think we're just going
24 far afield.

25 JUDGE McGUIRE: Sustained.

1 was a concern.

2 Q. And you're aware, are you not, that the EIA was
3 concerned that by engaging in the conduct it was
4 engaging in that Echelon was acting in violation of EIA
5 rules or at odds with the EIA rules; right?

6 A. What Echelon was doing was trying to I think
7 set things up so that a RAND letter would be requested
8 of it. I'm not sure. I'm not an expert on the EIA
9 rules, so I don't know precisely how that plays against
10 the EIA rules.

11 Q. Well, you read the testimony you said of
12 John Kelly in this trial relating to Echelon; right?

13 A. Yes.

14 Q. And do you recall in reading that testimony,
15 which you've relied on for purposes of making this
16 assumption, any testimony by Mr. Kelly to the effect
17 that he, the general counsel of EIA, was of the view
18 that Echelon's conduct was at odds with EIA's rules?

1 which nothing changes except the challenged conduct
2 does not occur? That is, the defendant, if you will,
3 conforms its conduct in the but-for world with what it
4 is challenged for not having done in the real world;
5 right?

6 A. That's the starting point, but you have to
7 trace through the implications of that for the but-for
8 world.

9 Q. Right.

10 But that's the starting point in terms of
11 defining the world, and then you have to think about
12 how that would affect potentially other things?

13 A. That's correct.

14 Q. So in the but-for world in this case I assume
15 that you would agree that from an economist's
16 standpoint in conceptualizing such a world what you
17 would want to do is conceptualize such a world in which
18 Rambus did not engage in any conduct that was in this
19 case at odds with the requirements or the rules or the
20 process of JEDEC; right?

21 A. Right. And I'm not assuming that. In this
22 particular instance, it's what's JEDEC's behavior would
23 be once there was disclosure of Rambus' potential
24 patent positions.

25 Q. So you would agree that, again from the

1 standpoint of economic theory, if it were true, and I'm
2 just asking you to assume that if it were true that
3 conduct of the sort that Echelon engaged in was a
4 violation of EIA/JEDEC rules, for instance, because it
5 was conduct in bad faith, it would not be appropriate
6 for you in constructing a but-for world to assume that
7 Rambus would engage in the same type of conduct in the
8 but-for world?

9 A. I agree with that, and I'm not hypothesizing
10 that. The behavior I'm referring to is JEDEC's, that
11 they might well conclude that Rambus' pending patents
12 will never become patents so why bother to ask for a
13 RAND letter.

14 Q. Now, referring to this same slide, DX-333, I
15 believe you said yesterday -- and I'm referring to the
16 bottom three or four bullet points on this slide -- in
17 reference to that I believe you said yesterday that you
18 have assumed that in the time periods referenced here
19 that Rambus made disclosures to JEDEC that gave JEDEC
20 reason to understand that Rambus had patents or patent
21 applications relating to JEDEC's standardization work;
22 is that right?

23 A. I don't believe that was quite what I said.

24 Q. Well, let me ask you to clarify what you did
25 say or recall saying with regard to the assumptions

1 that you were making in this regard.

2 A. Basically I believe what I said was that there
3 were various hints provided, for instance, in the Crisp
4 letters and importantly the event of the WIPO standard
5 or the WIPO application was out there. There was quite
6 a number of instances where JEDEC would become aware of
7 the fact of the possibility of Rambus' intellectual
8 property.

9 Q. So it's your assumption that through letters
10 written by Richard Crisp or through discussion of
11 Rambus' WIPO application that there were hints
12 available or in the public domain that might have given
13 JEDEC members some reason to have some sense that
14 Rambus might have intellectual property?

15 MR. STONE: Your Honor, I object. I think the
16 question is an incomplete statement of the testimony
17 provided yesterday by this witness on this issue.

18 As long as it's clear that he's only pulling
19 out some of what he said yesterday, I have no
20 objection. I just didn't want --

21 JUDGE McGUIRE: Noted.

22 MR. STONE: Thank you.

23 THE WITNESS: Of course, by the time the
24 patents issued, there's more than a hint; there's
25 concrete information in the marketplace.

1 BY MR. ROYALL:

2 Q. And when did you learn of this evidence, this
3 Richard Crisp evidence or other evidence that you're
4 referring to? Do you recall? At some time after your
5 report was completed?

6 A. I was generally aware of some of the
7 correspondence. My staff had relayed that to me
8 orally. I hadn't particularly focused on it until in
9 fact Mr. Kelly's testimony which drew this particular
10 alternative or threw this particular alternative into a
11 new light.

12 Q. Now, you mentioned hints that you were -- made
13 assumptions that there were some hints that may have
14 been conveyed through various disclosures that were
15 known to JEDEC.

16 I take it you're not aware of or haven't made
17 any assumptions that Rambus in fact made explicit
18 disclosures to JEDEC relating to the potential of its
19 technologies being used or what it believed to be its
20 proprietary technologies being used in JEDEC's
21 standards?

22 A. Yes. I'm not assuming that there was specific
23 disclosures to JEDEC. There were specific disclosures
24 through the WIPO application, but they were not
25 directly directed at JEDEC, although they were brought

1 to the attention that -- information was drawn to the
2 attention of JEDEC.

3 Q. Now, are you assuming that any of these hints
4 that you've referred to gave JEDEC a basis to
5 appreciate or understand that Rambus believed it had
6 patent rights over any of the specific four
7 technologies at issue in this case?

8 A. Well, that hasn't been something of specific
9 study that I've done, but I am aware that, you know, that hasn't

1 patent rights over any of the specific four
2 technologies at issue in this case? Can you answer
3 that?

4 A. Can I have it read back, please.

5 (The record was read as follows:)

6 "QUESTION: Let me ask you -- I'm not asking
7 you, Mr. Teece, about what knowledge there may be
8 generally or thoughts there may be about prior art. It
9 was a more specific question.

10 "I'm asking you, are you assuming that any of
11 these hints that you've referred to gave JEDEC a basis
12 to appreciate or understand that Rambus believed it had
13 patent rights over any of the specific four
14 technologies at issue in this case? Can you answer
15 that?"

16 THE WITNESS: You're asking me about patent
17 rights, not about patent applications; is that
18 correct?

19 JUDGE MCGUIRE: How do you define the term --

20 BY MR. ROYALL:

21 Q. I was not limiting. I was not limiting. I
22 said that Rambus believed it had patent rights. We can
23 start there. We can --

24 MR. STONE: I think the question then as framed
25 is ambiguous because he hasn't defined what a patent

1 right is.

2 JUDGE McGUIRE: That's the question I asked.

3 MR. ROYALL: I can restate it.

4 BY MR. ROYALL:

5 Q. Are you assuming that any of these hints that
6 you've referred to gave JEDEC a basis to appreciate or
7 understand that Rambus believed it possessed either
8 patents or patent applications that related to any of
9 the specific four technologies at issue in this case?

10 A. Can I have it read back.

11 (The record was read as follows:)

12 "QUESTION: Are you assuming that any of these
13 hints that you've referred to gave JEDEC a basis to
14 appreciate or understand that Rambus believed it
15 possessed either patents or patent applications that
16 related to any of the specific four technologies at
17 issue in this case?"

18 THE WITNESS: Well, I -- I do believe that --
19 and you're asking about how these -- what these hints
20 may have conveyed about Rambus' view of the world.

21 Yes, I do think that it's possible and likely
22 that it would convey the view that Rambus had
23 intellectual property or potentially down the road
24 might have intellectual property. But you know, I'm
25 not an expert on assessing this. I'm just considering

1 that there's a decent chance of that, which is all I
2 need to create some motivation for the scenario that
3 I've discussed.

4 BY MR. ROYALL:

5 Q. Again, Professor Teece, I'm not asking whether
6 there is a potential of -- that JEDEC may have known
7 that Rambus had intellectual property in the broad
8 sense. My question is focused on the four specific
9 technologies in this case.

10 And I'm asking you whether -- you have these
11 various hints that you've referred to -- that you
12 assumed that on the basis of such hints that JEDEC or
13 JEDEC participants possessed an understanding that
14 Rambus believed that it had patents or patent
15 applications that related to any of the specific four
16 technologies at issue in this case.

17 A. And my testimony is I think they indicated --
18 they would indicate to JEDEC members that Rambus --
19 that there was a certain probability that Rambus
20 believed that it had such possible intellectual
21 property.

22 Q. Okay. So you're saying that the hints that
23 you're referring to, the Richard Crisp letter to JEDEC
24 and the other things that you mentioned, that you think
25 that those hints would indicate to JEDEC this certain

1 probability that you referred to?

2 A. Yes. It's not a certainty, but it would lead
3 to a probability that Rambus either -- they might in
4 the future have intellectual property.

5 Q. In making that assumption, did you consider
6 whether there was any evidence in the record that
7 Rambus, either before or after withdrawing from JEDEC,
8 sought to conceal its SDRAM-related intellectual
9 property from JEDEC?

10 A. And once again using the word "intellectual
11 property" do you mean patent applications?

12 Q. Patents and patent applications.

13 A. Okay. Can I have the question again with that
14 clarification.

15 (The record was read as follows:)

16 "QUESTION: In making that assumption, did you
17 consider whether there was any evidence in the record
18 that Rambus, either before or after withdrawing from
19 JEDEC, sought to conceal its SDRAM-related intellectual
20 property from JEDEC?"

21 THE WITNESS: I --

22 MR. STONE: Your Honor, I do object to the
23 question on the grounds that this requires the witness
24 to state his interpretation of the evidence in the
25 record, which is exactly what I think we've concluded

1 witnesses should not do.

2 I think the question should simply be framed "I
3 want you to assume once" --

4 JUDGE McGUIRE: Sustained.

5 MR. ROYALL: May I approach, Your Honor?

6 BY MR. ROYALL:

7 Q. Now, I've just handed you two documents,
8 Professor Teece, and I'd like to start with the one
9 that's been marked as CX-919. And this is a
10 February 10, 1997 e-mail from -- sent by Geoffrey Tate,
11 the CEO of Rambus.

12 And I'd like to point you to some language at
13 the bottom of the page, and specifically you'll see
14 the paragraph beginning with the number 2 at the
15 bottom?

16 A. Yes.

17 MR. STONE: Your Honor, I object. There's been
18 no foundation the witness has seen the document before,
19 that there should be a proper foundation laid before
20 the witness is asked about the contents of the
21 document.

22 MR. ROYALL: Your Honor, may I respond?

23 JUDGE McGUIRE: Yes.

24 MR. ROYALL: What I'm doing, and I've been --
25 tried to be very careful about this, is I've looked at

1 the transcript of Professor McAfee's
2 cross-examination. I'm following the precise
3 methodology that Mr. Stone used in asking questions of
4 Professor McAfee.

5 And I would refer for the record to page 7703
6 of the trial record and continuing on 7704. He showed
7 the witness a document. He said he'd like to direct
8 his attention to some language. He read the language.
9 And then he asked the question: Is that consistent
10 with the assumptions you've made?

11 And that's -- I'm trying to follow the precise
12 methodology that he used in that portion of the
13 cross-examination of Professor McAfee.

14 JUDGE MCGUIRE: Mr. Stone, would you like to
15 respond to that?

16 MR. STONE: I would, Your Honor. Thank you.

17 And as we know from Professor McAfee's
18 testimony, he indicated that he had read all of the
19 documents that were in evidence in this case. I
20 presume if there was any concern on complaint counsel's
21 part that there was not a proper foundation for showing
22 him the document they would have objected.

23 JUDGE MCGUIRE: Okay. Mr. Royall, just lay a
24 foundation and we can get beyond this.

25 MR. ROYALL: Let me -- if I could just respond

1 to -- Professor McAfee didn't say he read every
2 document.

3 JUDGE McGUIRE: It's going to speak for itself,
4 so let's just move on.

5 BY MR. ROYALL:

6 Q. Now, you have since -- I understand -- and we
7 made some reference to this yesterday -- that you did
8 not review the Rambus documents in connection with the
9 work leading up to your expert report other than the
10 Rambus license agreements that were cited in your
11 report, so I understand that's true, but I also
12 understand that you did look at some Rambus documents
13 after you completed your report; is that right?

14 A. That's correct.

15 Q. And did you look at Rambus -- well, did you
16 look at this particular document, CX-919, Mr. Tate's
17 February 10, 1997 e-mail?

18 A. No. I haven't seen this one before.

19 Q. So you didn't take this document into account
20 in forming your opinions and conclusions in this case;
21 is that right?

22 A. That would be correct.

23 Q. Let me ask you to look at the next document,
24 CX-938. This is -- there are two e-mails here, but the
25 one that is of interest to me is the July 11, 1997

1 e-mail from Mr. Bill Davidow, chairman of Rambus, to
2 Gerry Parker of Intel. And that begins on the first
3 page of CX-938. Do you see that?

4 A. Yes.

5 Q. Did you take into account this document in
6 forming your opinions or developing the assumptions
7 that you made in connection with this case?

8 A. I haven't seen this document before. I'm not
9 sure it's particularly relevant to my testimony,
10 but --

11 Q. I'm not asking you to comment on whether
12 documents are relevant.

13 If we're going to do that, Your Honor, I think
14 I'm entitled to ask questions about it. He's made that
15 comment. I think I'm now entitled to probe the
16 relevance of this document to his testimony.

17 JUDGE MCGUIRE: Go ahead.

18 BY MR. ROYALL:

19 Q. Now, you'll see in this document, CX-938,
20 Mr. Teece, that the chairman of Rambus, Bill Davidow,
21 writes to Mr. Parker, and I'll represent to you that
22 Mr. Parker is an Intel executive, and he says in the
23 first paragraph of his letter, "Below is one of the
24 updates," referring to DRAM -- the DRAM company
25 problem, which is in the prior sentence.

1 A. And what is the DRAM company problem?

2 Q. Well, let me just point the language that I'd
3 like to point you to.

4 And then he says, "One of the things we have
5 avoided discussing with our partners is intellectual
6 property problem discussed in the fourth paragraph."

7 Do you see that?

8 A. Yes.

9 Q. And then below the heading that says "Below is
10 the Rambus update," the fourth paragraph under that at
11 the very bottom of the first page of CX-938 states:
12 "We have not yet told Siemens that we think SLDRAM and
13 SDRAM DDR infringe our patents. We think that will
14 just irritate them."

15 Let me just stop there.

16 Now, you said that you didn't think this
17 document was relevant to your testimony; right? That
18 was what you said a moment ago?

19 A. To the but-for world where we assume that, you
20 know, Rambus discloses.

21 Q. You assume in the but-for world that Rambus
22 discloses; right?

23 A. Yeah.

24 Q. But you have also assumed based on evidence
25 from the real world that JEDEC had, based on evidence

1 that was -- hints that were provided in the real world,
2 that JEDEC had reason to believe that Rambus might have
3 patents covering SDRAM; right?

4 A. That there might be certain probability of that
5 in the actual world.

6 Q. Yes.

7 And isn't it relevant to consider evidence that
8 some years later or a year after withdrawing from JEDEC
9 that the chairman of the company was writing to Intel
10 telling them about how Rambus had sought to avoid
11 disclosing to DRAM makers that it believed it had
12 patents over SDRAM DDR?

13 MR. STONE: Your Honor, I object to the
14 characterization of this because what he says is we
15 have not told them. That's what he says, we have not
16 told them because we don't want to irritate them. And
17 counsel's question, as he reformulates it, is
18 argumentative and improperly characterizes the --

19 MR. ROYALL: I can restate, Your Honor.

20 JUDGE McGUIRE: Restate.

21 BY MR. ROYALL:

22 Q. Isn't it relevant to consider evidence that
23 some years after or a year after Rambus withdrew from
24 JEDEC the chairman of the company was writing to Intel
25 telling him that Rambus had not yet told DRAM makers,

1 in this case specifically Siemens, that it thought
2 SDRAM DDR infringed its patents? Isn't that relevant
3 to consider?

4 A. Well, it's extremely tangential I believe,
5 Mr. Royall. You know, in the but-for world they do
6 disclose. In the actual world where we're assuming
7 that they don't disclose what they're supposed to
8 disclose, so that's the nature of the actual world, is
9 that there's limited disclosure.

10 What I'm really trying to calibrate is when
11 there are things -- let's take this as being a correct
12 representation of what was going on. I have no way of
13 knowing whether that's true. But let's suppose it is,
14 that Rambus isn't going out of its way to disclose.
15 Then -- but still there are things that get into the
16 public domain. There's the WIPO application. There's
17 information that gets out there.

18 And what I'm trying to calibrate is what does
19 JEDEC do, does JEDEC inquire, does JEDEC ask for a RAND
20 letter, and it doesn't.

21 So that's just a factor that helps me view and
22 interpret what they might have done in the but-for
23 world.

24 Q. So are you saying that facts in the real world
25 are not relevant to your assessment of what would have

1 happened in the but-for world?

2 A. No. They are relevant inasmuch as they go at
3 least with respect to this note in the decision tree to
4 helping us understand what JEDEC's behavior would be in
5 the but-for world.

6 Q. And you don't think it's relevant in
7 understanding what JEDEC's behavior would be in the
8 but-for world that Rambus apparently -- well, let me
9 restate this so we don't get an objection.

10 Let me ask you to assume that Rambus in
11 July 1997 believed that DRAM manufacturers did not
12 already know on their own that SDRAM and DDR -- that
13 Rambus believed SDRAM and DDR infringed their patents
14 and they didn't want to tell them that.

15 So if you assume with me that that's what
16 Rambus believed, they believed that JEDEC didn't
17 already know that and they didn't want to tell the DRAM
18 makers, now, would -- would you agree that if that --
19 assuming that to be true, that that would be something
20 that would be relevant for you to consider in making an
21 assumption about whether some hints that in the public
22 domain caused JEDEC to appreciate that Rambus had
23 patents or patent applications that might relate to or
24 cover its standards?

25 A. I think to answer the question of what JEDEC

1 would have done in the but-for world after there's
2 disclosure it's more relevant to look at JEDEC's
3 behavior and not Rambus' state of mind. I mean, it's,
4 as I said before, at best tangentially related.

5 Q. So in making your assumption about whether
6 hints may have caused JEDEC to realize that Rambus
7 thought that it had patents or patent applications
8 covering the standards, in making that assumption, you
9 think it's appropriate just to ignore the evidence
10 that shows what Rambus believed; is that what you're
11 saying?

12 A. It's very, very subsidiary to the question of
13 what JEDEC believed.

14 Q. Okay. Now, let me ask you to go to the next
15 slide, DX-334.

16 Now, this is a slide that you prepared again
17 relating to the discussion of whether in the but-for
18 world Rambus would agree to sign a RAND letter; is that
19 right?

20 A. That's correct.

21 Q. And for each of three different provisions
22 associated with a RAND assurance you describe both pros
23 and cons; right?

24 A. Yes.

25 Q. And as to the first point, am I right that it's

1 your view that, generally speaking, an assurance that
2 license will be made available to all interested
3 parties is something that would make it more likely
4 that firms would be willing to adopt a patented
5 technology?

6 A. Yes.

7 Q. And you would expect that to be true in this
8 case with respect to Rambus' technologies as well;
9 right?

10 A. That if it's made available to everybody versus
11 just a few it has a better chance of being accepted,
12 yes.

13 Q. Okay. And going to the second point, you refer
14 here to an assurance that licenses will be made
15 available on reasonable terms and conditions and
16 suggest that assurances of that type also tend to make
17 it more likely that the firms that are the
18 beneficiaries of such assurances would be willing to
19 adopt the patented technology in a standard; right?

20 A. Yes.

21 Q. And you would expect that to be true of Rambus'
22 technologies as well, that the effect of Rambus
23 providing assurances of this sort would make it more
24 likely that firms would be willing to adopt Rambus'
25 patented technologies in a standard?

1 A. Through a RAND letter, yes.

2 Q. And you would -- your views would be the same
3 as to the third point, that is, that by giving
4 assurances that it would agree to license on terms that
5 were demonstrably free of unfair discrimination, by
6 giving assurances of that sort, Rambus would be making
7 it more likely that firms would be willing to adopt its
8 patented technologies in the standard?

9 A. Correct.

10 Q. So I take it then that you agree that by
11 comparison to a situation in which Rambus did not
12 provide assurances of these sorts that a situation in
13 which it did provide such assurance would increase the
14 likelihood that the participants in the
15 standard-setting process would be willing to adopt the
16 Rambus technologies as part of the standard?

17 A. The question is after receiving a RAND letter,
18 what would be Rambus' response after receiving a
19 request for a RAND letter.

20 Q. I'm not asking you about that question. Let me
21 go back to my question. I'm asking you about
22 JEDEC's -- or the standard-setting participants.

23 Based on what you say here, isn't it true that
24 it's your view that the participants in the
25 standard-setting organization would be more likely to

1 adopt Rambus' technology, patented technology, in its
2 standards in the event that Rambus were to make it --
3 provide assurances of this sort by comparison to a
4 situation in which Rambus was not willing or had not
5 provided such assurances?

6 A. Well, it seems to me, if I understand your
7 question correctly, you're asking me whether or not
8 Rambus agreeing to RAND terms would increase the
9 likelihood of a license, and my answer to that is
10 yes -- excuse me -- would increase the likelihood of
11 the standards that were relevant being adopted, my
12 answer is yes.

13 Q. Let's go back to DX-332, the decision tree.

14 So am I right that it's your conclusion that in
15 a but-for world in which Rambus made patent-related
16 disclosures to JEDEC, Rambus would also be willing to
17 sign a RAND letter?

18 A. In the but-for world, yes.

19 Q. And it's your conclusion that in the but-for
20 world agreeing to sign the RAND letter would be Rambus'
21 best option; right?

22 A. Yes. Particularly if that but-for world
23 incorporates complaint counsel's assumption that there
24 are lots of alternative technologies that the industry
25 could go to.

1 Q. So the existence of commercially viable
2 alternatives makes it -- with that assumption, makes it
3 even more likely that Rambus would sign a RAND letter;
4 correct?

5 A. Yes.

6 Q. And doesn't the --

7 A. Well, let me restate that. Commercially viable
8 in the sense of being economic substitutes.

9 Q. And was that assumption that you made as part
10 of this decision tree that there were commercially
11 viable substitutes?

12 A. I can look at it either way. Either way, I
13 think you end up with the same answer, but it's -- the
14 probability goes up to I think any certainty if
15 complaint counsel's theory about substitutes being
16 available is in fact correct.

17 Q. Let me see if I can parse this.

18 You said that either way, that is, either
19 assuming that there were commercially viable
20 substitutes or assuming that there were not
21 commercially viable substitutes, either way you think
22 you would end up with the same outcome?

23 A. Yes.

24 Q. And by that you mean either way you believe you
25 would end up with a JEDEC standard that incorporates

1 don't think that this witness has actually used that
2 term.

3 MR. STONE: He just did.

4 MR. ROYALL: Well, if he used the term, then I
5 have no --

6 JUDGE McGUIRE: Okay. Restate it.

7 MR. ROYALL: Okay.

8 BY MR. ROYALL:

9 Q. You have used the term "commercially viable
10 alternatives" in connection with your testimony in
11 court these past days; right?

12 A. Yes. And I pointed out by that I mean that
13 they are effective economic substitutes.

14 Q. Okay. So we can try to go back then to my

1 that, which either way with respect to the economic
2 substitute point, Rambus is going to be willing to
3 grant a RAND letter.

4 Q. Okay. And then you would expect the ultimate
5 outcome I assume to be the same as well, either -- with
6 either assumption about the existence of effective
7 economic substitutes, that is, the ultimate outcome
8 being the adoption of Rambus patented technologies in
9 the standard?

10 A. Yes.

11 Q. Now, would you agree, though, or wouldn't you
12 agree that in a scenario in which you're assuming that
13 there are effective economic substitutes, the royalty
14 rates paid to Rambus associated with the use of its
15 patented technologies in the JEDEC standards would be
16 lower by comparison to the royalty rates that would be
17 paid in a scenario in which you've assumed that there
18 are no effective economic substitutes?

19 A. Not necessarily. You have to trace through the
20 rest of the tree.

21 Q. Well, in a world in which there are effective
22 economic substitutes, you've said that you would assume
23 that in that world as well as the alternative world
24 Rambus would sign a RAND letter; right?

25 A. Yes.

1 Q. And you would assume also I take it that there
2 would be no ex ante negotiations based on your
3 testimony yesterday; right?

4 A. That's correct.

5 Q. And then you would assume that JEDEC adopts the
6 patented technologies in its standards; is that your
7 testimony?

8 A. Correct.

9 Q. Okay. So we've traced through the tree and now
10 where we are is the patented technologies are there and
11 at some point there's a negotiation on the terms with
12 those companies that are building products using these
13 technologies, the terms in which they're going to pay
14 royalties to Rambus; right?

15 A. At some point, yes.

16 Q. And in this scenario in which there are
17 effective economic substitutes, we're assuming that,
18 you would expect that the royalty rates would be lower
19 by comparison to a scenario in which the same
20 technologies were adopted as part of the standards but
21 there were no effective economic substitutes?

22 A. Well, I think you have to just follow the logic
23 and go back and ask, you know, are there going to be
24 ex ante negotiations.

25 Q. You've already told us that either way there

1 aren't going to be. That's your opinion; right?

2 A. That is my opinion, that there won't be ex ante
3 negotiations.

4 Q. So why do we need to go back and trace through
5 that if you say it's not going to matter either way,
6 there are not going to be ex ante negotiations?

7 A. That's correct. And then in that case you
8 don't. If you want to get to a lower royalty because
9 there are substitutes, you would have to prove up that
10 there's going to be ex ante negotiations.

11 Q. It's your assumption, isn't it, that any
12 negotiations in the but-for world on royalties rates
13 for Rambus' technologies would occur after the patents
14 issued? Right?

15 A. Yes.

16 Q. And that could be -- that could be after the
17 standard is adopted; right?

18 A. That's correct.

19 Q. Okay. And that -- you would assume that
20 that's when the negotiation is going to take place
21 whether or not there are effective economic
22 substitutes; right?

23 A. That's correct.

24 Q. Okay. And so let's -- it's not going to change
25 whether or not there are effective economic

1 substitutes, and so this is going to happen after the
2 standards are adopted; right?

3 A. Yes.

4 Q. And at that point there's going to be a
5 negotiation.

6 Now, if at the time of that negotiation there
7 are effective economic substitutes, don't you agree
8 that the royalty rates that are negotiated are likely
9 to be lower than if at the same time there are
10 effective economic substitutes?

11 A. But if the technology -- if the standard has
12 been adopted, there may not be -- the substitution may
13 not be there.

14 Q. Because the standard eliminated these otherwise
15 effective economic substitutes as viable alternatives?
16 Is that what you're saying?

17 A. It's a possibility that the circumstance could
18 have changed some.

19 Q. Because you're saying the circumstance could
20 have changed in terms of how close these substitutes
21 are competing because the adoption of the standard
22 might diminish the commercial viability of those
23 substitutes; right?

24 A. As a matter of theory, it's possible.

25 Q. And if that were to happen, then the adoption

1 of the standard would add to the market value of
2 Rambus' technologies by comparison to the value those
3 technologies had before the standard was adopted;
4 right?

5 A. If -- in the ex ante world? Or are you talking
6 about the ex post world?

7 Q. I don't think it matters. Let me ask the
8 question again.

9 What you're saying is that in the ex post world
10 after the standards have been adopted that the effect
11 of adopting the standards may be to diminish the
12 commercial viability of substitutes to Rambus'
13 technologies by comparison to the value or viability of
14 those substitutes in the ex ante time period before the
15 standard was adopted; right?

16 A. We're talking pure theory here; is that
17 correct?

18 Q. Well, let's start there.

19 A. Yeah. Okay. So let me have the question
20 back.

21 (The record was read as follows:)

22 "QUESTION: I don't think it matters. Let me
23 ask the question again.

24 "What you're saying is that in the ex post
25 world after the standards have been adopted that the

1 effect of adopting the standards may be to diminish the
2 commercial viability of substitutes to Rambus'
3 technologies by comparison to the value or viability of
4 those substitutes in the ex ante time period before the
5 standard was adopted; right?"

6 THE WITNESS: You know, in the ex post world
7 it's going to depend on the switching costs.

8 BY MR. ROYALL:

9 Q. And the switching costs may be higher after the
10 standard has been adopted; correct?

11 A. As a matter of theory.

12 Q. So in that situation, the adoption of the
13 standard would have the effect of increasing the value

1 the theoretical --

2 Q. I didn't say that. I'm not assuming that. I'm
3 assuming only that there are effective economic
4 substitutes. I'm not assuming how many alternatives
5 there are and whether each of those alternatives by
6 comparison to the next one is equally good. I'm just
7 picking up on your language of effective economic
8 substitutes.

9 A. Okay. And then the question is?

10 Q. Well, the way we got into all this was I was
11 asking you wouldn't you agree that a world in which
12 there are effective economic substitutes by comparison
13 to a scenario in which there weren't would lead to --
14 at the time in which the royalties were negotiated, it
15 would lead to a lower royalty.

16 A. If there are -- yes. If at the time that you
17 engage in -- if there are negotiations and there are
18 substitutes available that are equally effective and
19 they're available, that will affect the royalty.

20 Q. Okay. And the extent to which they affect the
21 royalty could differ from the ex ante to the ex post
22 period; right?

23A. If thereuSep 7auwouldn't you agree thauc1E 7aTeuSep 7athe royalt

1 technologies, there may be switching costs that make
2 those alternative technologies now less viable because
3 of the switching costs?

4 A. That's theoretically possible, yes.

5 Q. And that would lead to a higher royalty rate by
6 comparison to negotiations -- or by comparison to the
7 royalty rates that would be negotiated in the absence
8 of such switching costs?

9 A. Correct.

10 Q. Okay. Now, in reaching the conclusion that
11 Rambus in the but-for world would agree to sign a RAND
12 letter, you relied on two key factors, am I right, the
13 fact that Rambus has licensed technology before and the
14 fact that it's a pure-play technology company?

15 A. And the fact that at that point in time it --
16 well, we're in the but-for world -- it's already
17 disclosed a considerable amount of proprietary
18 information and possibly trade secrets.

19 Q. Now, this conclusion that we're talking about
20 now, the conclusion that they would have signed a RAND
21 letter in the but-for world, that's a conclusion that
22 you reached and presented in your expert report in this
23 case; right?

24 A. Yes.

25 Q. And in reaching that conclusion and presenting

1 it in your expert report, you did so without regard to
2 any specific documentary evidence in this case; right?

3 A. What do you mean by "specific documentary
4 evidence"?

5 Q. Let me ask it this way.

6 In reaching your conclusion that Rambus would
7 have signed a RAND letter in the but-for world, the
8 process that you went through in reaching that
9 conclusion is taking what you knew about Rambus, you
10 essentially donned your own corporate strategy hat and
11 asked yourself what would you have done in the but-for
12 world if you had been Rambus; right?

13 A. Correct.

14 Q. And you did not as part of that analysis, you
15 did not -- you did not look at whatever factual
16 information there might be in the record as to what
17 Rambus may have thought about in the real world, may
18 have thought about in terms of the pros and cons of
19 signing a RAND letter?

20 A. Well, I was aware of that, but of course in
21 the real world Rambus doesn't get presented with a
22 RAND letter, so it's not something you can really
23 glean the answer to completely from looking at the
24 real world.

25 Q. I'm not asking whether you can glean it

1 completely from that. I'm asking -- I'm seeking to
2 confirm that in reaching your conclusion you did not
3 seek to evaluate and consider what the factual record
4 shows on that subject; is that right?

5 A. Well, I did look at it primarily from a
6 strategy perspective and I am aware of certain general
7 parameters of Rambus' strategy and took that into
8 account.

9 Q. Well, are you aware that in the real world
10 while it was a member of JEDEC that Rambus did consider
11 whether it made sense from its standpoint of its own
12 business strategy to sign a RAND letter?

13 A. There are various occasions I believe where
14 Rambus -- I mean, they never got close to it because it
15 was never something that actually happened, but they
16 did talk around the issue.

17 Q. They talked about the issue and they decided
18 not to do it; isn't that your understanding, your
19 assumption?

20 A. I'm not sure I'd characterize it quite that
21 way. When you say that they decided not to do it, they
22 were never presented with the scenario of actually
23 having a RAND letter in front of them where they have
24 to make the choice.

25 Q. Because they never actually disclosed anything

1 to JEDEC that caused JEDEC to ask for a RAND letter?

2 A. That's correct.

3 Q. But you are aware that despite having not done
4 that that there were internal considerations within
5 Rambus during the time period that it was a member of
6 JEDEC as to whether it made sense from the standpoint
7 of the company's business model to give a RAND
8 assurance?

9 A. Can I have that read back, please.

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9 o wh/OmDgei2" e?

1 had made statements to the effect that it believed
2 providing RAND assurances would be inconsistent with
3 its business model?

4 A. I believe that -- I have seen some records that
5 indicate that. I've seen other records that indicate
6 they thought RAND meant 1 percent. I've seen other
7 evidence that indicates they thought that RAND meant
8 anything goes. At various times they've had different
9 views as to what RAND really is.

10 Q. Let me ask you about the evidence that you say
11 that you've seen that indicates that they believed,
12 that is, that Rambus believed that providing RAND
13 assurances would be inconsistent with its business
14 model. What evidence do you have in mind?

15 A. I believe I saw a Crisp e-mail or something or
16 other at one point that indicated -- that had language
17 similar to that.

18 Q. And any other evidence that you're aware of or
19 that you considered suggesting that Rambus believed
20 that providing RAND assurances was inconsistent with
21 its business model?

22 A. There have been a number of things which talk
23 around the issue but, in a fundamental sense, I don't
24 think convey what would actually happen in the but-for
25 world.

1 MR. ROYALL: May I approach, Your Honor?

2 JUDGE McGUIRE: Yes.

3 BY MR. ROYALL:

4 Q. I've just handed you two documents,
5 Professor Teece, and let's start with the one that's
6 dated March 20, 1996. It's a Richard Crisp letter,
7 CX-874.

8 And I would direct your attention to the second
9 paragraph where the letter says: "We feel that our
10 interests are not being served by continuing our
11 involvement with JEDEC. In particular, the patent
12 policy of JEDEC does not comport with our business
13 model."

14 Do you see that?

15 MR. STONE: Your Honor, I think counsel
16 probably inadvertently characterized these as letters
17 as if they were actual letters that were sent. I think
18 the testimony in the record is somewhat to the contrary
19 on the status of these. I think counsel didn't mean to
20 miscommunicate that, but I think it might have been
21 inadvertent.

22 JUDGE McGUIRE: Could you restate.

23 MR. ROYALL: Well, I think it would suffice to
24 say I didn't -- I just referred to this being a letter
25 and I'm not making any representation about whether it

1 was sent or not.

2 JUDGE McGUIRE: Then let's make clear for the
3 record that it has not been sent and then that will
4 take care of it; right?

5 MR. ROYALL: I don't know if I can represent
6 that's true. That is consistent with my understanding.
7 But I don't know that I can represent it as a matter of
8 fact.

9 JUDGE McGUIRE: In that context, you may
10 proceed.

11 MR. ROYALL: Thank you.

12 BY MR. ROYALL:

13 Q. Now, you saw the language that -- let's blow
14 that up a little bit.

15 You saw the language that I referred you to in
16 the second paragraph of this letter? About the
17 language where in this -- I think --

18 A. Excuse me.

19 Q. I think we're all in agreement it's a draft
20 letter, but in this draft letter in which Mr. Crisp
21 says that "In particular, the patent policy of JEDEC
22 does not comport with our business model," do you see
23 that?

24 A. Which letter of the two?

25 Q. The March 20 -- oh, did I give you two March 20

1 letters?

2 A. Yes, you did.

3 Q. This is CX-874 that I'm on.

4 A. Where do I find the CX number?

5 Q. It's at the very bottom right. It's a one-page
6 document.

7 A. 874. Got it.

8 Q. It says -- I was referring to the second
9 paragraph.

10 A. I see it.

11 Q. Okay. Now, is this statement in this draft
12 letter to the effect that "In particular, the patent
13 policy of JEDEC does not comport with our business
14 model," is that information that you took into account
15 in assessing whether Rambus in the but-for world would
16 sign a RAND letter?

17 A. It is information I've taken into account.

18 Q. And despite statements of this that appeared in
19 documents drafted in the real world relating to the
20 RAND issue, is it nonetheless your conclusion that in
21 the but-for world Rambus would not have had the view or
22 have held a view that the patent policy of JEDEC was
23 inconsistent or did not comport with its business
24 model?

25 A. Yes.

1 Q. And why is that?

2 A. Well, there's a number of reasons. First of
3 all, and importantly, in the but-for world of course
4 it's already disclosed its trade secrets, so it's -- or
5 its pending patents, so it in some sense has already
6 given up something so you have to figure out what its
7 position is once it's disclosed.

8 More importantly, I think if you look at the
9 record, you find that Rambus was going through a
10 learning process trying to figure out what a RAND
11 letter really meant.

12 I mean, there's documents early on that speak
13 to the fact they thought RAND meant 1 percent. There's
14 subsequent discussions where Mr. Crisp is talking to I
15 think representatives from JEDEC where they're saying,
16 No, no, no, it doesn't mean 1 percent; it means
17 whatever you think it means, that there's much more
18 flexibility.

19 And I think that you have to say all right, in
20 the real world -- excuse me -- in the but-for world
21 where the actuality of a request lands on a desk in
22 Rambus, on an executive desk, what are they going to
23 do. And presumably one thing they're going to do is
24 learn what RAND really means.

25 Q. Are you assuming or have you concluded that

1 Rambus in the but-for world would pursue a different
2 model, a different business model than --

3 A. No, no, no.

4 Q. -- a different business model than it pursued
5 in the real world?

6 A. Not at all. The business model would be the
7 same.

8 Q. Okay.

9 A. But their understanding of what RAND means
10 would be different because it's clear that there was a
11 high degree of ignorance on the part -- on behalf of
12 Rambus early on in terms of what it meant, that that
13 uncertainty only got partially resolved as time went
14 on. And as time went on, they got a clearer
15 understanding that reasonable royalty is not something
16 that's necessarily going to penalize Rambus.

17 Q. So you're making assumptions along the lines of
18 what you just described that over time as it
19 participated in JEDEC Rambus' understanding of RAND
20 evolved? That's your assumption?

21 A. My assumption is that it did evolve and that
22 if a RAND request was made, it would have evolved
23 still further, because of Rambus' business model.
24 This is very important stuff for Rambus. And they're
25 going to start looking at it in a highly analytical

1 way once they get a formal request from JEDEC. And I
2 think if they do the additional analysis that would be
3 required, they would come up with a decision,
4 particularly since they've already disclosed, to write
5 a RAND letter.

6 Q. You would agree, won't you, that that's
7 somewhat speculative to be talking about how Rambus'
8 understanding of the RAND requirement might have
9 evolved in a but-for world after it was asked for a
10 RAND letter?

11 A. Part of it's not speculative, the fact that it
12 did evolve in the actual world. The question is:
13 Would it evolve still further in the but-for world? I
14 think the answer is yes.

15 Q. What evidence do you have that you rely on for
16 that conclusion or assumption?

17 A. The business model itself. Because what would
18 happen is this is very important for Rambus and they're
19 going to have to be quite analytical about it in the
20 but-for world when the actuality of a

1 maybe in an effort to this afternoon to perhaps
2 expedite, would it be adequate if we only took an hour
3 break today?

4 MR. STONE: That's fine for us, Your Honor.

5 MR. ROYALL: Yes, Your Honor.

6 JUDGE McGUIRE: All right. We'll take a break
7 then. It's 12:30. We'll be back here at 1:30 p.m.

8 (Whereupon, at 12:28 p.m., a lunch recess was
9 taken.)

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1 A F T E R N O O N S E S S I O N
2 (1:32 p.m.)

3 JUDGE McGUIRE: Mr. Royall, still your
4 witness.

5 MR. ROYALL: Thank you, Your Honor.

6 BY MR. ROYALL:

7 Q. Professor Teece -- first of all, good
8 afternoon.

9 A. Good afternoon.

10 Q. We were discussing earlier your consideration
11 of a but-for world and in particular whether in that
12 but-for world if asked to sign a RAND letter Rambus
13 would have done so; right?

14 A. Correct.

15 Q. And I believe you said that in a situation in
16 which Rambus was confronted with the actual question of
17 whether to sign a RAND letter, you think that Rambus'
18 thinking would have evolved to the point that
19 ultimately it would have decided to sign a RAND letter;
20 right?

21 A. Yes. In the but-for world where there is
22 disclosure and it's already given up important
23 confidential information, that's correct.

24 Q. And since that didn't happen in the real world,
25 you discount the relevance to some extent of the

1 real-world evidence relating to Rambus' assessment of
2 whether or not providing RAND assurances was consistent
3 with its business model?

4 A. I wouldn't say I discount it. I'm aware of it.
5 I think it's consistent with a story about learning,
6 but I'm primarily looking at it from the point of view
7 of economics and economic analysis if Rambus is
8 confronted with a hard choice and the alternative is
9 that it potentially gets nothing, what's it going to
10 do.

11 Q. And the hard choice that you're talking about
12 Rambus being confronted with is a hard choice of being
13 asked will you give a RAND assurance and then having to
14 sort that through; right?

15 A. The concrete business of actually thinking
16 whether or not it wants to provide a RAND letter.

17 Q. And because that Rambus didn't have to go
18 through that kind of concrete thinking of whether to
19 provide a RAND letter in the real world, the real-world
20 evidence doesn't -- isn't determinative in your view of
21 what it would have done in the but-for world in which
22 it did have to go through that type of concrete
23 analysis; right?

24 A. The real world is -- you know, provides certain
25 insights, but you know, the event never happened, so I

1 think one is better off looking at it from the point
2 of view of their strategy and the fundamental
3 economics.

4 Q. When you say "the event never happened," the
5 event that you're talking about is the event of Rambus
6 being asked concretely whether it would provide a RAND
7 letter; right?

8 A. Being not just asked concretely but where
9 there's a formal request from JEDEC and it knows it has
10 to make a decision.

11 Q. Okay. So the event you're talking about then
12 is a formal request for a RAND letter?

13 A. In the context where, you know, Rambus has --
14 in the but-for world Rambus discloses and JEDEC goes
15 through its formal process and puts a request in
16 writing to Rambus.

17 Q. Now, isn't it the case, Professor Teece, that
18 Rambus in fact was asked in the real world, it was
19 asked, it was formally asked, to give RAND assurances
20 relating to certain Rambus patents?

21 A. I don't believe that with respect to the
22 particular intellectual property -- well, the pending
23 patents at issue that it ever got a formal request that
24 required a formal response.

25 MR. ROYALL: May I approach, Your Honor?

1 JUDGE McGUIRE: Yes.

2 BY MR. ROYALL:

3 Q. If it had been asked formally to give RAND
4 assurances, you don't recall that; is that right?

5 Could I ask, before reviewing the document,
6 sir, could I ask for an answer to that?

7 A. That with respect to the standards at issue,
8 it's my understanding that they were not asked for --
9 not formally asked for a written RAND letter.

10 Q. Okay. Now, I've just handed you documents
11 marked CX-487. This is a letter on IEEE stationery
12 from a Ms. Cheryl Rowden to Geoffrey Tate, the CEO of
13 Rambus. And let me focus your attention on the second
14 paragraph.

15 It says: If your patents do apply, we would
16 ask that you also advise whether or not your company
17 will issue a letter of assurance, in accordance with
18 IEEE standards policy, which would state that Rambus
19 will make a nondiscriminatory license to the technology
20 available under reasonable terms -- reasonable rates,
21 terms and conditions.

22 Do you see that?

23 A. Yes.

24 Q. Now, is this letter, IEEE letter, formally
25 requesting RAND assurances from Rambus, is that

1 something that you took into account in assessing --
2 making your assessment about what Rambus would have
3 done in a but-for world with respect to issuing a RAND
4 letter?

5 MR. STONE: Your Honor, if I might be heard.

6 The use of this particular letter in this
7 context I think brings into question what the IEEE
8 patent policy is. That's an issue on which complaint
9 counsel has moved for in limine to exclude one of our
10 witnesses and who, as you know, you excluded his
11 testimony on what the IEEE patent policy was.

12 So we do run into an area where, if he's going
13 to pursue this line of questioning, I think he
14 necessarily draws into question what that patent
15 policy is and how it would be implemented and
16 understood. That's a different dynamic I think -- it
17 is one that we may get into as a result of this and I
18 just simply --

19 JUDGE MCGUIRE: No, we're not going to get into
20 it. We're not going to get into IEEE policy per my
21 earlier order on the motion in limine.

22 MR. ROYALL: Can I be heard on this?

23 JUDGE MCGUIRE: Yes.

24 MR. ROYALL: This issue actually has come up
25 before, IEEE, and it came up in the testimony of

1 John Kelly.

2 And as you may recall, in the testimony of
3 John Kelly, there were some questions about IEEE. And
4 Mr. Perry had objected to any questions about other
5 standards organizations but did not object to questions
6 about IEEE because, as you may recall, EIA is a member
7 of IEEE. Its standards were based on IEEE standards.
8 All of that came in. No objection from Mr. Perry
9 because of the close relationship between IEEE and
10 EIA/JEDEC, so this is not --

11 JUDGE MCGUIRE: The problem, though, as I see
12 it is that this would appear, depending on how -- on
13 the track you pursue in this line of questioning, that
14 it could easily run afoul of my previous order. And I
15 believe their proposed expert was going to testify as
16 to, you know, IEEE patent policies. Is that not
17 correct?

18 MR. PERRY: And other standards organizations.

19 JUDGE MCGUIRE: And other standards
20 organizations, which I precluded them from doing.

21 MR. PERRY: Just to correct the record, EIA is
22 a member of ANSI and it was ANSI, the umbrella
23 organization that we were talking about with
24 Mr. Kelly.

25 MR. ROYALL: Okay. Now, Your Honor, my

1 questions will not involve asking the witness to
2 interpret the policy. I'm simply asking whether he has
3 considered this information in answering -- in
4 assessing this question. That's -- at this point
5 that's all I'm asking about.

6 JUDGE McGUIRE: Then on those grounds you may
7 ask the question.

8 MR. ROYALL: Thank you.

9 BY MR. ROYALL:

10 Q. And this letter, this formal RAND-related
11 request from IEEE, CX-487, is that something that you
12 took into account in making your determinations about
13 what Rambus would do in the but-for world?

14 A. I don't recall seeing this.

15 Q. Okay. Now, let me show you another document in
16 the same vein.

17 May I approach?

18 JUDGE McGUIRE: Yes.

19 BY MR. ROYALL:

20 Q. Now, I've just handed you another document
21 marked CX-1243. This is, as it clearly shows, a draft
22 letter, not a final letter, but a draft letter to the
23 author of the prior document, Cheryl Rowden of IEEE,
24 and I believe that the exhibit actually encompasses two
25 drafts, but just referring to the first two pages,

1 you'll see there's a name Lester Vincent on the second
2 page.

3 And now then if I could focus your attention on
4 the third paragraph, it's -- of the draft, it says,
5 "The position of Rambus is and has been that Rambus is

1 of it in.

2 JUDGE McGUIRE: In the future, I'm going to ask
3 you, Mr. Royall, to begin -- before you read any aspect
4 of any document, you ask the witness if he or she has
5 seen the document. That's the proper way to lay
6 foundation.

7 MR. ROYALL: Yes, Your Honor.

8 JUDGE McGUIRE: Okay?

9 BY MR. ROYALL:

10 Q. This document, either the language that I read
11 or any other language that you see in it, is this
12 anything that you took into consideration in forming
13 your opinions about what Rambus would have done in a
14 but-for world if confronted with a formal request from
15 JEDEC for a RAND letter?

16 A. I haven't seen this document.

17 Q. And let me move to another document.

18 May I approach, Your Honor?

19 JUDGE McGUIRE: Yes.

20 BY MR. ROYALL:

21 Q. I've just handed you another document marked
22 CX-855. I'm not going to ask you -- at the moment I'm
23 not going to ask you about the substance of the
24 document. I'm not going to read anything from it. But
25 I would like to ask whether this document, CX-855, is

1 something that you've seen before.

2 A. No, I don't believe it is.

3 Q. And so I take it then that this is not
4 something that you took into account in forming your
5 opinions about whether Rambus would sign a RAND letter
6 in the but-for world? Is that --

7 A. Correct.

8 Q. -- is that correct?

9 I believe I may have -- I'll try to handle this
10 very quickly. I have two more things I'd like to show
11 you.

12 May I approach, Your Honor?

13 JUDGE MCGUIRE: Yes.

14 BY MR. ROYALL:

15 Q. Mr. Teece, I've just handed you two other
16 documents. One, CX-490, is a February -- I think it's
17 a '94 letter -- is it '96? -- rather, February '96
18 letter from IEEE to Mr. Anthony Diepenbrock. Do you
19 see that?

20 A. Yes.

21 Q. And is that something that you've seen before?

22 A. No.

23 Q. So I take it it's not something that you took
24 into account in forming your opinions?

25 A. Correct.

1 Q. And the next letter, CX-869, is a February '96
2 letter from Rambus to IEEE.

3 Have you seen that one before?

4 A. No.

5 Q. So I take it you didn't take that into account
6 in forming your opinions; is that right?

7 A. Corr tw

5 8 Q. Soou didn'm8 8 pull

1 Q. And that could happen -- some small assistance
2 to RDRAM could result in that situation, that is, the
3 situation in which Rambus refused to give a RAND
4 letter, inasmuch as that might interfere with JEDEC's
5 ability to develop its SDRAM standards or delay those
6 standards in some way?

7 A. Well, I've just simply taken into account
8 there conceivably could be some small benefit if for
9 some reason because of the failure of the
10 standard-setting process that JEDEC was currently on
11 the industry would go to RDRAM. I think that's a very
12 low probability and the amount of assistance would be
13 very small as well.

14 Q. Putting aside the magnitude of the assistance
15 or the probability of it, what you're talking about
16 is -- the type of assistance that you're talking about
17 to RDRAM would be assistance flowing from or benefits
18 flowing from the refusal of a RAND letter to JEDEC that
19 might in turn cause some delay or disruption in the
20 JEDEC process; right?

21 A. Yes. And now not only be in a world where
22 there aren't alternative standards that JEDEC could
23 adopt. I mean, as per your, complaint counsel's,
24 theory.

25 Q. But in that world in which there either weren't

1 alternatives or it wasn't clear-cut, by refusing a RAND
2 letter to JEDEC, Rambus might -- let's put aside the
3 magnitude, whether it's small or large -- but Rambus
4 might -- there might be some benefit that would inure
5 to Rambus in terms of its RDRAM technology?

6 A. When you talk about that world, we talk about a
7 world where there aren't substitutes.

8 Q. Now, in the course of your work on this case in
9 developing your assumptions and conclusions, have you
10 seen evidence that Rambus desired for its RDRAM
11 technology to become a successful high-volume
12 standard?

13 A. Have I seen evidence of a desire to promote
14 RDRAM?

15 Q. And to make it a high-volume standard.

16 A. Early on I believe there was and, you know,
17 some attention given to that.

18 Q. And you said earlier today, didn't you, that
19 it's -- you're not assuming that in the but-for world
20 Rambus' business strategy would change, you're
21 assuming it would have the same business strategy;
22 right?

23 A. Well, the same business strategy as much as it
24 would be depending primarily on licensing income as
25 it's primary revenue.

1 Q. Well, are you assuming that in the but-for
2 world Rambus makes some change in its business strategy
3 with respect to whether it is seeking to make RDRAM a
4 successful high-volume standard?

5 A. Well, I believe at some point when it
6 recognized that wasn't going to happen.

7 Q. I'm not asking you at some point they may or
8 may not have recognized that.

9 My question was: Are you assuming that in the
10 but-for world Rambus makes some change in its business
11 strategy with respect to whether it is seeking to make
12 RDRAM a successful high-volume standard?

13 A. Well, if you grant the assumptions of complaint
14 counsel's case and there are a whole bunch of
15 alternatives, then yes, it would, because it would be
16 concerned about losing the standard to the
17 alternatives.

18 Q. Now, you're not assuming that there's more
19 evidence of alternatives in the but-for world than the

1 whatever choices there are available in the real world
2 are also available in the but-for world; right?

3 A. As I told you, I'm willing to look at it either
4 way.

5 Q. Well, the appropriate thing -- you told me
6 earlier that from the standpoint of economics, the
7 appropriate thing in defining the but-for world is to
8 change nothing except the conduct that's challenged.
9 In the but-for world that conduct doesn't occur; that
10 is, in this case Rambus complies with all of the
11 disclosures that complaint counsel says it didn't
12 make.

13 That's the only thing that changes in the
14 but-for world, not what alternatives exist; right?

15 A. The starting point is that assumption. And I
16 believe that you can look at things in an A or B
17 subscenario.

18 Q. So do you have some basis to assume,
19 Professor Teece, that in the but-for world in which
20 Rambus discloses there would be a larger number of
21 commercially viable alternatives than in the real
22 world?

23 A. No, I don't. I just note that that's the
24 theory of your case.

25 Q. Well, I beg to differ.

1 standards?"

2 THE WITNESS: There is I think some evidence
3 along those lines, but I don't recall it specifically
4 as I sit here right now.

5 BY MR. ROYALL:

6 Q. Do you recall any evidence suggesting that
7 Rambus at any time was pursuing strategies in part out
8 of a desire to stunt the adoption of synchronous
9 DRAMs?

10 A. I don't recall seeing a specific document to
11 that effect.

12 Q. Well, putting aside specific documents, do you
13 recall seeing any evidence that was -- would be
14 consistent with such a business strategy on the part of
15 Rambus?

16 A. I don't recall seeing anything specifically
17 along those lines. I do know at one point it was
18 promoting RDRAM.

19 Q. But you're simply not aware of any evidence
20 that might indicate that in furtherance of promoting
21 RDRAM Rambus was pursuing business strategies to in
22 part designed to stunt the adoption of synchronous
23 DRAMs?

24 A. I don't recall anything specific on that.

25 Q. Well, I want you to assume with me that Rambus,

1 in the real world, which for this purpose I assume you
2 agree should be no different than the but-for world,
3 desired to or was pursuing strategies to in part to
4 stunt the adoption of synchronous DRAMs as a way of
5 advancing its interest in promoting the alternative
6 RDRAM. Can you assume that?

7 A. Yes.

8 Q. Now, if that were true in both the real world
9 and the but-for world, wouldn't you agree that such a
10 strategy on the part of Rambus might influence its
11 decisions about whether to sign a RAND letter?

12 A. It may be a factor in the back of their mind,
13 but I don't think it would be the primary driving
14 factor.

15 Q. You say that, am I right, without looking at
16 what the evidence may show in the record on that
17 subject?

18 A. Well, I'm bearing in mind a couple of things.
19 One is that in the but-for world a RAND letter request
20 has come to Rambus and Rambus has to make a concrete
21 decision. If it says yes, they're going to go ahead
22 and adopt a standard that's using Rambus' technology,
23 so it's a bird in the hand, so to speak. And Rambus is
24 a repeat player, it's not going to be here one day and
25 gone the next, so it has to take into account those

1 types of considerations.

2 So in my view, whatever gaming there was from
3 RDRAM would be small relative to accepting significant
4 opportunity that would be right in front of it.

5 Q. You say that Rambus was a repeat player.

6 Have you seen any evidence, specific evidence
7 that would cause you to conclude or to make an

1 Q. Do you recall seeing in your review of evidence
2 in this case in forming your assumptions and
3 conclusions evidence suggesting that Rambus would
4 prefer to see JEDEC standardize noncommercially
5 attractive solutions?

6 A. I don't recall a particular document that says
7 that.

8 MR. ROYALL: May I approach, Your Honor?

9 JUDGE McGUIRE: Yes.

10 BY MR. ROYALL:

11 Q. Professor Teece, I've just handed you a
12 document that's been marked as CX-725, and you'll see
13 it's a March 11, 1994 e-mail from Richard Crisp.

14 Have you seen this document before?

15 A. No, I haven't.

16 Q. Let's pull that down.

17 So I take it that this is not a document that
18 you considered in forming your opinions and conclusions
19 in this case?

20 A. Correct.

21 Q. Now, I want you to assume with me that during
22 the time period it was involved in JEDEC, Rambus or
23 certain Rambus representatives such as Richard Crisp,
24 the official representative of Rambus to JEDEC, had
25 the view that it was in Rambus' interest that JEDEC

1 develop standards that were not commercially
2 attractive but, rather, standards that were
3 noncommercially attractive.

4 Can you assume that?

5 A. Okay.

6 Q. And can you assume that the reason that Rambus
7 preferred to see JEDEC develop standards that were not
8 commercially attractive is that Rambus didn't want to
9 see JEDEC's standards succeed, it wanted to see its
10 RDRAM proprietary technology succeed? Can you assume
11 that?

12 A. I can assume that.

13 Q. Now, if you assume those things and you assume
14 that that's true both in the real world and the but-for
15 world, would you agree that such a business strategy on
16 the part of Rambus might have caused it to hesitate

1 now want to offend their present and future customers.

2 And it's my belief that once they looked at
3 that and did the numbers, they would decide to go
4 ahead, grant the RAND letter, particularly once they
5 understood that a RAND letter wouldn't involve a
6 significant compromise.

7 Q. And you're assuming that such an assumption
8 would be made?

9 A. You asked me to assume it.

10 Q. No. That -- the significant compromise was not
11 something that was in my question; it was something
12 that you injected into your answer. That you said that
13 you -- particularly if they assume signing a RAND
14 letter won't involve a significant compromise, that
15 is -- was your language that you injected into the
16 answer and I'm asking you whether that is your
17 assumption.

18 MR. STONE: Your Honor, counsel's commentary
19 about what the witness did or didn't do is
20 argumentative, and I move to strike it from the record.
21 I think either the record will speak as to what the
22 witness said or didn't say or counsel should pose
23 another question. I object to the description of
24 colloquy regarding the testimony.

25 MR. ROYALL: Your Honor, I was just commenting

1 on trying to focus -- the witness had said that he --

2 JUDGE McGUIRE: Okay. Restate the question.

1 to be or what JEDEC understands a RAND letter to be?

2 What is your basis for referring to what a RAND
3 letter really meant?

4 A. My basis is understanding JEDEC's behavior and
5 gleaning from the record what a RAND letter meant.

6 Q. So you're now -- you're talking about your
7 interpretation of the record as to what a RAND letter
8 really means?

9 A. Well, I'm -- I'm certainly aware that there's
10 discussion in the record what a RAND letter meant in
11 JEDEC. I talked yesterday about what "reasonable and
12 nondiscriminatory" means to me as an economist.

13 Q. Right. But now we're talking about what
14 JEDEC's -- what RAND means under JEDEC's rules and
15 JEDEC's process, not an economic theory; right?

16 A. I'm not an expert on their rules and policies.
17 I do observe that there was considerable learning by
18 Rambus with respect to what it really meant and that
19 Rambus didn't know early on what it meant.

20 Q. So when you were referring to RAND letters
21 being onerous or not onerous, you're not purporting to
22 offer an interpretation of the -- as an expert as to
23 what the RAND requirements in JEDEC really were,
24 you're just referring to potential assumptions that
25 you might make about what the RAND requirements were;

1 right?

2 A. I'm referring to what I had testified to
3 yesterday as to what the conditions -- what from the
4 economic point of view RAND means.

5 Q. So you're now talking about economics and not
6 about what JEDEC's process and rules actually provide?

7 A. Correct.

8 Q. Okay. Now, am I right that you assume that
9 if -- and for this question maybe we should go back to
10 DX-332, the decision tree.

11 A. Okay.

12 Q. Am I right that you assume that if Rambus in
13 the but-for world were to sign a RAND letter that at
14 this point, as far as JEDEC's process is concerned, the
15 IP issue would be put to rest?

16 I believe -- I used that language because I
17 believe you used that language yesterday.

18 A. Correct.

19 Q. And so it's your assumption that once a RAND
20 letter is provided in the but-for world by Rambus,
21 there's no further deliberation within JEDEC as to
22 whether JEDEC might use alternative technologies in
23 lieu of the Rambus technologies; right?

24 A. I'm not necessarily assuming there's no further
25 deliberations. I'm basically saying that JEDEC moves

1 forward to adopt a standard.

2 Q. Well, let me then ask you, what do you mean --
3 what did you mean yesterday when you said that it's
4 your assumption that if Rambus signed a RAND letter the
5 IP issue would be put to rest?

6 MR. STONE: Your Honor, might I ask that the
7 witness be presented with the transcript of his
8 testimony yesterday so he can see in what context he
9 said it if he's being asked to explain what he meant by
10 it.

11 JUDGE McGUIRE: Sustained.

12 If you're going to confront him with his prior
13 statement, he's entitled to see it.

14 Are you talking about his statement in the
15 hearing yesterday?

16 MR. ROYALL: In court yesterday. And he just
17 answered he recalled that statement and --

18 JUDGE McGUIRE: Mr. Stone, what's the
19 foundation of your objection?

20 MR. STONE: I think he's being asked to
21 interpret his prior testimony. He's entitled to
22 request to see what it is -- to see the context in
23 which he said it. I think it's hard to ask him --

24 JUDGE McGUIRE: I will give him that chance if
25 he's unclear as to what his prior testimony is,

1 Professor.

2 THE WITNESS: It would help to just quickly
3 throw up the transcript so I can be reminded.

4 JUDGE McGUIRE: Let's go off the record a
5 minute.

6 (Discussion off the record.)

7 BY MR. ROYALL:

8 Q. Professor Teece, I've just handed you a
9 transcript from yesterday's proceedings, and you're
10 obviously welcome to look at whatever you need to for
11 context, but let me point out, just to orient us
12 initially, the testimony that I was referring to.

13 On page 10379 Mr. Stone asked the question
14 starting at line 20: "Based on the work you have
15 performed and the things you have reviewed and the
16 assumptions you have consequently made, have you formed
17 any conclusions about JEDEC's actual behavior that
18 inform your decision about whether JEDEC would have
19 adopted the same standards had it asked for and
20 received a RAND letter following disclosure by Rambus
21 of the information that it is contended Rambus should
22 have disclosed?"

23 And your answer starting on line 4 of
24 page 10380 was: "Based on what you said, which I would
25 summarize to say its past behavior, what JEDEC would do

1 is ask for a RAND letter, and what the assumptions
2 suggest or -- not just suggest but indicate, is once it
3 got a RAND letter, that puts intellectual property
4 issues to rest, and it proceeds to either adopt the
5 standard or not adopt it, but intellectual property
6 issues are swept to one side fundamentally once the
7 RAND letter is received."

8 Do you see that?

9 A. Yes.

10 Q. So my question to you is: What did you mean
11 when you testified yesterday that if a RAND letter was
12 provided by Rambus to JEDEC in the but-for world you
13 believed that that would put intellectual property
14 issues to rest or cause those intellectual property
15 issues to be swept to one side? What did you mean by
16 that?

17 A. What I meant by that is that the particular
18 intellectual property that was being addressed through
19 the RAND letter, that those issues would be put to one
20 side. The standard would either proceed or not
21 proceed, depending on, you know, fundamentally on
22 technical and other grounds.

23 Q. So you -- am I right then, if I

Q. So you -- am I

1 world from Rambus that JEDEC would continue to assess
2 the Rambus technologies by comparison to alternatives
3 and might ultimately decide, notwithstanding the RAND
4 letter, to use alternative technologies in its
5 standard?

6 A. I think what I -- what is a fair statement of
7 what I said is that the intellectual property issues
8 raised in the RAND letter, once there was a response to

1 Q. And am I right that you are aware of no
2 instance in which JEDEC, after receiving a RAND letter
3 from the owner of patented intellectual property,
4 declined to incorporate that technology into its
5 standards due to the patented nature of the
6 technology?

7 A. My staff and I researched that and we could not
8 come up with a circumstance where a RAND letter didn't
9 put the IP issue to rest.

10 Q. In your research or your staff's research on
11 this issue, did you come across instances in which,
12 within JEDEC, RAND letters were provided by the
13 intellectual property owner and yet JEDEC continued to
14 analyze alternatives?

15 A. Yes. I think that's a possibility, but as I
16 said, the IP issues were put out of play.

17 Q. I'm not asking whether it's a possibility. My
18 question was whether in the research that your staff
19 did or that you did or are aware of your staff doing,
20 are you aware of any instances in which JEDEC, after
21 receiving a RAND letter from an intellectual property
22 owner, continued to analyze the potential to use
23 alternatives to the patented or patent/s askinhat you did oatent

1 would continue to assess these things from a technical
2 point of view in certain occasions, but the IP wouldn't
3 get in the way.

4 Q. I'm not asking conceptually what you think is
5 possible.

6 I'm asking you, are you aware of specific
7 instances in which that happened, based on your review
8 or your staff's review of the JEDEC minutes or any
9 other evidence?

10 A. I think there are some instances where
11 standards got dropped or they just simply lapsed after
12 IP issues were put to one side.

1 A. No.

2 Q. Let me ask you to turn to page 5046 of the
3 transcript that I provided to you.

4 Do you have that page, 5046?

5 A. Yes.

6 Q. Now, at the bottom of that page, 5046,
7 Mr. Kellogg is asked -- this is line 24 -- "Okay.
8 Mr. Kellogg, are you aware of any circumstances when a
9 company advised JEDEC that it had relevant patent
10 rights and agreed to the RAND costs, in other words,
11 assured JEDEC that it would make licenses available on
12 reasonable and nondiscriminatory terms, yet JEDEC
13 nevertheless chose to investigate alternative
14 technologies?"

15 Now, let me -- I'm just going to switch the
16 page now for the ELMO.

17 Do you see that, that question?

18 A. Yes.

19 Q. And then on page 5047, line 6, Mr. Kellogg
20 answers, "Yes, I do.

21 "QUESTION: Can you please describe the
22 examples that you can think of?

23 "ANSWER: One very good example I remember was
24 associated with Cypress. Cypress disclosed a patent
25 associated with a PLL power-down mode. This is a

1 device that we're using on memory modules for our
2 synchronous memory standard.

3 "And in that case, Cypress disclosed that the
4 method by which we were powering or reducing the power
5 dissipation on the device was covered by one or more of
6 their patents.

7 "The committee did consider the alternative of
8 continuing to use the method that Cypress was claiming
9 and that we had standardized, but we also investigated
10 alternatives, and ultimately we did adopt an
11 alternative which -- which was something (sic) painful
12 but not significantly so, fortunately, in that case,
13 but we did adopt an alternative."

14 Do you see that?

15 A. Yes.

16 Q. So let me ask you this: Is that testimony
17 consistent with assumptions that you have made about
18 JEDEC's -- in your view, is it consistent with the
19 assumptions that you've made about JEDEC's
20 consideration of alternatives in instances in which it
21 learns of patented technologies?

22 A. Well, as I read this, it seems to be saying
23 that they were exploring other technical alternatives,
24 but it doesn't say, as I read it, that it's because of
25 IP issues. Or am I reading it wrong?

1 Q. So you're saying that just based on what I've
2 shown you here, that in this testimony from Mr. Kellogg
3 you're not able to assess whether there were IP issues
4 that were influencing the decision to go to
5 alternatives? Is that what you're saying?

6 A. Well, there's nothing here that says that.

7 Q. And are you aware of any evidence in the record
8 in this case that JEDEC, after learning of a patented
9 technology, did consider alternatives to the -- or and
10 receiving a RAND letter, that is, it learned of
11 patented technology after receiving a RAND letter, are
12 you aware of any instance in which in that situation
13 JEDEC continued to evaluate alternatives in part out of
14 concern about the potential for adopting a patented
15 technology in its standards?

16 A. No.

17 Q. You're aware of no instance in which that has
18 happened?

19 A. Correct.

20 Q. And so in saying that, have you or your staff
21 sought to study the record as it pertains to the views
22 of individual JEDEC participants as to whether they
23 were concerned of such a situation about patent
24 issues?

25 A. As I said before, I thoroughly studied the

1 minutes, and there was absolutely nothing in the
2 minutes that indicated that once IP issues were put to
3 one side that the standard-setting process didn't
4 continue. It may lapse, but not for reasons associated
5 with intellectual property.

6 Q. Did you or your staff look at anything other
7 than JEDEC minutes in assessing that issue?

8 A. We looked at the item logs and looked at
9 everything that was relevant, everything we could find
10 that was relevant.

11 Q. Did you look at third-party documents produced
12 in this case by companies that participated in JEDEC in
13 the relevant time period?

14 A. Let me say that, you know, I kept an eye out
15 for instances and couldn't find any. I did look very
16 thoroughly.

17 Q. You did not look very thoroughly at any
18 evidence that might have be -- that might appear in
19 third-party business records produced in this case?

20 A. Well, I looked -- you know, my primary source
21 was the JEDEC minutes and committee minutes, and so
22 forth, where this stuff is recorded.

23 Q. So you can't say based on any work that you've
24 done in this case whether in the types of instances
25 that we're focused on individual JEDEC participants may

1 have had concerns, continued concerns, about the
2 proprietary nature of the intellectual property even
3 after a RAND letter was signed?

4 A. Well, nothing that made its way into the JEDEC
5 minutes or, you know, got otherwise publicized.

6 Q. I don't think that was responsive to the
7 question. Let me ask it again. I'm not asking whether
8 you looked at material outside the JEDEC minutes. I
9 think we've already tried to cover that.

10 I'm now asking you, is it right that based on
11 the work that you have done in this case, focused on
12 the types of instances that we've been discussing, you
13 cannot say whether individual JEDEC participants have
14 had concerns, continued concerns, about the proprietary
15 nature of intellectual property even after a RAND
16 letter was signed?

17 You can't say that because you didn't look
18 beyond the JEDEC minutes, you didn't look at the
19 third-party documents themselves; right?

20 A. All I can say is there's nothing in what I've
21 seen.

22 Q. Okay. Now -- and you may set that aside for
23 the moment.

24 You are aware -- I'm sorry.

25 Am I right that you, Professor Teece, you are

1 aware of statements in JEDEC or EIA rules to the effect
2 that those organizations seek to avoid the use of
3 patented technology in their standards whenever
4 possible?

5 MR. STONE: Your Honor, I object that this is
6 outside the scope of direct and is asking this witness
7 to give his opinion or view as to what the rules of
8 JEDEC or EIA are, an area I think we've been precluded
9 from testimony by this and other witnesses.

10 MR. ROYALL: Your Honor, may I respond?

11 JUDGE MCGUIRE: Go ahead.

12 MR. ROYALL: This is not -- it's clearly not
13 outside the scope of the direct. This relates to he's
14 opined about whether there would be adoption of these
15 technologies if a RAND letter were signed by JEDEC.
16 This is directly relevant.

17 And he also has noted in my questions that one
18 of the things that he looked at in forming his
19 opinions were JEDEC and EIA rules relating to patent
20 disclosure and licensing. That came up in the
21 examination yesterday.

22 MR. STONE: And all I would say is I understand
23 that Mr. Royall brought out that he looked at it. My
24 point is it's improper to ask him to interpret those

1 JUDGE McGUIRE: He's not going to be allowed to
2 ask him to interpret them.

3 Maybe you just need to clarify your question.
4 I will allow you to pursue it on the basis of -- I'm
5 not sure what basis at this point, but he will not be
6 allowed to interpret what these rules are.

7 In the context that you responded to the
8 opposition, then you can pursue that, but if you even
9 come close to asking him to interpret it, then I'm not
10 going to allow it.

11 MR. ROYALL: No. I have no intention.

12 MR. STONE: Thank you, Your Honor.

13 MR. ROYALL: Thank you.

14 BY MR. ROYALL:

15 Q. Now, Professor Teece, I clearly am not asking
16 you, don't intend to ask you to interpret JEDEC -- any
17 JEDEC or EIA rules, but you did note yesterday when I
18 was asking you the materials you reviewed and we looked
19 at appendix C or whichever it was to your report one of
20 the -- among the materials that you reviewed in this
21 case were JEDEC and EIA policies as related to patent
22 disclosure and licensing; right?

23 A. I did at one point.

24 Q. Okay. Now, without interpreting, asking you to
25 interpret the rules, all I'm asking you is whether you

1 Q. On that subject?

2 A. I haven't bothered to sit down and try and
3 interpret how Rambus interpreted JEDEC rules.

4 I did note earlier today that there was some
5 learning over time, that as time went by they got a
6 better understanding of what RAND meant, but they
7 clearly didn't understand it very well early on, but I
8 haven't tried to interpret Rambus' interpretation of
9 JEDEC rules.

10 MR. ROYALL: May I approach, Your Honor?

11 JUDGE McGUIRE: Yes.

12 MR. ROYALL: Your Honor, I want to be very
13 careful not to do anything that might run afoul of your
14 prior admonitions.

15 This is a document that I would like to ask the
16 witness about and I would like to ask him about it in
17 the same manner in which Mr. Stone asked
18 Professor McAfee about documents and again would want
19 to follow precisely the same format by pointing out
20 some language, and it would in this case be one
21 sentence, and asking him if that's consistent with the
22 assumptions that he has made. That's what I would like
23 to do.

24 JUDGE McGUIRE: Then proceed, and if we hear
25 any objection, I'll rule.

1 BY MR. ROYALL:

2 Q. Now, I've just handed you a document,
3 Professor Teece, marked CX-903, and you'll see that
4 it's an August 1996 e-mail sent by Richard Crisp.

5 Do you see that?

6 A. Yes.

7 Q. And if you could turn to page 2, the third
8 paragraph from the bottom beginning "The most valuable
9 patents." Do you see that paragraph?

10 A. Yes.

11 Q. And in that paragraph, Mr. Crisp states, "The
12 job of JEDEC is to create standards which steer clear
13 of patents which must be used to be in compliance with
14 the standard whenever possible."

15 Do you see that language?

16 A. Yes.

17 Q. Now, is that sentence consistent with
18 assumptions that you have made or the conclusions that
19 you have drawn about JEDEC's process in terms of its
20 consideration of the adoption of patented technologies
21 in its standards?

22 A. Can I have the question read back.

23 (The record was read as follows:)

24 "QUESTION: Now, is that sentence consistent
25 with assumptions that you have made or the conclusions

1 that you have drawn about JEDEC's process in terms of
2 its consideration of the adoption of patented
3 technologies in its standards?"

4 THE WITNESS: No, it's not consistent.

5 BY MR. ROYALL:

6 Q. Thank you.

7 Now, this document that I showed you, CX-903,
8 is that a document that you've seen before or that you
9 took into account in forming your opinions in this
10 case?

11 A. No.

12 Q. Thank you.

13 Now, if we could turn to DX-336.

14 Do we have that up?

15 On this demonstrative slide, DX-336, you refer
16 to -- I'm looking for the language, but I believe that
17 you refer to difficulties that you believe would exist
18 in any situation in which Rambus or any other company
19 were seeking to negotiate royalty rates or licenses
20 covering not issued patents but patent applications; is
21 that right?

22 A. That's correct. That's the section pragmatic
23 difficulties.

24 Q. I see. Yes, pragmatic difficulties.

25 So that's the second point made on the slide.

1 We might want to blow that up.

2 Now, you are aware, are you not, that in the
3 early 1990s Rambus entered into licenses related to its
4 RDRAM technology at a time when it had no issued
5 patents but only had pending patent applications
6 relating to that technology?

7 A. It entered into arrangements that were, as I
8 said yesterday, much broader than a naked straight-up
9 license for pending patents or around pending patents.

10 Q. And those arrangements that you referred to,
11 they were licenses; right?

12 A. They were what I would call bundled licenses
13 that were, you know, economically much like a strategic
14 alliance or a joint venture.

15 Q. Well, I'm not asking you to interpret what they
16 were like economically. I'm asking you, am I right
17 that you recall that the agreements that you're
18 referring to or arrangements that you're referring to
19 were themselves denominated as licenses?

20 A. Yes.

21 Q. Okay. And those licenses specified royalty
22 rates, did they not?

23 A. Yes.

24 Q. And are you aware or have you looked in the
25 record of this case to determine whether in arriving at

1 the royalty rates specified by those licenses that
2 covered no issued patents but only patent applications,
3 the parties to the license negotiation, Rambus and the
4 other parties, encountered the pragmatic difficulties
5 that you describe on DX-336?

6 A. I haven't specifically looked and I wouldn't
7 necessarily expect to find them because it's a very
8 different transaction from what would have to take
9 place in the but-for world.

10 Q. But you haven't looked; is that right?

11 A. Well, I'm generally aware of the nature of
12 those agreements and that, as I said, quite a lot of
13 things was bundled into them. They were in the form of
14 the nature of what I think of as a clear development
15 agreement.

16 Q. Now, on the subject of negotiating licenses or
17 royalties covering not issued patents but only patent
18 applications, on that subject, putting aside these
19 RDRAM-related arrangements that you described as
20 bundled licenses, putting those aside, are you aware of
21 any evidence that Rambus, in the early 1990s,
22 contemplated negotiating licenses with DRAM
23 manufacturers covering only patent applications and not
24 issued patents?

25 Let me stop -- let me leave it at that for the

1 moment.

2 A. Oh. Am I aware that they contemplated
3 licensing patent applications?

4 Q. Yes. Licensing patent applications as opposed
5 to issued patents. And I'm saying are you aware of
6 evidence that Rambus contemplated that independent of
7 these, the licenses that you've described as the
8 bundled licenses.

9 A. So on a naked basis.

10 Q. Yes.

11 A. And so let me make sure I understand that they
12 would be contemplating entering into an agreement at
13 the time that provided for a royalty and nothing would
14 be exchanged other than cash on the one hand and access
15 to future patents on the other?

16 Q. I would say use of the technology that's the
17 subject of the patent applications and future patents.

18 A. Okay. So it's technology plus patents and --
19 because I thought you were asking me whether there was
20 a naked intellectual property license.

21 Q. Well --

22 A. Are you referring to a technology license then,
23 because that often is something -- well, that's
24 something quite different.

25 Q. I'm referring to a license that would be a

1 license of a patent -- of a portfolio of patent
2 applications to be used in the manufacture of
3 synchronous DRAM but without any technical assistance
4 provisions or other bundled arrangements, just a
5 license to use technology that may be covered by a
6 portfolio of pending patent applications on synchronous
7 DRAMs.

8 A. I'm not aware of any negotiations at least
9 around a complete naked license for pending patent
10 rights.

11 Q. Not to negotiations yet. I'm asking you, are
12 you aware that Rambus contemplated the possibility of
13 negotiating such licenses?

14 A. No, I'm not.

15 MR. ROYALL: May I approach, Your Honor?

16 JUDGE McGUIRE: Yes.

17 MR. ROYALL: Your Honor, this is another Rambus
18 document that I'd like to see if I could approach it in
19 the very same manner as before.

20 BY MR. ROYALL:

21 Q. I've just handed you a document,
22 Professor Teece, marked CX-543a. And for the record,
23 this is a document that's been used in this trial.
24 It's a June 1992 Rambus business plan.

25 And let me ask you to turn to page 39 of the

1 document. My copy doesn't have the CX page numbers,
2 but it's page 39 of the document or Bates number
3 R 46434. And it has the heading at the bottom of the
4 page Six Quarter Cash Flow Projection. Do you see
5 that?

6 A. Got it.

7 Q. And now that we've identified the heading of
8 the relevant section, let me ask you to turn to the
9 next page, which has the Bates number R 46435.

10 Do you see the paragraph at the very bottom of
11 that page? The last paragraph?

12 A. Right.

13 Q. In the first sentence it says, "There are many
14 potential deals we can do with current and future
15 licensees to generate cash if we had a significant
16 need." And I'll stop there.

17 Do you see that language?

18 A. Yes.

19 Q. And let me refer you to the last sentence in
20 the same paragraph, which states, "As a final example,
21 we could approach manufacturers of sync DRAMs with our
22 patent portfolio and negotiate a cash license
23 payment."

24 Do you see that?

25 A. Yes.

1 Q. Now, let me ask you first, did you see this
2 document in connection with the work that you did on
3 this case?

4 A. I may have. I don't recall it as I sit here
5 right now.

6 Q. So I take it then you don't recall taking into
7 account any aspect of this document or this particular
8 language that I just called your attention to?

1 A. Okay.

2 Q. And I want to also ask you to assume, as I
3 think to be consistent with the heading of this
4 section, that what was being discussed in this
5 paragraph is the potential of licensing a portfolio of
6 synchronous DRAM-related patent applications at some
7 point in a six-quarter period after the date on which
8 the document was written in June '92, so we're talking
9 about some -- I'm asking you to assume that what's
10 being discussed here is an idea to potentially pursue
11 sometime before the end of 1994.

12 Can you assume that?

13 A. Okay.

14 Q. Now, if you assume all that -- now, understand
15 that I'm not asking you to interpret that document.
16 I'm not asking you to determine whether those
17 assumptions are right.

18 But if you assume all that, what we're talking
19 about is the potential of -- Rambus discussing or
20 contemplating the potential of licensing a portfolio of
21 patent applications on synchronous DRAMs and
22 negotiating for, as the last words of this sentence
23 state, a cash license payment.

24 And if you assume that that was something that
25 Rambus was contemplating, isn't that inconsistent with

1 Q. So you think that when Rambus' CEO wrote this,
2 he just wasn't cognizant of the practical difficulties
3 that you describe on DX-336?

4 A. Well, he may have been aware of them at some
5 level. He's discussing it as a distress circumstance,
6 if -- I believe.

7 Q. Let's -- you may set this aside. Thank you.

8 Let's go to DX-340. I don't believe I've
9 touched on this yet.

10 Can we enlarge that?

11 MR. STONE: I don't believe I used this,
12 Your Honor, on direct. I thought this was one of the
13 ones that seemed to have raise some issue with
14 complaint counsel and I didn't put it up yesterday.

15 MR. ROYALL: I'm sorry. My mistake. I had
16 been informed that you did use it.

17 MR. STONE: I don't think I did. I could be
18 wrong.

19 MR. ROYALL: Can we confirm that because I had
20 been informed that -- can we have a moment,
21 Your Honor?

22 JUDGE McGUIRE: Sure.

23 Off the record.

24 (Discussion off the record.)

25 (Recess)

1 JUDGE McGUIRE: Mr. Royall, you may proceed.

2 MR. ROYALL: Thank you.

3 BY MR. ROYALL:

4 Q. If we could pull up DX-350.

5 Do you recall discussing this slide yesterday,
6 Professor Teece?

7 A. Yes, I do.

8 Q. And this slide relates to your view that the
9 rates that Rambus has charged in connection with
10 licensing the RDRAM technology are not a reasonable
11 benchmark for assessing -- are not a benchmark for
12 assessing reasonable SDRAM DDR rates; is that right?

13 MR. STONE: Your Honor, if I might just
14 interject, I'm sorry to interrupt. DX-350 was not used
15 yesterday. The subject was clearly discussed. The
16 demonstrative was not used.

17 MR. ROYALL: Pull that down.

18 MR. STONE: I don't mind if he uses it. I
19 don't mean to object to its use. I don't have a
20 particular objection. It's just Mr. Royall sort of
21 indicated it was used yesterday and it was not, I'm
22 pretty confident of it, but the topic was discussed,
23 and I don't have any objection to it being used. I
24 just wanted the record to be clear as to what had
25 happened yesterday.

1 JUDGE McGUIRE: Noted.

2 MR. ROYALL: Your Honor, if it wasn't used -- I
3 asked the witness and he indicated that he recalled it,
4 but that's fine -- I don't want to use it.

5 JUDGE McGUIRE: All right. Proceed.

6 And I guess while we've interjected, the
7 parties note -- you'll file a copy of this with the
8 office of the secretary and all that (indicating)? I
9 mean, all that's taken care of; right?

10 MR. WEBER: We will take care of it, yes,
11 Your Honor.

12 JUDGE McGUIRE: All right. Very good.

13 BY MR. ROYALL:

14 Q. Without reference to any demonstrative
15 exhibits, am I right that it's your view,
16 Professor Teece, that the rates that were established
17 in licenses, Rambus licenses relating to RDRAM, are not
18 in your view a benchmark for what reasonable SDRAM DDR
19 rates would be?

20 A. Correct.

21 Q. Now, you recall that I asked you earlier today
22 whether you had looked in the record to see if Rambus
23 itself, in arriving at or negotiating the SDRAM DDR
24 rates that it has negotiated, made reference to or
25 considered the rates that were established in other

1 unrelated licenses either in the semiconductor industry
2 or elsewhere. Do you recall that?

3 A. Yes.

4 Q. What I think I did not cover with you at that
5 time was whether you looked in the record of this case
6 to see whether Rambus in either negotiating or
7 establishing the royalties that it would seek on SDRAM
8 and DDR, whether in that connection Rambus itself
9 thought it was relevant to look at the Rambus RDRAM
10 royalty rates. Did you look at that?

11 A. Are you asking me whether Rambus thought it was
12 relevant to look at? When you say "to look at," what
13 do you mean by that?

14 Q. Well, your exercise here has been to -- part of
15 your exercise and part of your testimony relates to
16 assessing what royalty rates would be reasonable for
17 SDRAM and DDR; right?

18 A. Correct.

19 Q. And I'm using shorthand, but we're talking
20 about Rambus' technologies as used in those products.

21 And you say that you don't think that rates
22 that were charged by Rambus in licensing the RDRAM
23 technology, you don't think those are relevant; right?

24 A. What I said is that you cannot use those as the
25 sole benchmark, which is what Professor McAfee did.

1 I'm willing to put, you know, a lot of things in the
2 universe of things to be looked at and then the
3 question is, you know, how do you distill a number or
4 how do you confirm that the rates actually charged are
5 reasonable.

6 Q. You say you don't think it can be used as the
7 sole benchmark, but I take it then that you do think
8 that they can be used as a benchmark along with other
9 things?

10 A. Well, as one data point.

11 Q. And did you look in the record of this case to
12 see whether Rambus itself viewed the RDRAM rates as a
13 benchmark to be taken into consideration in assessing
14 what rates would be appropriate on SDRAM and DDR?

15 A. I would expect that they would be very aware
16 of that, but in terms of using it as a precise
17 benchmark, I mean, clearly the two rates that were
18 chosen, .75 and 3.5, were not that number, so it's not
19 an equivalent.

20 Q. Well, okay. Again, let me focus you on my
21 precise question.

22 MR. STONE: Your Honor, I'm sorry. May I just
23 caution the witness that the RDRAM rates shouldn't be
24 given in response to a question. The actual RDRAM
25 rates shouldn't be given in response to a question so

1 long as we remain in public session. If you don't mind
2 me cautioning the witness.

3 JUDGE McGUIRE: No. That's fine.

4 BY MR. ROYALL:

5 Q. And I'm not asking you, Professor Teece, with
6 reference to specific rates.

7 Let me focus you back on the prior question.
8 The question wasn't what you think is equivalent or
9 not equivalent. I'm not asking for your
10 interpretation.

11 I'm asking you, did you look in the record of
12 this case to see whether Rambus itself viewed the RDRAM
13 rates as a benchmark to be taken into consideration in
14 its own assessment of what rates would be appropriate
15 to charge to negotiate on SDRAM and DDR? Did you do
16 that?

17 A. I didn't specifically go down that path.

18 MR. ROYALL: May I approach, Your Honor?

19 JUDGE McGUIRE: Yes.

20 BY MR. ROYALL:

21 Q. Now, Mr. Teece, I've just handed you a copy of
22 the deposition transcript of the March 16, 2001
23 deposition, again, of Rambus' CEO Geoffrey Tate in the
24 Infineon case, and let me ask you to turn to page 20.

25 And there's just one question and answer I

1 wanted to draw your attention to.

2 Starting on line 9, the question was: "And
3 correct me if I'm wrong, but I believe you said the
4 rates for RDRAM was something that was taken into
5 consideration in determining the rates for SDR and
6 DDR?"

7 "ANSWER: Yes."

8 Do you see that?

9 A. Yes.

10 Q. Did you take that testimony into account in
11 assessing -- making your own assessment of whether the
12 RDRAM rates were relevant to consider in assessing
13 reasonable SDRAM and DDR rates?

14 A. Not specifically. And I'm happy to tell you
15 why.

16 Q. Well, I'm not -- let me ask you this.

17 Were you aware of this testimony when you
18 formed your opinions and conclusions?

19 A. Not this particular piece of testimony, not
20 that I recall anyway. I may have known of it at some
21 point, but I don't recall it as I sit here right now.

22 Q. Were you aware of any other evidence indicating
23 or suggesting that Rambus in setting rates for SDRAM
24 and DDR did in fact take into account its rates on
25 RDRAM?

1 A. Am I aware of other evidence did you say?

2 Q. Other than the deposition.

3 A. No. Not specifically.

4 Q. You may set that aside.

5 Now, I believe that you testified yesterday
6 about -- in connection with this issue of how
7 significant you think the RDRAM rates may be as a
8 benchmark in assessing reasonable SDRAM and DDR rates,
9 I believe that you were asked some questions about a
10 royalty cap imposed on Rambus' RDRAM licenses by
11 virtue of an agreement with Intel. Do you recall
12 that?

13 A. Whether you asked me about that?

14 Q. No, I didn't ask. I think Mr. Stone may have
15 asked you that.

16 A. I don't know that he used the word "royalty
17 cap."

18 Q. But you have an understanding of some agreement
19 or arrangement between Rambus and Intel relating to
20 Rambus' RDRAM royalties?

21 A. No, I'm not specifying as to any agreement or
22 arrangement.

23 Q. You don't have any understanding or
24 recollection as to in your work on this case learning
25 of any agreement or arrangement between Rambus and

1 Intel relating to Rambus' RDRAM royalties?

2 A. Well, what I testified to yesterday was that
3 I'm aware that Intel -- I think you used the word
4 jawboned or was pressuring Rambus to keep those rates
5 down.

6 Q. And you're not aware of any agreement that
7 Intel and Rambus ever entered into relating to that?

8 A. I believe they did enter into some type of
9 agreement. Whether it specifically related to the
10 royalty rate or not I don't know.

11 Q. And so I take it then that you don't have, as
12 you sit here today, you don't have any recollection of
13 a particular percentage that Rambus and Intel agreed
14 Rambus would not exceed in its RDRAM royalties?

15 A. I don't have a specific recollection of that as
16 I sit here right now.

17 Q. You do not?

18 A. Correct.

19 Q. May I ask you to take a look at your deposition
20 from this case, the deposition that I took in this
21 case. Do you have that?

22 A. Yes, I do.

23 Q. Let me see if I can refresh your recollection
24 on this issue.

25 We can go to page 225.

1 relating to whether you had an understanding as to
2 whether there was an agreement or understanding
3 between Intel and Rambus relating to a particular
4 royalty rate?

5 A. Well, I don't make reference to a particular
6 agreement. I certainly recognize that Intel pursuing
7 its own self-interest was putting pressure on Rambus as
8 best it could to go lower rather than higher rates.

9 Q. And how does that influence if it does
10 influence at all your views as to whether the RDRAM
11 rates are a relevant benchmark in assessing reasonable
12 SDRAM and DDR royalties?

13 A. Well, I think there's two issues. One, the
14 royalty that was established for RDRAM was in the
15 context where Intel was pressuring Rambus to keep the
16 rates down.

17 And secondly, as I testified before, the RDRAM
18 license arrangements were in the nature of
19 codevelopment where the customers would be investing
20 along with Rambus to make this technology go.

21 So in that context, where the expectation is
22 that in the long run if the technology goes there will
23 be significant licensing revenues, the combination of
24 those two factors I think help explain why the rate is
25 what it is.

1 Q. Now, if we could go back to DX-341, I believe
2 this is the slide that was used yesterday, DX-341. Do
3 you see that?

4 A. Yes.

5 Q. And the last point you make here, you say,
6 "Agreed to in arm's-length negotiation with major
7 industry players."

8 Do you see that?

9 A. Yes.

10 Q. And you're referring there to the SDRAM and DDR
11 royalties that were established through arm's-length
12 negotiations; right?

13 A. I am.

14 Q. And the fact that they were agreed to in
15 arm's-length negotiations you've said is not something
16 that in itself could cause you to conclude that those
17 royalties are reasonable, but it's something that you
18 considered; is that right?

19 A. Yes. I think yesterday on my direct I put the
20 least weight on that fourth factor.

21 Q. But you would agree that the RDRAM royalties
22 that were charged in actual license agreements between
23 Rambus and its RDRAM licensees were also royalties
24 that were established in arm's-length negotiations;
25 right?

1 A. As were thousands that were embedded in the
2 databases that I summarized.

3 Q. And so as regards the arm's-length negotiation
4 issue, you would accord no less weight to the royalties
5 established through arm's-length negotiations with
6 RDRAM?

7 A. With respect to it being arm's length, that
8 element standing alone, yes, but I have testified as to
9 two significant reasons why I believe the RDRAM rates
10 were held down, and one relating to Intel and the other
11 relating to the coinvestment nature of the license
12 agreements.

13 Q. Well, in the dealings that Rambus had with
14 Intel, those were also arm's-length dealings, weren't
15 they?

16 A. Yes, inasmuch as there's no common equity link
17 in these two companies, but they're obviously however
18 important to each other in the marketplace.

19 Q. You can set that aside.

20 Now, Professor Teece, you recall earlier, I
21 think it was before the lunch break, referring to hints
22 that you assumed had occurred relating to Rambus
23 intellectual property and gave JEDEC some reason to
24 understand that Rambus may have intellectual property
25 relating to its standards or its standards work?

1 A. Yes.

2 Q. Have you seen in the evidence that you've
3 considered in forming your opinions, assumptions and
4 conclusions in this case, in that regard have you seen
5 any evidence that Rambus did not want to hint to others
6 outside the company that it had or might have
7 intellectual property bearing on SDRAM or DDR?

8 A. Are you asking me whether there were internal
9 discussions at various points of time that were along
10 the lines of we should keep quiet? Is that what you
11 mean?

12 Q. Well, to be specific about it, what about
13 discussions internally within Rambus to the effect that
14 it's important not to indicate, hint, wink, et cetera,
15 what we expect the results of our analysis to be,
16 referring to an analysis of whether Rambus standardized
17 parts infringe Rambus patents -- rather, JEDEC
18 standardized parts infringe Rambus patents?

19 A. Was that a question?

20 Q. Yes. Do you want me to read it back?

21 A. Yes, please.

22 Q. To be specific about it, in the work that
23 you've done in this case, did you come across
24 discussions internally within Rambus or evidence of
25 such discussions to the effect that it is important not

1 to indicate, hint, wink, et cetera, what we expect,
2 that is, what Rambus expects, the result of its
3 analysis to be, where the analysis being referred to
4 was an analysis of whether JEDEC standardized parts
5 infringe Rambus patents?

6 A. I mean, I'm obviously not the best person to
7 summarize the record of this case, so I mean, I'm
8 generally aware that they were trying to keep many

1 Do you see that?

2 A. Yes.

3 Q. Now, is this information in this document
4 information that you considered in forming the
5 opinions and conclusions that you reached in this
6 case?

7 A. You know, I don't recall this particular
8 e-mail. I may have seen it. My staff may have seen
9 it.

10 Q. Is this statement -- do you regard this
11 statement in Mr. Tate's December 1999 e-mail to be
12 consistent with the assumptions that you have made,
13 that hints to JEDEC in the earlier part of the 1990s
14 caused JEDEC to be aware that Rambus might have
15 intellectual property relating to SDRAM and DDR?

16 A. Can I have that question again, please.

17 (The record was read as follows:)

18 "QUESTION: Is this statement -- do you regard
19 this statement in Mr. Tate's December 1999 e-mail to be
20 consistent with the assumptions that you have made,
21 that hints to JEDEC in the earlier part of the 1990s
22 caused JEDEC to be aware that Rambus might have
23 intellectual property relating to SDRAM and DDR?"

24 THE WITNESS: Look, you know, I'm clearly not
25 the person to summarize the record on this. I think

1 there's been a lot of testimony on it.

2 But you know, I am aware that material did
3 leak into the public domain. You know, I talked about
4 the WIPO filings, things of that kind.
5 Notwithstanding that, you know, Rambus, at least in
6 this document, appears to be trying to keep things
7 confidential.

8 MR. ROYALL: Your Honor, no further questions
9 at this time.

10 JUDGE McGUIRE: All right. Thank you,
11 Mr. Royall.

12 Mr. Stone, redirect?

13 MR. STONE: Thank you, Your Honor. Please.

1 Q. I want you to further assume that while that
2 analysis was ongoing, Mr. Tate had been asked on an
3 analyst conference call the question of does DDR
4 infringe your intellectual property.

5 Can you also assume that?

6 A. Yes.

7 Q. I want you to further assume that Mr. Tate was
8 aware that if he said on that conference call in a
9 public setting that they thought DDR parts did infringe
10 that that statement alone might be a sufficient basis
11 for one of the manufacturers to file a declaratory
12 judgment action.

13 Can you assume that?

14 A. Yes.

15 Q. And that in that declaratory judgment action a
16 manufacturer might seek a declaratory judgment of
17 invalidity and noninfringement.

18 Can you also assume that?

19 A. Yes.

20 Q. Would it be consistent with the opinions you
21 have reached in this case that, given the assumptions
22 that I have provided to you, a company might decide
23 that while its analysis was ongoing and before it had
24 come to a definitive conclusion that would lead it to
25 decide that issue one way or the other, it might decide

1 that information about that should not be shared
2 publicly?

3 MR. ROYALL: Your Honor, I object to that
4 question because now we're going beyond the scope of
5 both the direct and the cross.

6 He's now asking a different issue about whether
7 it was appropriate or not, in terms of economics, for
8 Rambus to have these views in '99. My question was
9 focused on his assumptions about the earlier time
10 period and about the hints that he referred to
11 in '91-96. It is a document from a later period. What
12 I focused on was earlier assumptions and Mr. Stone is
13 now asking a different question relating to what may be
14 an appropriate --

15 JUDGE MCGUIRE: He's been on cross for a solid
16 day, so I'm sure what you just said is true regarding a
17 question. He said a question.

18 Now, I don't know -- it's hard for me to
19 determine whether it's beyond the scope of cross, but
20 you can respond to that, Mr. Stone.

21 MR. STONE: Yes, Your Honor. I think all I
22 asked him is whether this document, which he was
23 shown, is, given the assumptions I've added to it,
24 consistent with the opinions he's expressed in this
25 case.

1 The whole issue here of the cross-examination
2 was an effort to undermine or attack his opinions. I
3 just want to ask him if, given the assumptions I've
4 given him to put this document in context and minor
5 assumptions, whether this changes his opinions.

6 JUDGE MCGUIRE: Mr. Royall, one last stab.

7 MR. ROYALL: All I'm saying, Your Honor, is
8 that I understand we're trying to be careful here with
9 the extent to which we're using documents and I was
10 trying to be very focused on a statement that he had
11 made earlier about the time period that he focused on
12 at JEDEC, and I think Mr. Stone is now taking this out
13 of that time period and asking whether in 1999 this --
14 any actions based on assumptions that he made were
15 appropriate, and I just don't think --

16 JUDGE MCGUIRE: Overruled. I'll hear the
17 question.

18 THE WITNESS: Yes, I do. If your assumptions
19 are correct, Mr. Stone, it would be extremely important
20 to keep this confidential, and that would be consistent
21 with my study here.

22 BY MR. STONE:

23 Q. Okay. Yesterday you were asked some questions
24 about work you had done and work you had not done and
25 work your staff had done. Do you recall that?

1 A. Yes.

2 Q. And Mr. Royall asked you some questions about
3 work you had done before your expert report was
4 prepared. Do you recall that?

5 A. Correct.

6 Q. Did you yourself personally do any work in
7 connection with this case after your expert report was
8 prepared?

9 A. Yes, I did.

10 Q. And did your staff do any work after your
11 expert report was prepared?

12 A. Yes.

13 Q. You told us today that you had done some review
14 of JEDEC minutes. Do you recall that?

15 A. Yes.

16 Q. And what was your purpose in reviewing the
17 JEDEC minutes?

18 A. Well, I was trying to understand JEDEC
19 behavior. I wasn't trying to understand their rules
20 per se but their behavior because the task that was put
21 to me was to figure out in the but-for world how JEDEC
22 would behave, in particular if they'd issued a RAND
23 letter, issued a request for a RAND letter and Rambus
24 had provided one, would they have gone ahead and
25 adopted the same standards.

1 Q. And was your opinion that you've expressed on
2 the subject of what JEDEC would have done informed by
3 your review of the JEDEC minutes?

4 A. Very much so.

5 Q. You were asked some questions yesterday about
6 your law review article. Do you recall that?

7 A. Yes.

8 Q. Do you still have a copy someplace there? It
9 might be up above because I don't think you were asked
10 about it today.

11 May I approach, Your Honor, and help him?

12 JUDGE MCGUIRE: Yes.

13 THE WITNESS: Thank you.

14 BY MR. STONE:

15 Q. I direct your attention -- this is an article
16 that appears at 87 Minnesota Law Review 1913, does it?

17 A. Yes.

18 Q. And if -- if we could bring it up, if you'd

1 Q. Okay. You were asked about some provisions of
2 this article yesterday, and I want to go to some of
3 those.

4 Let me ask you a question first.

5 In this article you talk about standards; is
6 that right?

7 A. I do.

8 Q. Do you include both de facto and de jure
9 standards in the discussion in this article?

10 A. I do. I look at both.

1 standard-by-standard basis, together with and based
2 upon in part the work of others, such as Dr. Rapp,
3 Mr. Geilhufe and Dr. Soderman, is that what you've
4 tried to do in this case?

5 A. Yes.

6 Q. Turn if you would to the text of footnote 81,
7 which was not read to you yesterday I don't believe but
8 which is at the end of that paragraph. That appears on
9 page 39.

10 A. Okay.

11 Q. In footnote 81 where you say, "From an
12 economic standpoint, what is important is not the
13 technological feasibility of various alternatives, nor
14 cost considerations (narrowly construed) but rather
15 the overall attractiveness (on a quality/cost-adjusted
16 basis) of the various alternatives," do you see that?

17 A. I do.

18 Q. Is that also what you have done in connection
19 with this case based in part on the work of others as
20 you earlier described?

21 MR. ROYALL: Objection. Leading.

22 JUDGE McGUIRE: Sustained.

23 BY MR. STONE:

24 Q. Could you tell us what relationship there is
25 between the text in footnote 81 as we just read it

1 into the record and the work that you've done in this
2 case.

3 A. Well, basically I've made sure that in looking
4 at alternatives that I just simply don't look at
5 technological possibilities, but you have to look at
6 economic substitutes, because technical choices alone
7 don't convey meaning as to whether or not there are
8 effective economic substitutes, which is what's
9 important here.

10 Q. Okay. Turn if you would to page 10 of this
11 article, Professor Teece.

12 In the fourth paragraph of the article, Professor Tee

1 did you write in your article that is set forth in
2 footnote 88 with respect to that statement?

3 A. Well, let me read it.

4 "Ex post, once a standard has been adopted and
5 a patent reading on the standard has been asserted, the
6 accused infringers clearly have a strong incentive to
7 claim that the SSO would have adopted some alternative
8 nonpatented standard had the SSO only known of the
9 existence of the patent. In our experience, such
10 claims rarely articulate which alternative would have
11 been adopted or demonstrate that the SSO would in fact
12 have adopted a different alternative."

13 Q. Let me ask you to go to the bottom of page 10.

14 May I approach and get the board, Your Honor?

15 I have brought up DX-355 from yesterday, and
16 directing you to the text on page 10, I want to ask you
17 a couple of questions about that and how it correlates
18 with what was written on DX-355 if I might.

19 At the bottom of page 10 under the heading
20 Limitations of the Hold-Up Concerns, if we can bring up
21 the first paragraph.

22 I have the wrong page in my article. I'm
23 sorry, Your Honor. This was not page 10. Give me one
24 second.

25 Let me come back to that point because I can't

1 find my prior citation.

2 Let me ask you with respect to the first point
3 on DX-355 -- if I may approach -- when you're talking
4 about the ex post situation after the standard is
5 adopted and you made a -- or Mr. Royall wrote here sunk
6 costs associated with implementing the standard, do you
7 see that?

8 A. Yes.

9 Q. Can you explain what role sunk costs have in
10 connection with any ex post reasons why switching to
11 alternatives may be more or less feasible?

12 A. Yeah. The key question is the switching costs.
13 I mean, just about every industry has got sunk costs of
14 one kind or another, so the key question is not whether
15 there are sunk costs or not but what the switching
16 costs are. And Dr. Rapp has calculated those and I
17 don't believe anybody else has in the context of this
18 case and I think his number is slightly less than
19 five million, so it means --

20 Q. But I'm --

21 A. Sorry.

22 MR. ROYALL: Your Honor, I'd ask that we not
23 have the witness interpret what another witness'
24 testimony is.

25 JUDGE McGUIRE: Sustained.

1 BY MR. STONE:

2 Q. Professor Teece, let me put the question to you
3 this way.

4 A. Okay.

5 MR. STONE: May I approach, Your Honor.

6 JUDGE McGUIRE: Yes.

7 BY MR. STONE:

8 Q. Just as a matter of economic principle,
9 Professor Teece, if the sunk costs associated with an
10 existing product can be used in connection with the
11 alternative product, do those sunk costs enter into
12 consideration of reasons why switching to alternatives
13 may be more or less feasible?

14 A. No.

15 Q. Okay. Are there any costs that would be
16 within the category of sunk costs that you would take
17 into account in considering the feasibility of
18 switching to alternatives if those costs were not
19 required to be incurred in connection with the
20 alternative and had not been incurred in connection
21 with the prior technology?

22 A. It's only the incremental piece that's
23 implicated.

24 Q. Okay. You were asked some questions yesterday
25 about your deposition. Do you have it handy?

1 deposition, do you remember?

2 A. Yes.

3 Q. Could you pull that back out again.

4 JUDGE MCGUIRE: You might want to help him
5 there, Mr. Stone.

6 MR. STONE: May I approach, Your Honor?

7 BY MR. STONE:

8 Q. And let me ask if you would to turn to the page
9 which is 158.

10 A. Okay. I have 158.

11 Q. Do you have that page?

12 A. Got it.

13 Q. Okay. And do you see above you were asked
14 about testimony which I think, if my recollection is
15 correct, began on 157?

16 "It was actually very little in the public
17 domain about license terms of other semiconductor IP
18 licenses."

19 Do you see that?

20 A. Yes.

21 Q. And the question was then: "So I mean that
22 wasn't a consideration as far as arriving at the
23 royalty percentage under the SDRAM and DDR licensing
24 agreements, that other license agreements in the
25 semiconductor industry weren't a consideration?"

1 And then the answer: "Companies within
2 negotiations would refer to what they said were other
3 agreements, but we had no specific knowledge. In any
4 case, it's apples and oranges. The royalty rate for
5 one patent and the royalty rate for another patent even
6 in the industry can vary tremendously based on the
7 value of the patent and the application involved."

8 Do you see that?

9 A. Yes.

10 Q. That's what you were asked about earlier;
11 right?

12 A. Yes.

13 Q. And then following this, did you -- I don't
14 believe you were asked about this, but I want to see
15 if you considered this testimony or this concept.

16 "Okay. Are you personally aware of -- other
17 than Rambus licensing agreements, both RDRAM and SDRAM,
18 are you aware of any royalty rates for other licenses
19 in the semiconductor industry?"

20 Answer at the top: "Aware? Aware? Aware,
21 yes, I am aware there are royalty rates.

22 Are you aware of the royalty rates, are you
23 aware of the specific numbers?

24 "ANSWER: Only from what people have told me.
25 Not from seeing copies, to my knowledge."

1 And then the question is asked: "And when you
2 say from what people have told you, I think earlier
3 you referred to the other participants in the
4 negotiations for the license agreements had brought
5 up --

6 "ANSWER: They would mention things, a
7 microprocessor company has told me they pay 4 percent
8 to another microprocessor company, those kinds of
9 things. But did I have copies of the agreements with
10 definitive information? No."

11 And it goes on from there.

12 Is information that there was royalty rates at
13 4 percent with microprocessor companies the type of
14 information that you would have expected someone at

17 8 tg tm?e

1812 MR. ROYALLER: Your Honor, submit on that at 'she
1 9 aionmrop4 p useses of n itranscriptgs. I used in the
2 10 transcriptup .I e wavery cau rul tosknd wnothe the
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2412 MR. STONEER: LeBud moskknitup .leBud mt widrawhe

25 9 the questi.R: LeBud mt widrawhn the questios o seeeif 04

1 I can respond to it this way.

2 BY MR. STONE:

3 Q. Did you consider, in connection with your work,
4 Mr. Tate's testimony that a microprocessor company had
5 told him that they paid 4 percent to another
6 microprocessor company with respect to license
7 agreements in this industry?

8 A. I don't specifically recall that, but certainly
9 it's here.

10 Q. Is such information -- when you were asked
11 questions by Mr. Royall about whether you would expect
12 the management of Rambus to have taken into account
13 royalty rates of other products -- do you recall being
14 asked that?

15 A. Yes.

16 Q. And you said you would be quite surprised if
17 they hadn't taken into account such rates? Do you
18 remember that?

19 A. Yes.

20 Q. And would you expect that if Rambus had
21 information about rates that were being charged by
22 other companies in this industry that they would have
23 taken them into account?

24 A. Indeed.

25 Q. And would you expect that in doing that they

1 would rely upon information that was provided to them
2 by companies in the industry?

3 MR. ROYALL: Your Honor, I object. These
4 questions are leading.

5 MR. STONE: Let me rephrase.

6 JUDGE McGUIRE: Sustained.

7 MR. STONE: I'll withdraw it.

8 BY MR. STONE:

9 Q. What sources of information would you expect
10 Rambus management to have relied upon in seeking data
11 or obtaining data about license rates charged in this
12 industry?

13 MR. ROYALL: Your Honor, this assumes facts in
14 evidence that there was any effort to seek to obtain
15 such data rates, and in that sense it's both leading
16 and assumes facts in evidence.

17 JUDGE McGUIRE: Mr. Stone?

18 MR. STONE: Let me just rephrase, Your Honor.

19 BY MR. STONE:

20 Q. If somebody was a Rambus executive and they
21 were interested in getting rates about what was being
22 charged, royalty rates being charged in this industry,
23 what sources, in your opinion, would they avail
24 themselves of?

25 MR. ROYALL: Your Honor, that's an improper

1 Q. And let me ask if you would to turn -- it's
2 page 12 on the copy you have, Professor Teece. I
3 believe it's going to be page 14 on the screen.

4 A. Okay.

5 Q. Yes.

6 If I can draw your attention to the middle
7 paragraph under the heading Resistance to Business
8 Model, draw your attention to the middle paragraph
9 there.

10 MR. ROYALL: Your Honor, I did not ask the
11 witness about this aspect of the document.

12 MR. STONE: Your Honor, may I respond?

13 JUDGE McGUIRE: Yes.

14 MR. STONE: Mr. Royall asked the witness about
15 whether documents that he showed the witness would
16 reveal whether or not Rambus had considered rates
17 within the industry in setting their rates both as to
18 RDRAM and as to SDRAM.

19 And this document goes directly to that and I
20 think I'm entitled to ask the witness whether the
21 testimony here, A, was considered by him and, B,
22 whether now that I've shown it to him it is consistent
23 with or inconsistent with his opinions.

24 MR. ROYALL: Your Honor, one point I would make
25 is, as you may recall, I was not allowed to present

1 documents and ask these sorts of questions of
2 Professor McAfee on redirect. I would -- certainly
3 would not object if he was asking him about the same
4 language in this document that I asked about, but now
5 he's going into a different issue. I was not allowed
6 to do that in redirect of Professor McAfee.

7 MR. STONE: My point is I don't think that's a
8 correct statement as to McAfee, but let me address this
9 issue. It is not fair for Mr. Royall to use a single
10 question and answer from a deposition of Mr. Tate to
11 suggest that Rambus didn't consider information when I
12 can pick up the two documents he did use, the same Tate
13 deposition --

14 JUDGE MCGUIRE: Overruled. I'll hear the
15 question.

16 BY MR. STONE:

17 Q. I want to draw your attention only to one
18 sentence in that paragraph, Professor Teece, where it
19 says, "Also we explain, without being specific, that
20 our royalties are in line with IC industry traditional
21 royalty levels of 1-5 percent."

22 Do you see that?

23 A. I do.

24 Q. Is that something that you had considered until
25 you were presented with this today?

1 A. I was aware of this. I have reviewed the
2 document before I was reminded by my staff and this is
3 certainly consistent with Mr. Tate being aware of
4 outside industry rates.

5 MR. ROYALL: Your Honor, the witness is now
6 interpreting the document, which is certainly not
7 something I was permitted to ask Professor McAfee to do
8 on redirect.

9 JUDGE MCGUIRE: I would hope at this stage that
10 it's clear that I'm not going to tolerate that. Now,
11 Mr. Stone --

12 MR. STONE: I'm not trying to elicit that,
13 Your Honor.

14 JUDGE MCGUIRE: Well, in any event, it's been
15 elicited, so that answer will be stricken, and maybe
16 you could restate it.

17 MR. STONE: Certainly.

18 BY MR. STONE:

19 Q. Is this sentence that I just read to you
20 something that you had seen or considered prior to
21 being presented with it today?

22 A. Yes.

23 Q. And is the statement contained in that document
24 consistent or inconsistent with the opinions that you
25 have presented in this case?

1 MR. ROYALL: Again, Your Honor, he's asking for
2 the witness to interpret the document and then to offer
3 some further comments on how that relates to his
4 conclusions, which is not something certainly that I
5 was allowed to do on redirect with Professor McAfee.

6 MR. STONE: Your Honor, on cross, for example,
7 Mr. Royall asked, I've counted, 50 questions that began
8 with one of the two following phrases, have you seen
9 evidence of part of the work you have done as to
10 whether or not this is a fact or based on your review
11 of the record in this case have you.

12 I'm simply trying to see -- it's a document he
13 says he's now reminded he's seen before -- whether it's
14 consistent or inconsistent with his opinions. I'm not
15 asking him to interpret it.

16 MR. ROYALL: May I comment, Your Honor?

17 The consistency, again, I'm concerned about is
18 not between my cross and his redirect. It's between
19 his redirect and my redirect of McAfee.

20 And as you may recall, and I admit some
21 frustration at the time, I stopped the redirect of
22 Professor McAfee and said at the time that assuming the
23 same ground rules applied to their experts I had no
24 further questions. And now we're exactly into a
25 situation where he is trying to apply different ground

1 rules to his redirect, and that's my concern.

2 JUDGE McGUIRE: Sustained.

3 BY MR. STONE:

4 Q. To what extent, Professor Teece, did you take
5 into account the rates Rambus charged for RDRAM in
6 coming up with your opinion as to fair and reasonable
7 rates for SDRAM and DDR, if you can explain that
8 without getting into specific numbers?

9 A. Yes. I was aware of the rate and I was also
10 aware of the circumstances under which those rates had
11 been negotiated. It was simply one amongst many data
12 points that I made reference to and that I had in mind
13 when I came to the conclusions that I came to.

14 Q. Let's bring up if we can DX-341.

15 You were asked earlier about this document,
16 were you not?

17 A. Yes.

18 Q. And I want to ask you just to have in mind the
19 fourth bullet point, agreed to in arm's-length
20 negotiations with major industry players, if you'd have
21 that in mind for my next question?

22 A. Yes. Okay.

23 Q. If we could then bring up DX-332.

24 Directing your attention now to DX-332, the
25 but-for world decision tree, if JEDEC or -- let's just

1 say if JEDEC was prepared to accept a RAND letter and
2 proceed without ex ante negotiations to consideration
3 of technology for a standard -- which is the bottom
4 branch of your tree; correct?

5 A. Yes.

6 Q. If that was the conduct that JEDEC would
7 engage in, is it your understanding that in doing so
8 they would be aware that any negotiations with respect
9 to royalty rates would occur at some point after
10 standards had been adopted or at least after patents
11 had issued?

12 MR. ROYALL: Your Honor, I object to the
13 question as asking for understandings of the state of
14 mind of JEDEC. He's asking whether JEDEC would be
15 aware. And I don't mind him asking what assumptions
16 he's making but --

17 JUDGE McGUIRE: Sustained.

18 BY MR. STONE:

19 Q. Is it a necessary assumption of your decision
20 tree that if no ex ante negotiations occur, then any
21 negotiations which do occur will occur ex post?

22 A. Yes. In the circumstance where there's no
23 ex ante negotiations, then sometime after the patent
24 issues the negotiations commence.

25 Q. And is it your assumption that an organization

1 such as JEDEC that understood those negotiations would
2 occur ex post would be aware that the arm's-length
3 negotiations we referred to earlier would be ex post
4 negotiations?

5 A. Yes.

6 Q. In the real world of today, has the RDRAM
7 product become a high-volume product, as you understood
8 that term when you were asked questions about it
9 earlier today by Mr. Royall?

10 A. No.

11 Q. Okay. And in taking into account in your
12 but-for world, have you considered that the success or
13 failure of RDRAM in the but-for world would be the same
14 as in the real world that we are in today?

15 A. Yes.

16 Q. Mr. Royall asked you earlier today if you
17 assumed that in the but-for world Rambus would have
18 conducted itself consistent with JEDEC's rules and
19 referenced Echelon. Do you recall that?

20 A. Yes.

21 Q. In the but-for world have you considered
22 whether or not JEDEC would have conducted itself in
23 accordance with its rules?

24 A. Yes.

25 Q. Did you in your paper that we looked at

1 earlier, your law review paper, consider the
2 possibility that members of standard-setting
3 organizations might not always conduct themselves in
4 accordance with JEDEC's rules?

5 MR. ROYALL: Your Honor, I don't know where
6 we're going with this, but it sounds like we're going
7 beyond the scope of anything that was covered in
8 cross.

9 MR. STONE: I think it goes directly to his
10 question of in his but-for world the extent to which
11 he's assuming everyone has acted consistent with the
12 rules, and I want to make sure that he has done so. I
13 understand it to be now a key element of complaint
14 counsel's contentions that everyone involved with
15 JEDEC in the but-for world must have done so in
16 accordance --

17 JUDGE MCGUIRE: Are you talking about SSOs
18 overall, Mr. Stone, or just JEDEC?

19 MR. STONE: Just JEDEC.

20 JUDGE MCGUIRE: Maybe we could clarify it by
21 restating the question then we'll see if there's an
22 objection.

23 MR. STONE: I will, Your Honor.

24 BY MR. STONE:

25 Q. In your but-for world, Professor Teece, you

1 have assumed that the members of JEDEC and the
2 organization itself would conduct themselves in
3 accordance with their rules?

4 A. Not necessarily. I mean, I've assumed that, as
5 in the actual world, some people pay attention to them
6 and some people don't and sometimes they don't know
7 what they are.

8 MR. ROYALL: Your Honor, I object to that. The
9 witness is interpreting the factual record as to
10 whether the actual world shows whether JEDEC members do
11 or do not comply with the rules.

12 MR. STONE: I think if counsel would look at
13 the testimony --

14 JUDGE McGUIRE: He said, "I've assumed that in
15 the actual world."

16 MR. ROYALL: But he said, "as in the actual
17 world, some people pay attention to them and some
18 people don't."

19 MR. STONE: I don't -- I don't think he needs
20 to say that he's commenting on what JEDEC in fact did.

21 THE WITNESS: Correct.

22 MR. STONE: He's commenting on what in fact
23 happens.

24 MR. ROYALL: Well, that's my problem, is I'm
25 objecting to him commenting on what in fact -- his

1 interpretation of what in fact happens. If all he's
2 saying is that he's made an assumption that certain
3 things happen in the actual world --

4 JUDGE McGUIRE: I'll tell you what. Let's
5 restate and perhaps we'll hear a clearer answer,
6 Professor, and then we can proceed.

7 BY MR. STONE:

8 Q. Professor Teece, for purposes of your
9 assumptions as to the but-for world, have you assumed
10 for those purposes that members of JEDEC and the
11 organization itself may not always act in accordance
12 with its own rules?

13 MR. ROYALL: Your Honor, I object to this as
14 leading. I think if he just wants to ask him what
15 assumptions have you made, if any, as to compliance
16 with the rules, we can have the witness explain to us
17 what --

18 MR. STONE: I'm happy to do that.

19 BY MR. STONE:

20 Q. What assumptions have you made, if any, with
21 respect to how JEDEC and its members conduct themselves
22 with respect to JEDEC's rules?

23 A. Well, I've assumed there's at least one rule
24 that JEDEC follows, which is that if it doesn't get a
25 RAND letter, it won't proceed with a standard.

1 But setting that to one side, I've -- I have
2 assumed that JEDEC basically mimics standard-setting
3 organizations as I described them in my paper, which is
4 that there are some parties that pay a lot of attention
5 to things and some that don't, some that know the rules
6 and some that don't.

7 Q. And in your answer when you said you've assumed
8 that they don't proceed if they get a RAND letter, is
9 that in the situation where they've requested it or in
10 other situations?

11 A. In the situation where they've requested it.

12 Q. And did you in your paper discuss the various
13 assumptions about how members of standard-setting
14 organizations may conduct themselves in accordance with
15 compliance of rules and laws?

16 A. I considered that in the paper.

17 Q. In your opinion, would you expect that royalty
18 rates would be, just as a general matter, higher or
19 lower if the licensor was a pure-play technology
20 company as opposed to one which was able to engage in
21 cross-licensing?

22 A. Well, the cash royalty rate would be higher
23 because with a pure-play technology company they don't
24 have the need, typically, to license anybody else's
25 technology, so they engage in cash licensing rather

1 than cross-licensing.

2 Q. And earlier today -- let's bring up if we can
3 DX-347.

4 You were asked about DX-347. Do you recall
5 that?

6 A. Yes.

7 Q. And you were asked about the number of
8 agreements being listed as 101 and 5 adding up to 106?

9 A. Yes.

10 Q. And that was compared with another document
11 that showed a total of 111. Do you recall that?

12 A. I believe that's correct. I believe that's
13 correct, yes.

14 Q. Could we bring up RX-2105-3.

15 Is this the PLX study that was the basis for
16 DX-347, if you know?

17 A. Yes, it is.

18 Q. Okay. Is that the document you were shown
19 earlier?

20 A. Yes.

21 Q. Could we turn to page 3.

22 MR. ROYALL: Your Honor, I did not show the
23 document to the witness.

24 MR. STONE: I apologize.

25 MR. ROYALL: I've never used this document.

1 MR. STONE: Let me restate my question.

2 BY MR. STONE:

3 Q. Is that a document I showed you earlier today?

4 A. Yes.

5 Q. And did I draw your attention to page 3 of that
6 document, if we could go to that?

7 MR. ROYALL: Are we referring to discussions
8 that you had with the witness out of the courtroom?

9 MR. STONE: I showed him the document, yes. I
10 showed him the document.

11 MR. ROYALL: I just want the record to be clear
12 on that.

13 MR. STONE: Yes.

14 BY MR. STONE:

15 Q. Could you blow up the chart at the top.

16 And you see here on this chart where it lists
17 106?

18 A. Yes.

19 Q. And then it lists 5?

20 A. Yes.

21 Q. After I showed you that, did you come to any
22 conclusion as to where the missing five referenced
23 agreements went?

24 A. Yes. It's just simply a typographical error.

25 JUDGE McGUIRE: All right. Let's lay a

1 foundation here, because when I go back to this
2 transcript, I'll have no idea what you're talking
3 about.

4 MR. STONE: I'm sorry, Your Honor.

5 BY MR. STONE:

6 Q. Can you tell us what RX-2105-3 is?

7 A. The document we have in front of us is the
8 foundation exhibit from which I took the data.

9 Q. And the data is the data we saw earlier on
10 DX-347?

11 A. Right.

12 MR. ROYALL: Your Honor, I have not been
13 provided a copy of this document.

14 MR. STONE: Oh, I'm sorry.

15 MR. ROYALL: I've never seen it before.

16 MR. STONE: It's an admitted exhibit. I'm
17 sorry, Your Honor.

18 MR. ROYALL: But I think our standard practice
19 is to provide opposing counsel copies of documents
20 before the witness is asked about it.

21 JUDGE MCGUIRE: Yes, it is. Let's go off the
22 record a moment.

23 (Discussion off the record.)

24 JUDGE MCGUIRE: Mr. Stone, you may proceed.

25 MR. STONE: Thank you, Your Honor. And I

1 apologize in my haste not to have pulled this out ahead
2 of time.

3 BY MR. STONE:

4 Q. Let me ask you, Professor Teece -- we now have
5 on the screen -- at the bottom we have DX-347. Do you
6 see that?

7 A. Yes.

8 Q. And at the top we have page 3 from RX-2105-34.

9 A. Yes.

10 Q. What's the relationship, if any, between the
11 data numbers shown on DX- -- I'm sorry -- DX-347 and
12 the chart that we see up above from RX-2105-3 at
13 page 3?

14 A. The chart up above is the source table.

15 Q. Okay. And if you look at the numbers there for
16 number of agreements, what numbers do you see in the
17 source table?

18 A. 106 and 5.

19 Q. And then in the demonstrative that was
20 prepared, what numbers do you see?

21 A. 101 and 5.

22 Q. And can you explain the fact that there's a
23 difference of five?

24 A. Yes. It's simply a transcription error.

25 Q. And what should the numbers have been on

1 DX-347?

2 A. 106 and 5.

3 MR. STONE: Thank you.

4 I have no further questions, Your Honor. Thank
5 you.

6 JUDGE McGUIRE: Thank you, Mr. Stone.

7 Any recross?

8 MR. ROYALL: Very brief, Your Honor.

9 RA6E8?

8 MR. ROYALL: Very brief, Your Honor.

1 Q. We have different versions, but just for
2 purposes of pulling it up on the screen.

3 So in footnote 88 Mr. Stone pointed you to the
4 following language: "Ex post, once a standard has been
5 adopted and a patent reading on the standard has been
6 asserted, the accused infringers clearly have a strong
7 incentive to claim that the SSO would have adopted some
8 alternative nonpatented standard had the SSO only known
9 of the existence of the patent. In our experience,"
10 referring to -- I assume the "our" here is referring to
11 yourself and Dr. Sherry who cowrote this with you;
12 right?

13 A. Correct.

14 Q. So in your experience and in Dr. Sherry's
15 experience you say, "Such claims rarely articulate
16 which alternative would have been adopted or
17 demonstrate the SSO would in fact have adopted a
18 different alternative."

19 Do you see that language?

20 A. Yes.

21 Q. Now, you're not suggesting through your answers
22 to Mr. Stone's questions that you're offering an
23 opinion that that's true in this case, are you?

24 A. This is -- no. I'm making a general statement
25 here about the proclivities of parties to avoid paying

1 money.

2 Q. And you're aware, are you not, that there are
3 many alternatives to Rambus' technologies that have
4 been the subject of testimony by engineers, not experts
5 but business engineers in this case?

6 MR. STONE: Your Honor, I object on the grounds
7 that this goes beyond the scope of redirect and, more
8 importantly, asks this witness to characterize and
9 interpret testimony.

10 MR. ROYALL: Your Honor, it's directly within
11 the scope. I'm asking him about a statement that he
12 pulled out and drew his attention to and I just want to
13 clarify that he's not by making this reference
14 purporting to suggest anything about the evidence in
15 this case.

16 MR. STONE: Well, he said that. He asked him
17 that question and he said, No, I'm not. He said, I'm
18 not expressing an opinion as to whether in this case
19 people --

20 JUDGE MCGUIRE: Was that your answer, Professor?

21 THE WITNESS: Yes, it was.

22 MR. ROYALL: Then I'm sufficient with that.

23 Thank you.

24 BY MR. ROYALL:

25 Q. Now, you were also asked by Mr. Stone -- if

1 you'll give me a moment to find the language -- if I
2 could refer you to -- and again our page numbers are
3 probably about one page off, but it's my page 10,
4 maybe your page 9. It's a section with the heading B,
5 The Choice of Standards: Ex Ante versus Ex Post
6 Assessment.

7 Do you find that, that heading, in your
8 article?

9 A. Yes.

10 Q. And below that heading, the fourth paragraph
11 below that, you were asked about this language. It's
12 the paragraph beginning "Clearly." Do you see that?

13 A. Yes.

14 Q. And then after that, there is a discussion
15 that I focused you on yesterday afternoon, and that
16 was a discussion that I believe was the subject of
17 DX-355 which Mr. Stone asked you about. Do you recall
18 that?

19 A. I'm not sure if we characterized this as a
20 discussion, but you did put up some propositions.

21 Q. Yes. Well, we were discussing what you said in
22 your Minnesota Law Review article, and I was just
23 taking notes on what you said.

24 And in this regard, what you said in the
25 article about reasons why switching to alternatives,

1 quote, may be much less feasible, end quote, in the
2 ex post as opposed to the ex ante time period; right?

3 A. Yes. And my article speaks for itself. I'm
4 not laying claim on your precise wording.

5 Q. I understand your article speaks for itself,
6 but because of a question Mr. Stone asked, I just want
7 to clarify something.

8 He asked you a question that caused you I
9 believe to give testimony to the effect that the
10 switching costs issue was a key issue?

11 A. Yes.

12 Q. But am I right that in your article on the page
13 that we're focusing on, you don't say that the
14 switching costs is any more important in this regard
15 than, for instance, the coordination problem that you
16 identified?

17 A. Well, it's -- well, they're obviously related,
18 but at the end of the day it's the switching cost which
19 is critical.

20 Q. So there can be switching costs that are
21 critical in this context that flow from the types of
22 coordination problems that are discussed in your
23 article and that we discussed in my questioning of you
24 yesterday afternoon; right?

25 A. Switching costs is where the focus should be in

1 this type of analysis.

2 Q. And those switching costs can flow from the
3 coordination problems that are referred to in the third
4 numbered point on DX-355?

5 A. Yeah, that can be an element. If you continue
6 to read on through my paper, you'll find a discussion
7 of the fact that in regimes of rapid change there are
8 many windows to change standards and that it's not
9 something that's infeasible. It depends on the facts,
10 but it's something that happens. Standards do get
11 changed, can get changed, and there are many windows
12 within which switching costs get depressed.

13 Q. I'm not asking you, Mr. Teece, about what you
14 say in other parts of the article. I'm just asking you
15 about, just to clarify because Mr. Stone raised it,
16 about these three conditions.

17 A. The key points I want to make is that the
18 element of sunk costs which is important is the
19 incremental element. I mean, just to say there are
20 sunk costs doesn't by any means make the case.

21 Q. And costs that you would view as being
22 important from the standpoint of assessing whether in
23 the ex post period it may be much less feasible to
24 change to alternatives, costs that you would view as
25 being important in that context can flow from the types

1 of coordination problems that are identified on this
2 exhibit, DX-355, and that we discussed yesterday;
3 you'll agree with that?

4 A. Coordination can be an element, yes.

5 Q. No -- and so you agree that coordination costs
6 can be part of the broader switching costs that are
7 relevant to this type of analysis?

8 A. It can be an element.

9 MR. ROYALL: Thank you, Your Honor. No further
10 questions.

11 JUDGE MCGUIRE: All right. Thank you,
12 Mr. Royall.

13 Then, Professor, I think that does it. Your
14 testimony in this proceeding has concluded and you're
15 excused from this proceeding.

16 THE WITNESS: Thank you very much, Your Honor.

17 JUDGE MCGUIRE: Thank you very much.

18 Counsel, I guess we're coming down the home
19 stretch here. I look forward to starting again early
20 next week and getting this thing concluded on August 1,
21 which is next Friday.

22 Mr. Perry, did you want to make a comment?

23 MR. PERRY: Yeah. On that score, Your Honor,
24 on Monday morning we have some deposition transcripts
25 to use -- I think that will only take the morning, but

1 we couldn't get the Tuesday witness until Tuesday. On
2 Tuesday we have the last witness.

3 JUDGE McGUIRE: Okay.

4 MR. PERRY: And we also received last evening
5 the notice regarding their proposed rebuttal case, and
6 we will have a response to that that will come in first
7 thing Monday morning to Your Honor.

8 JUDGE McGUIRE: Very good. If we need to take
9 that up, we'll do so on Monday. Or I assume on Monday,
10 possibly on Tuesday, but hopefully on Monday.

11 All right. Everyone have a good weekend.

12 MR. STONE: Thank you, Your Honor.

13 MR. ROYALL: Thank you.

14 (Time noted: 4:09 p.m.)

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1 C E R T I F I C A T I O N O F R E P O R T E R

2 DOCKET NUMBER: 9302

3 CASE TITLE: RAMBUS, INC.

4 DATE: July 25, 2003

5

6 I HEREBY CERTIFY that the transcript contained
7 herein is a full and accurate transcript of the notes
8 taken by me at the hearing on the above cause before
9 the FEDERAL TRADE COMMISSION to the best of my
10 knowledge and belief.

11

12 DATED: July 27, 2003

13

14

15

16 JOSETT F. HALL, RMR-CRR

17

18 C E R T I F I C A T I O N O F P R O O F R E A D E R

19

20 I HEREBY CERTIFY that I proofread the
21 transcript for accuracy in spelling, hyphenation,
22 punctuation and format.

23

24

25 DIANE QUADE