

	WITNESS:	DIRECT	CROSS	REDIRECT	RE CROSS
1					
2					
3					
4	Williams	757	840	950	962
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6					
7	EXHIBITS		FOR ID	IN EVID	WITHDRAWN
8	CX				
9	Number 14			838	
10	Number 23			839	
11	Number 40			976	
12	Number 252A			838	
13	Number 253			837	
14	Number 254			838	
15	Number 255			838	
16	Number 336			976	
17	Number 342			976	
18	Number 364			977	
19	Number 2632			838/977	
20					
21	RX				
22	Number 317			979	
23	Number 340			978	
24	Number 356			978	
25	Number 361			978	

	EXHIBITS	FOR ID	IN EVID	WITHDRAWN
1				
2				
3	RX			
4	Number 559		977	
5	Number 585		978	
6	Number 629		977	
7	Number 663		978	
8	Number 2250		979	
9				
10	JX			
11	None			
12				
13	DX			
14	Number 4	809		
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UNITED STATES OF AMERICA  
FEDERAL TRADE COMMISSION

In the Matter of: )  
Rambus, Inc. ) Docket No. 9302  
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Monday, May 5, 2003  
9:30 a.m.

TRIAL VOLUME 4  
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: Susanne Bergling, RMR

For The Record, Inc.  
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## P R O C E E D I N G S

- - - - -

1  
2  
3 JUDGE McGUIRE: This hearing is now order,  
4 convened at 9:30 a.m.

5 Counsel, how is everyone this morning? I trust  
6 everyone had a peaceful weekend, a quiet weekend.

7 Before we get started today, are there any  
8 housekeeping chores that we should take up before the  
9 start of the testimony?

10 MR. STONE: I can just report, Your Honor, that  
11 I think we have agreed on the form of a stipulation and  
12 that the lists are being processed, and we should be  
13 able to file everything with you tomorrow afternoon.

14 JUDGE McGUIRE: Is there anything that you want  
15 to add to that, Mr. Oliver?

16 △MR. OLIVER: No, I agree with that statement.  
17 I simply want to mention that over the weekend, we have  
18 been considering trying to work on some changes to our  
19 schedule in light of the discussions late Friday, and I  
20 hope I will be in a position to report by the end of  
21 the day today or tomorrow morning about some changes in  
22 our schedule.

23 JUDGE McGUIRE: Okay, all right, very good.

24 Then if there are no other issues to be brought  
25 to the Court's attention at this time, then the

1 complaint counsel can call its next witness.

2 MR. OLIVER: Your Honor, Ms. Cary Zuk will be  
3 handling the next witness on behalf of complaint  
4 counsel.

5 JUDGE McGUIRE: How is that spelled, Counsel?

6 MS. ZUK: Z like in zebra, U, K like in kite.

7 JUDGE McGUIRE: Thank you very much.

8 Sir, could you please come this way and then  
9 you will be sworn by the court reporter.  
10 Whereupon--

11 BRETT WILLIAMS  
12 a witness, called for examination, having been first  
13 duly sworn, was examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MS. ZUK:

16 Q. Good morning, Mr. Williams.

17 A. Good morning.

18 Q. Could you please state your name for the  
19 record?

20 A. Brett Williams.

21 Q. And where do you work, Mr. Williams?

22 A. I work at Micron Technology.

23 Q. And what kind of company is Micron Technology?

24 A. It's a company that manufactures memory  
25 products.

For The Record, Inc.  
Wallnology?

1 Q. And what is your job there?

2 A. I am the strategic marketing manager in charge  
3 of desktop systems.

4 Q. And could you briefly describe what your job  
5 responsibilities are as strategic marketing manager?

6 A. My main job responsibilities are to interface  
7 with customers and try to determine the requirements  
8 for the next generation memory products as well as help  
9 them designing in the current memory problems.

10 Q. What kinds of products are you responsible for  
11 as strategic marketing manager at Micron Technology?

12 A. Mainly DRAM.

13 Q. And how long have you been strategic marketing  
14 manager at Micron Technology?

15 A. For about three years.

16 Q. Can you briefly describe your educational  
17 background to the Court?

18 A. Yes, I graduated with a Bachelor of Science in  
19 electrical engineering from Brigham Young University in  
20 1981.

21 Q. And what did you do after you graduated from  
22 BYU?

23 A. I joined Intel Corporation and worked with them  
24 as an application engineer.

25 Q. And how long were you at Intel?



1           A.  Until 1989.

2           Q.  And could you please briefly describe your job  
3 responsibilities at -- while you were at Intel?

4           A.  Yeah, I started initially as an application  
5 engineer in the board division, then moved from there  
6 to the field as an application engineer in the field,  
7 and then got promoted as a regional architecture  
8 specialist in the field also.

9           Q.  And when you were at Intel, what kinds of  
10 customers were you involved with?

11          A.  Mainly customers that would build computer  
12 systems, AST, ALi, and my territory was the Southern  
13 California area.  So, people that build motherboards or  
14 build computer systems, worked a lot with military  
15 accounts down there also.

16          Q.  And when you were at Intel, what products were  
17 you primarily responsible for?

18          A.  Microprocessor products.

19          Q.  At Micron, have you held several different  
20 positions?

21          A.  Yes, I have.  I started as an application  
22 engineer and after two years there became the  
23 application engineering manager; held that position for  
24 a couple years and then was asked to go start up a  
25 couple ventures, one with after-market memory called

1 Crucial Technology, and then another one called the  
2 Integrated Platform Group, which was making  
3 motherboards.

4 Q. And in general terms, what did you do as an  
5 applications engineer manager in the 1991 to 1994 time  
6 frame?

7 A. In that time, again, interfaced with customers  
8 to try to design in our current products, also trying  
9 to understand their needs for the next generation  
10 products.

11 Q. And as an applications engineer manager in 1991  
12 to 1994, did you have a focus in any particular DRAM  
13 products?

14 A. Yeah, at that point, since I had people working  
15 for me that had focus on specific DRAM, SRAM and flash  
16 products, I was focused more on leading edge products,  
17 and at that time it was SDRAM and burst EDO.

18 Q. And in your role as applications engineering  
19 manager in 1991 to 1994, what kinds of customers did  
20 you work with?

21 A. The typical computer customers, HP, Dell,  
22 Compaq, Sun, Unysis, DEC.

23 Q. Have you ever published any technical articles?

24 A. Yes, I have published several.

25 Q. And what subjects did these technical articles

1 cover?

2 A. Typically memory products and how to use  
3 memory -- specific memory products or the advantages of  
4 one memory product over another.

5 Q. And where were these technical articles  
6 published?

7 A. In trade publications.

8 Q. Are you familiar an organization called JEDEC?

9 A. Yes, I am.

10 Q. What is JEDEC?

11 A. JEDEC is a committee of industry people who set  
12 standards based upon an open standard that everybody  
13 can use.

14 Q. Have you had any personal involvement with  
15 JEDEC?

16 A. Yes, I have. I was actually the JEDEC  
17 representative for Micron from the '91 to '93 time  
18 frame.

19 Q. And when you said you were the JEDEC  
20 representative for Micron, what did you mean by that?

21 A. JEDEC requires that each member company select  
22 a -- what they call a representative, and they can also  
23 have several alternates. The representative's duty is  
24 to attend the meetings. They get the official minutes  
25 of the meetings. They are really chartered to do the

1 voting at the JEDEC meetings and in essence be the  
2 liaison between JEDEC and the member company.

3 Q. Would you say between the 1991 to 1993 time  
4 frame you were the official JEDEC representative for  
5 Micron?

6 A. Yes.

7 Q. As far as you know, has Micron always had a  
8 JEDEC representative?

9 A. As long as I've been there, yes, they have.

10 Q. Do you think it's important for Micron to have  
11 a JEDEC representative?

12 MR. STONE: Objection, Your Honor, lacks  
13 foundation, calls for speculation.

14 JUDGE McGUIRE: Sustained.

15 BY MS. ZUK:

16 Q. Do you have an understanding of why it was  
17 important for Micron to have a JEDEC representative?

18 MR. STONE: Same objection, and now assumes  
19 facts which are not in evidence, namely, assuming that  
20 there is an importance. This witness has simply no  
21 basis to express an opinion as to whether it is or is  
22 not important for Micron to have a representative, or  
23 if he has such a foundation, one has not been laid.

24 JUDGE McGUIRE: Overruled, but I will insist on  
25 a better foundation on that, Ms. Zuk.

1 MS. ZUK: Okay.

2 BY MS. ZUK:

3 Q. Do you have an understanding as to why Micron  
4 had a JEDEC representative?

5 A. Yes, for Micron, they make memory products that  
6 are used in the industry. Their customers are mainly  
7 computer customers who require that they are able to  
8 buy products from multiple sources and that these  
9 products interoperate, and JEDEC is the body that sets  
10 those standards by which there are interoperability and  
11 everybody has, in essence, the same part based upon the  
12 JEDEC standard. So, it was very important for Micron  
13 to be a member of JEDEC to ensure that we know what  
14 those standards are and we help formulate those  
15 standards.

16 Q. How long were you personally Micron's official  
17 JEDEC representative?

18 A. For between two and three years, '91 to '93.

19 Q. And between 1991 to 1993, what JEDEC committees  
20 did you participate in?

21 A. The memory committees primarily. JC-42, and of  
22 JC-42, there's several subcommittees; JC-42.3, which is  
23 the RAM committee; JC-42.5, which is the module

1 attended JC-11, which is really the packaging  
2 committee.

3 Q. In the 1991 to 1993 time period, did you attend  
4 JEDEC meetings regularly?

5 A. Yes, I did.

6 Q. And in that same time period, was there a  
7 Rambus representative who attended those meetings?

8 A. Yes.

9 Q. Do you remember who represented Rambus at JEDEC  
10 meetings in the 1991 to 1993 time frame?

11 A. Yes, Richard Crisp I believe was the one that  
12 attended most of the meetings that I remember. I  
13 remember seeing Dave Mooring there also from time to  
14 time, but in essence, it was Richard Crisp.

15 Q. Why do you remember Richard Crisp and David  
16 Mooring attending meetings in the 1991 to 1993 time  
17 frame?

18 A. I saw Richard Crisp there quite often. I also  
19 knew Mr. Crisp previously. He was at a company that  
20 when I was at Intel in Southern California, I had some  
21 interaction with him.

22 As far as Mr. Mooring, I actually worked with  
23 him at Intel. I was a field application engineer at  
24 Intel, and he was a salesman in the Southern California  
25 area.

1           Q.   Okay.  Now, you mentioned that you participated  
2 in the JC-42.3 subcommittee of JEDEC.

3           A.   Yes.

4           Q.   What types of companies participate in that  
5 subcommittee?

6           A.   Almost all of the DRAM memory companies, SRAM  
7 memory companies, logic companies, customers of memory,  
8 as well as interconnect companies, such as socket  
9 manufacturers.

10          Q.   Between late 1991 and 1993, what are some of  
11 the names of the DRAM manufacturers who participated in  
12 JC-42.3?

13          A.   They would be companies like Toshiba, OKI,  
14 Mitsubishi, Panasonic.  Those are some that I remember.

15          Q.   And in that same time frame, what are the names  
16 of some of the DRAM customers who participated in  
17 JC-42.3?

18          A.   HP, Compaq, IBM, Unysis, DEC, Sun.

19          Q.   And you mentioned there were other companies  
20 besides DRAM manufacturers and DRAM customers who  
21 participated in JEDEC.

22          A.   That's correct.





1 MS. ZUK: Well, I'm happy to try to lay the  
2 foundation. I believe we have established that Mr.  
3 Williams has worked with DRAM customers, has worked for  
4 a DRAM customer in the past and also has involvement  
5 with JEDEC where all of these companies get together.

6 JUDGE McGUIRE: Okay, the objection is  
7 sustained. I am going to ask you if you want to go  
8 into that inquiry that you lay a proper foundation to  
9 that inquiry.

10 MS. ZUK: Okay.

11 BY MS. ZUK:

12 Q. You worked with many DRAM customers in the 1991  
13 to 1993 time frame. Is that true?

14 A. Again, repeat the question.

15 Q. Did you work with several DRAM companies in the  
16 1991 to 1993 time frame?

17 A. In a cooperative effort, yes.

18 Q. And would any of that work entail a discussion  
19 about standards?

20 A. At the JEDEC meetings, that is correct, they  
21 would.

22 Q. And the JEDEC meetings would involve DRAM  
23 customers as well?

24 A. Yes, they were there.

25 Q. And would JEDEC meetings also involve DRAM

1 suppliers or manufacturers?

2 A. Yes, the manufacturers were there, and they  
3 were in the discussions.

4 Q. Okay. Based on that understanding that you  
5 developed in exchanging with DRAM customers and DRAM  
6 suppliers, did you have developed in exchanging with  
3 7 those companies before that business that exchange

1 cross examination --

2 MR. STONE: That's fine. Thank you, Your  
3 Honor.

4 JUDGE McGUIRE: -- of the witness. Overruled.  
5 You may proceed.

6 BY MS. ZUK:

7 Q. Do you have my question in mind?

8 A. No.

9 Q. Okay, I'll try to paraphrase.

10 Do you have an understanding -- you testified  
11 earlier that companies you worked with based their  
12 business on the standard. Do you have an understanding  
13 of why that was so?

14 A. Yes, the computer companies need to keep the  
15 costs of their systems as low as possible. If they use  
16 a standard device, they know it's going to be  
17 manufactured by everybody in the industry, and they  
18 require that, and they ensure that -- even when we were  
19 trying to bring out new products, they wanted to make  
20 sure that JEDEC was going to be the -- the standards  
21 body that would grant the standard to the device, and  
22 so it was very important to them.

23 And they reiterated over and over when I would  
24 talk to them, where's JEDEC on this device? And before  
25 JEDEC had a standard, they wanted to make sure it was

1 well down the road before they would actually adopt it  
2 for their systems.

3 Q. Now, turning back to JEDEC meetings themselves,  
4 does Micron compete for the same business as the other  
5 DRAM manufacturers who participated in JEDEC?

6 A. Yes, we do.

7 Q. Given that companies are ultimately competing  
8 for business with at least a few other JEDEC members  
9 during the time you attended JEDEC, can everyone work  
10 together to formulate a standard?

11 MR. STONE: Objection, Your Honor, leading and  
12 assumes facts not in evidence.

13 JUDGE MCGUIRE: Sustained.

14 BY MS. ZUK:

15 Q. Do you have an understanding that everyone can  
16 work together at JEDEC?

17 A. Yes, because we have.

18 Q. Okay. And can you explain a little bit further  
19 about why -- what your understanding was based on?

20 A. I sat in many, many meetings where we would try  
21 to formulate a standard based upon the discussions and  
22 the proposals that various member companies would bring  
23 to the committee, and we had long discussions of the  
24 pros and cons of various options and tried to determine

1 produce.

2 Q. Are you familiar with JEDEC's patent policy  
3 between late 1991 and 1993?

4 A. Yes.

5 Q. Between late 1991 through 1993, how did you  
6 learn about JEDEC's patent policy?

7 A. Mainly by the presentations that were given at  
8 every meeting by Mr. Townsend.

9 Q. And in that time period between late 1991 and  
10 1993, what was your understanding of JEDEC's patent  
11 policy?

12 A. That if somebody had a patent or pending patent  
13 based upon the work that was being discussed at JEDEC,  
14 that there needed to be disclosure of sufficient  
15 information so that the council or the committee could  
16 determine whether or not what was being discussed was  
17 actually implied in the patent.

18 Q. Did you have an understanding of how close a  
19 connection there needed to be between the discussion  
20 that was taking place in JEDEC and patents and pending  
21 patents that a company might have?

22 A. Just needed to know -- just needed to have  
23 sufficient information to ensure that -- and none of us  
24 were lawyers there, so we couldn't determine if it  
25 was -- if it infringed or not. I mean, that wasn't the

1 purpose.

2 The purpose was to bring the information to the  
3 committee so that based upon the information that was  
4 given we could determine if the actual aspect that was  
5 being discussed at JEDEC was included in the patent.  
6 And it was incumbent upon the member committee -- I  
7 mean the member -- the member to bring that information  
8 to the committee.

9 Q. Between late 1991 through 1993, did you have an  
10 understanding of when a company had to disclose a  
11 patent?

12 A. Yes, it was determined that we didn't want to  
13 waste time at JEDEC, so it was encouraged to bring that  
14 information forward as soon as you knew. As soon as  
15 you knew that there was a possible patent that could  
16 apply to what was being discussed, you were to bring  
17 that forward to get it out of the way and determine  
18 whether or not -- you were going to see if you needed  
19 to use that patent and what the terms of use of that  
20 patent would be or you tried to design around it.

21 Q. Now, you used the phrase "waste time." Do you  
22 have an understanding of why it would waste time to not  
23 disclose a patent or pending patent as soon as  
24 possible?

25 A. Yes, at that time, JEDEC was meeting about

1 every three months, and in order to get a point or  
2 feature to ballot, it required a first showing, which  
3 would happen at one meeting. You would then go to a  
4 second showing at the second meeting. You could then  
5 at the end of the second showing request that the item  
6 or the ballot -- the item be sent to ballot. The  
7 ballots would be issued. They would count the ballots  
8 at the third showing, and then based upon if it passed,  
9 then it would go to the board, which would then ratify  
10 it or -- and it typically got ratified if it got that  
11 far.

12 So, you're talking about nine months from the  
13 time that you introduced an item to the earliest time  
14 that it typically could be sent to ballot and voted on.

15 Q. Okay. Between late 1991 through 1993, if you  
16 thought you had a relevant patent or patent  
17 application, what, if anything, did you need to inform  
18 the committee about?

19 MR. STONE: Your Honor, just so I understand,  
20 is this based on his understanding when she says -- or  
21 something else? Because the question as phrased is,  
22 what did you need to inform the committee about? Is  
23 this just his understanding as to what you needed to  
24 inform the committee about or some other source of  
25 opinion?

1 JUDGE McGUIRE: Is that his understanding? Is  
2 that the import of your inquiry, Ms. Zuk?

3 MS. ZUK: I certainly wouldn't ask him to  
4 answer anything beyond his understanding, so --

5 JUDGE McGUIRE: All right, does that satisfy  
6 you, Counsel?

7 MR. STONE: Absolutely, thank you.

8 JUDGE McGUIRE: All right, proceed.

9 BY MS. ZUK:

10 Q. Do you have my question in mind?

11 A. Repeat it if you would, just to make sure.

12 Q. Between late 1991 through 1993, if you thought  
13 you had a relevant patent or patent application, what,  
14 if anything, did you have to inform the committee  
15 about?

16 A. Based upon my understanding, it would be that  
17 you had to bring sufficient information, whatever that  
18 meant, so the committee could make a determination, and  
19 I think it was a -- it was a case-by-case basis what  
20 that actually meant, but you -- the committee, if they  
21 didn't think it was sufficient information so that they  
22 could make an informed decision, they would then ask  
23 for more definite information.

24 Q. In the case of a patent application, did  
25 companies provide a copy of their patent applications



1 to the committee?

2 A. I don't ever remember that happening.

3 Q. Do you know whether they were required to give  
4 the committee a copy of their patent application?

5 A. No, I don't think so.

6 Q. Now, we've just gone over the -- your  
7 understanding of the patent policy at JEDEC, and I'd  
8 like to draw on your memory of particular applications  
9 of the patent policy, if I could.

10 Do you remember any examples of companies  
11 between late 1991 and 1993 who disclosed patents or  
12 patent applications during a JC-42.3 meeting?

13 A. Yes, there were several.

14 Q. In the late 1991 to 1993 time frame, do you  
15 remember an example where Micron disclosed a patent?

16 A. Yeah, I remember specifically we disclosed a  
17 patent on the VPAK package.

18 Q. Can you tell us what you remember about  
19 Micron's disclosure of the VPAK patent in the 1991 to  
20 1993 time frame?

21 A. Yes, we disclosed to the committee that we had  
22 a patent that possibly applied and that -- at that time  
23 gave the patent number and submitted a letter as to --  
24 that we would license that at a reasonable and  
25 nondiscriminatory rate, which is what was required by

1 the committee.

2 Q. In general terms, how did the committee react  
3 to Micron's disclosure of the VPAK patent?

4 A. They wrote it down on the patent tracking list  
5 so that other people, if they wanted to delve more in  
6 detail, could look at that and determine whether or not  
7 it was applicable to what was being discussed.

8 Q. In the 1991 to 1993 time frame, do you remember  
9 an example where a company failed to disclose a patent?

10 A. Yes, I do.

11 Q. Could you tell us what you remember?

12 A. Yeah, this was a case where it was found out  
13 that TI had -- and it could have been Micron I believe  
14 that brought it to the committee -- had a patent on the  
15 quad CAS device that had just been standardized or was  
16 in the process of being standardized, and it did pass,  
17 became a standard, and the council -- so, here we are,  
18 we had just either made a standard or it was past the  
19 voting stage of council, I can't remember exactly where  
20 it was, but I remember a great uproar in the committee  
21 based upon it.

22 I mean, they were very irate that it had gotten  
23 this far and they had a patent based upon what was  
24 being standardized. So -- in fact, I remember Ernest  
25 Powell, who was the committee member for TI, just

1 getting pummeled in that meeting for his failure to  
2 disclose.

3 Q. Do you remember --

4 JUDGE McGUIRE: Now, who was Ernest Powell?

5 THE WITNESS: Ernest Powell was the JEDEC  
6 committee member from TI.

7 JUDGE McGUIRE: Okay, thank you.

8 Go ahead, Ms. Zuk.

9 BY MS. ZUK:

10 Q. Do you remember how the committee responded to  
11 the disclosure of the TI patent on quad CAS?

12 A. Yes, I believe that standard was actually  
13 rescinded.

14 Q. And was that because of the patent issues  
15 surrounding the quad CAS standard?

16 A. Yes.

17 MS. ZUK: I would like to now introduce my  
18 first exhibit, but I thought, Your Honor, perhaps it  
19 would be more efficient if I just handed the witness  
20 and opposing counsel a copy -- and if you would like a  
21 copy -- copies of the documents I intend to use today  
22 at this time.

23 JUDGE McGUIRE: Is it going to be on the ELMO?

24 MS. ZUK: Yes, it is going to be.

25 JUDGE McGUIRE: Then I don't need a hard copy.

1 MS. ZUK: May I approach the witness?

2 JUDGE McGUIRE: That will be fine. Just make  
3 sure you give a copy to opposing counsel.

4 MS. ZUK: Okay.

5 BY MS. ZUK:

6 Q. Mr. Williams, I have just handed you a set of  
7 exhibits, and I'd like you to look at the first in the  
8 set. It's JX-10. Do you have that document in front  
9 of you?

10 A. Yes, I do.

11 Q. Are you familiar with JX-10?

12 A. Yes, I am.

13 Q. What is it?

14 A. These are committee minutes of the JC-42.3  
15 committee for December '91.

16 Q. And I see your name on the attendance roster of  
17 this set of minutes. Did you attend this meeting?

18 A. Yes, I did.

19 Q. Where did this meeting take place?

20 A. In Maui, Hawaii.

21 Q. Did you attend the entire December 1991 JC-42.3  
22 meeting?

23 A. Yes, I did.

24 Q. Okay. And if I can refer you to the next page,  
25 which is page 2 of JX-10, I see a name next to Rambus

1 of Billy Garrett. Do you see that?

2 A. Yes, I do.

3 Q. Does this indicate that someone from Rambus  
4 attended the December 1991 JC-42.3 meeting?

5 A. Yes, it does.

6 Q. And who does it indicate attended on behalf of  
7 Rambus?

8 A. Billy Garrett.

9 Q. And if you could turn to page 8 of JX-10, which  
10 is also JEDEC 14188. Do you see that?

11 A. Yes, I do.

12 Q. Okay. At the middle of the page, Section 6.2,  
13 it appears that a ballot on V-Pack is mentioned. Do  
14 you see that?

15 A. Yes.

16 Q. Does this indicate that a V-Pack ballot was  
17 discussed during the December 1991 meeting?

18 A. Yes, it does.

19 Q. Did you observe the discussion of the V-Pack  
20 ballot during the December 1991 meeting?

21 A. Yes.

22 Q. And below the mention of the VPAK ballot, there  
23 appears a statement from Micron, and it says, "Possible  
24 Micron patent may or may not apply. Copies of the  
25 patent were handed out at the Philadelphia meeting."

1 Do you see that?

2 A. Yes.

3 Q. Does this passage in the December 1991 minutes  
4 relate to the VPAK disclosure that you made to JEDEC on  
5 Micron's behalf just a moment -- that you mentioned  
6 just a moment ago?

7 A. Actually, I believe the disclosure was made at  
8 the Philadelphia meeting, and this was just a follow-up  
9 stating that we didn't know whether it applied or not,  
10 but we disclosed it.

11 Q. And next I'd like to focus your attention  
12 towards the bottom of the page. It states, "TI  
13 responded the mechanical issues and packaging viability  
14 were already proves. TI felt patent issue was resolved  
15 by disclosure." (Sic)

16 Do you see that?

17 A. Yes.

18 Q. Does this indicate that TI felt the patent  
19 issue was resolved by disclosure?

20 MR. STONE: Objection, Your Honor, the document  
21 speaks for itself, and unless he has independent  
22 knowledge as to what TI felt, this witness has no basis  
23 for testifying to what TI felt.

24 JUDGE McGUIRE: Sustained.

25 MS. ZUK: I -- if I -- could I respond to that?



1 ballot failed at the committee?

2 A. I think it failed due to the possible patent  
3 problems.

4 Q. Did you ever reach an understanding about  
5 whether or not the Micron patent you disclosed actually  
6 applied to the VPAK ballot?

7 A. I believe that it actually did not. I think it  
8 was determined that it did not apply.

9 Q. And how did you reach your understanding that  
10 the patent you disclosed during the meeting or during  
11 the discussion of the VPAK standard actually didn't  
12 apply?

13 A. I believe that committee members -- I'm trying  
14 to recall. I think I recall that committee members  
15 decided that it didn't apply.

16 Q. Okay. I'd like to direct your attention to the  
17 second exhibit in this stack that I handed you earlier,  
18 and this is Respondent's Exhibit 356. Do you have that  
19 exhibit?

20 A. Yes, I do.

21 Q. Can you tell me what this exhibit is?

22 A. Yeah, these are some draft minutes from the  
23 JC-42.5 committee that was held on December 8th of '92  
24 in Fort Lauderdale.

25 Q. How can you tell that this is -- that this



1 exhibit is a set of draft minutes?

2 A. They're not in the final form that would be  
3 issued from the JEDEC office.

4 Q. Okay. Between late 1991 and 1993, was it  
5 typical for you to receive draft minutes?

6 A. Yes. Every meeting -- after every meeting, we  
7 got a set of draft minutes.

8 Q. Okay. Do you have an understanding of why you  
9 received -- it was typical for you to receive draft  
10 minutes?

11 A. It's because it took the JEDEC office so long  
12 to get to the final draft minutes -- I mean to the  
13 final version of the minutes, and people wanted to  
14 ensure that they got something to take back to start  
15 discussing with their companies as soon as possible.

16 Also, it gave the members a time to review the  
17 minutes and make sure that everything was included that  
18 was discussed.

19 Q. Okay.

20 Your Honor, I don't believe that this exhibit  
21 has been introduced yet, so I would ask to offer it  
22 into evidence at this time.

23 JUDGE McGUIRE: Mr. Stone, any response?

24 MR. STONE: Yes, Your Honor. I don't know that  
25 this witness has testified he received this document,

1 so I don't know that -- what the basis is for his  
2 testimony. If he received it, then I think his  
3 description of the document may indeed be correct, but  
4 I don't know if he has any basis for describing what  
5 the document is or not.

6 JUDGE MCGUIRE: Can you answer that inquiry,  
7 Mr. Williams?

8 THE WITNESS: Yes, I did receive a copy.

9 JUDGE MCGUIRE: Go ahead. Okay, I'm sorry, you  
10 did receive it.

11 Does that satisfy the objection, Mr. Stone?

12 MR. STONE: Yes, Your Honor.

13 JUDGE MCGUIRE: All right, then we will enter  
14 it at this time.

15 (RX Exhibit Number 356 was admitted into  
16 evidence.)

17 BY MS. ZUK:

18 Q. If you could turn to page 2 of Respondent's  
19 Exhibit 356. In the middle of the page it reads, "Call  
20 to Order - Jim Townsend. Review of Patent Items -  
21 Members are cautioned to disclose their relevant patent  
22 applications. Those believed to be in violation of  
23 this policy will be identified to the committee at the  
24 next meeting."

25 Do you see that?

1 A. Yes.

2 Q. What does "call to order" mean?

3 A. This was just a call to the members that were  
4 around to sit down, we are going to start the meeting  
5 and get going.

6 Q. Who would typically call to order the meetings  
7 between late 1991 and 1993?

8 A. It would have been the committee chair, in this  
9 case for this committee it was Jim Townsend.

10 Q. Between late 1991 and 1993, was Chairman --  
11 what would Chairman Townsend typically do after he  
12 called JC-42.3 meetings to order?

13 A. He would take care of some logistical issues,  
14 and then he would go through the -- he would pass out a  
15 sign-in sheet to make sure everybody that was there  
16 would get their name on the sign-in sheet so we could  
17 say who and who was not present, make sure we have a  
18 quorum, and then he would pass out -- he would go  
19 through the patent issue presentation that he would  
20 present at each one of these meetings.

21 Q. And between late -- and what would he do after  
22 he passed out the sign-in sheet to the committee?

23 A. He would then start his presentation on the  
24 patent policy.

25 Q. Okay. Between late 1991 and 1993, how long did

1 Chairman Townsend's patent presentations last?

2 A. It actually varied. Early on it was quite  
3 lengthy, because he would ask for discussion. He would  
4 put up a foil set and go through it point by point,  
5 ensuring that everybody understood that -- what the  
6 patent policy covered, that it covered patents issued,  
7 that it would cover pending patents, that it covered --  
8 and what the obligation of each member was, that they  
9 had an obligation to bring that information to the  
10 committee so that they can make an informed choice of  
11 what's being discussed, whether or not it applied to  
12 the patent that's being disclosed.

13 So, early on it was quite lengthy. Towards the  
14 end of my -- my stay as a patent -- I mean as a  
15 committee representative, it got short, because  
16 everybody was quite tired of hearing it every time,  
17 beating into you what your responsibility was.

18 Q. In that -- in the time frame when the  
19 presentations were quite lengthy, as you testified --  
20 just testified to, what was your understanding, if any,  
21 about why Chairman Townsend devoted time at JC-42.3  
22 meetings to give these presentations on the patent  
23 policy?

24 MR. STONE: Objection, Your Honor, lacks  
25 foundation as to this witness having any knowledge as

1 to why Jim Townsend did or didn't spend a long or a  
2 short period of time on things. He just can't know --

3 JUDGE McGUIRE: That's overruled.

4 If you have an understanding as to why, sir,  
5 you may answer, and if not, you may not answer.

6 THE WITNESS: As to why he had spent longer  
7 time versus shorter time on it? Is that the question?

8 BY MS. ZUK:

9 Q. Yes.

10 A. Well, I think from the beginning, because of  
11 what had happened just prior to this time period with  
12 the WANG case where they were part of the committee,  
13 they had helped set a standard, and then they went out  
14 and enforced their patents against everybody in the  
15 industry who used a SIMM module. That's what Chairman  
16 Townsend and the rest of the board wanted to ensure  
17 never happened again, and so that's why there was so  
18 much emphasis placed upon why the policy was where it  
19 was and why there was discussion upon it and why it was  
20 at length discussed that this was so important, so that  
21 the industry was not held hostage again like it was  
22 under the WANG case.

23 Q. And how did you -- you testified that you --

24 youe WANGaalt† 24 riooooooooooooooooooportant, so that

1           A. Well, being in the industry, I heard about what  
2 happened prior to my joining the JEDEC, but it was  
3 brought up during Chairman Townsend's discussions.

4           Q. Now, this statement on page 2 of RX-356 uses  
5 the word "cautioned." Between late 1991 and 1993, did  
6 Chairman Townsend typically caution members to disclose  
7 relevant patent applications?

8           A. I can't remember how often he used the word  
9 "caution," but he did explain to the members the  
10 importance of disclosure, the importance of making sure  
11 that the work that's being done there is -- remains an  
12 open standard and tried to emphasize the importance for  
13 each member there, their duty to ensure that patents  
14 were disclosed.

15          Q. And what is your understanding, if any, of what  
16 Chairman Townsend meant when he used the term "relevant  
17 patent applicationsw3trh5'bia           4 nknowsinghat'singw   ln

ng "ca 8 Chaisingi ChaithellT†   d mi Q.s, no JEDEC, but it was2)TjTmat whl

1 determine whether or not it does apply.

2 Q. I'd like to direct your attention to the next  
3 exhibit in the set of documents I handed to you  
4 earlier, and it's JX-14.

5 Now, we just looked at the draft minutes of the  
6 December 1992 JC-42.3 meeting. Can you tell the Court  
7 what this exhibit is?

8 A. Yes, these are the meeting minutes from the  
9 JC-42.3 committee of December '92 that was held in Fort  
10 Lauderdale, Florida.

11 Q. Okay. And the first page of JX-14 appears to  
12 be an attendance roster, and I see about midway down  
13 the page your name appears on the list. Did you attend  
14 the December 1992 JC-42.3 meeting?

15 A. Yes, I did.

16 Q. Okay. And if you could turn to the next  
17 page -- or I'm sorry, stay on that page, my apologies.

18 I see a Richard Crisp next to Rambus on the  
19 attendance roster. Do you see that?

20 A. Yes.

21 Q. Does this indicate that Mr. Crisp attended the  
22 December 1992 JC-42.3 meeting?

23 A. Yes, it does.

24 Q. And if you could turn to the next page, about  
25 halfway down the list again, there is a Dave Mooring

1 next to Rambus on the attendance roster. Do you see  
2 that?

3 A. Yes.

4 Q. Does this indicate that Mr. Mooring attended  
5 the December 1992 JC-42.3 meeting?

6 A. Yes, it does.

7 Q. Now, I'd like to refer you to the next page.  
8 Section 5 refers to patent policy, and it reads, "A  
9 presentation was made on the EIA patent policies by Mr.  
10 Townsend. The tracking list was shown and also the  
11 draft of Appendix F of JEP-21H policy manual."

12 Do you see that?

13 A. Yes.

14 Q. Does this passage indicate that Mr. -- Chairman  
15 Townsend showed the draft of Appendix F of JEP-21H at  
16 this meeting?

17 A. Yes.

18 Q. Do you know what JEP-21H stands for?

19 A. Not specifically, but it is a JEDEC manual. I  
20 don't know exactly what the JEP stands for, but it is a  
21 manual that guides the policies of JEDEC, how the JEDEC  
22 ought to operate.

23 Q. Okay. And is one of the policies the patent  
24 policy?

25 A. Yes.



1           Q. Between late 1991 and 1993, did you observe  
2 discussions about how to revise portions of the patent  
3 policy?

4           A. Yes, there were several discussions over  
5 several meetings.

6           Q. Okay. And who typically led those discussions  
7 about how to revise the patent policy?

8           A. Mr. Townsend.

9           Q. And in general terms, between late 1991 to  
10 1993, what was discussed about how to revise portions  
11 of the patent policy?

12          A. It was discussed how to revise the wording to  
13 ensure that the patent policy was clear so that new

1 revised; only the manual was being revised. The  
2 policy, even from my very first time at JEDEC, was



1 that you could make a decision.

2 Also, if you were going to use the patent, you  
3 also needed to know -- and it was described up front --  
4 that you needed a letter from the company stating their  
5 position on the patent in order to use it, the license  
6 requirement.

7 Q. Did the JEDEC policy require anything about the  
8 terms of that license?

9 A. Yeah, they stated that they -- it needed to be  
10 licensed on a reasonable and nondiscriminatory basis to  
11 ensure that it's an under -- that it's an open standard  
12 and everybody was treated the same.

13 Q. Now, if I could direct your attention to the  
14 last sentence of this paragraph on page 25 of JX-14,  
15 "The term 'patented' as used in this policy, also  
16 includes pending patents on items and processes under  
17 discussion -- under consideration by a committee,  
18 subcommittee, or working group."

19 Do you see that?

20 A. Yes.

21 Q. Do you have an understanding of what this  
22 sentence in the revised -- or the manual under revision  
23 meant in the late 1991 to 1993 time frame?

24 A. Yes, it meant that it not only applied to  
25 patents granted but applied to patents that were

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A. Yes, it meant that it

1 pending, really any patented -- and by "patented," I  
2 mean any IP that was in the process of being patented,  
3 whatever stage of the process that might be.

4 Q. And lastly I'll refer you to the first  
5 paragraph of Section 8.3.1 of the manual under revision  
6 that was shown at the December 1992 JC-42.3 meeting.  
7 It reads, "The Chairperson must call to the attention  
8 of the members present the requirements contained in

1 do its work, that it can progress with a standard and  
2 not get down the road like happened, you know, with the  
3 quad CAS device, that you get to the final throes of  
4 getting a standard, and then in the standard there's  
5 some patent road blocks.

6 Q. Now, when you attended JEDEC meetings as  
7 Micron's official representative in 1991 to 1993, was  
8 the JC-42.3 subcommittee working towards an SDRAM  
9 standard?

10 A. Yes, they were.

11 Q. What data rate was the JC-42.3 subcommittee  
12 striving to achieve with an SDRAM standard?

13 A. Initially, it was 66 megahertz.

14 Q. And afterwards, did that target change?

15 A. That got extended to 100 megahertz.

16 Q. And when did the target get extended to 100  
17 megahertz?

18 A. I'm not sure exactly when. Later in the -- in  
19 the development process.

20 Q. Do you have an understanding as to why JC-42.3  
21 was striving to achieve those data rates in the early  
22 1990s?

23 A. Yes, that was the data rates of the front side  
24 bus of the processor, and the customers were requiring  
25 to get -- to get the best utilization of the processor,

1 so the customers were demanding that -- and this was  
2 the view of the customers -- were demanding that the  
3 memory be at the same rate to utilize the processor.

4 Q. Are you familiar with how a JEDEC SDRAM  
5 operates?

6 A. In general, yes.

7 Q. How did you become familiar with how a JEDEC  
8 SDRAM operates?

9 A. Through the discussions at JEDEC, through the  
10 ballots that were issued and through our data sheet as  
11 well as competitor data sheets.

12 Q. Are you aware that the JEDEC SDRAM standard  
13 calls for programmable CAS latency and burst length?

14 A. Yes, I am.

15 Q. What is your understanding of the term "CAS  
16 latency"?

17 A. CAS latency is the time in the DRAM from when a  
18 read is registered at the DRAM to the time that data is  
19 guaranteed to be valid on the output.

20 Q. What is your understanding of the term  
21 "programmable CAS latency"?

22 A. That means that that time, that CAS latency  
23 time, might be of one or multiple items -- it can be  
24 one or multiple values, and that those values can be  
25 programmed on the DRAM.

1           Q. How does the JEDEC standard require  
2 programmable CAS latency to be implemented?

3           A. It uses a mode register where it stores the  
4 data, stores the CAS latency item.

5           Q. In the early 1990s, did JC-42.3 consider  
6 different ways to determine CAS latency?

7           A. Yes, there were discussions on various ways to  
8 program it.

9           Q. What were the different ways that were proposed  
10 within JC-42.3 to determine CAS latency in the early  
11 1990s?

12          A. Either to have a fixed CAS latency, use a  
13 combination of signal levels, of various signals, a  
14 programming pin were some that were discussed.

15          Q. Now, switching gears to burst length, what is  
16 your understanding of the term "burst length"?



1 so many data items out, and those data items are called  
2 the burst length, and the typical ones at that time

1 options were really discussed for all of the  
2 programmability portions of the DRAM.

3 Q. I'd like to direct your attention to JX-56,  
4 which is the next -- what should be the next exhibit in  
5 your stack. It looks like it's below those documents.

6 A. CX-56 or -- oh, J.

7 Q. JX-56.

8 A. Okay.

9 Q. Are you familiar --

10 MR. STONE: Give me just a minute to get it,  
11 Your Honor. It was not in our stack.

12 JUDGE McGUIRE: All right, just a moment.

13 MS. ZUK: It's probably at the bottom. I took  
14 it out of order.

15 JUDGE McGUIRE: Off the record.

16 (Discussion off the record.)

17 JUDGE McGUIRE: On the record.

18 You may proceed, Ms. Zuk.

19 MS. ZUK: Okay.

20 BY MS. ZUK:

21 Q. Are you familiar with this document?

22 A. Yes, I am.

23 Q. Can you tell me what this document -- what this  
24 exhibit is?

25 A. This is the -- the actual JEDEC standard,

1 printed standard, in which all of the RAM standards are  
2 incorporated. After they've passed the council and  
3 passed the board of directors, they are actually  
4 printed from time to time in the actual standard. This  
5 is that standard.

6 Q. And when was this version of the standard  
7 published?

8 A. This was November of '93.

9 Q. And is the title of this particular standard  
10 JEDEC Standard Number 21-C, Release 4?

11 A. Yes, it is.

12 Q. Does Release 4 of Standard 21-C contain the  
13 first publication of JEDEC's SDRAM standard?

14 A. Yes, it does.

15 Q. Can you turn to page 114 of this exhibit, which  
16 is also JEDEC 7793.

17 A. Okay.

18 Q. Now, this page is titled SDRAM Mode Register.  
19 Do you see that?

20 A. Yes.

21 Q. Would you please explain what this page titled  
22 SDRAM Mode Register shows?

23 A. Yeah, what this is showing is that the SDRAM  
24 contains a register of bits zero through 11 and that  
25 different fields of those bits have been defined to

1 contain the burst length, the burst type and the CAS  
2 latency or what they are calling latency mode. Both  
3 are the same. So that this is the actual register in  
4 the DRAM you would program in order to gain the  
5 specific burst length and specific burst type and CAS  
6 latency.

7 Q. Okay. Can you enlarge the mode register part  
8 of this page at the top?

9 Do you see this part of page 114 --

10 A. Yes.

11 Q. -- of Exhibit 56?

12 A. Yes.

13 Q. Is this element of the page an illustration of  
14 a mode register?

15 A. Yes, it is.

16 Q. Can you enlarge the bottom half of the page,  
17 the rest of the page?

18 I'd like you to walk us through each element of  
19 this page, if possible, and I will try to take them one  
20 by one. If you could explain the burst length portion  
21 of this mode register depiction for us.

22 A. The lower bits, bits zero, one and two,  
23 actually contain the burst length information, and in  
24 the table, it shows that the burst length of one and  
25 the burst length of two are -- and the burst length of

1 full page are actually in parentheses, meaning they are  
2 optional but not really used. The main ones are the  
3 burst length of four and the burst length of eight, as  
4 is the descriptor in the table.

5 Q. And where in the mode register is the burst  
6 length information that is programmed stored?

7 A. In bits zero, one and two.

8 Q. Okay. And if I could direct your attention to  
9 the burst type portion of the mode register as  
10 illustrated on this page.

11 A. Yes.

12 Q. Could you please explain that?

13 A. The burst type allows for two options, which is  
14 a sequential option or an interleaved option, and that  
15 information is stored in bit three of the mode  
16 register.

17 Q. And lastly, the latency mode table on this  
18 page, could you please explain what that illustrates?

19 A. Yes, the latency mode is described or actually  
20 held in bits four, five and six, and it gives -- the  
21 table gives options for one, two and three, and in  
22 parentheses, there is also an option for four, but  
23 because it's in parentheses, all DRAM do not have to  
24 contain that option. That is an optional option, but  
25 you had to contain options for one, two and three.

1 Q. Okay. I'd now like to show the witness a  
2 demonstrative, and we've provided respondent with a  
3 copy of the demonstrative I think Friday, and I have  
4 copies.

5 May I approach?

6 JUDGE McGUIRE: All right, you may approach.

7 MS. ZUK: Would you like a copy?

8 JUDGE McGUIRE: Yes, I'll take one. Thank you.

9 BY MS. ZUK:

10 Q. Mr. Williams, I've just handed you a  
11 demonstrative. Do you feel comfortable explaining what  
12 this demonstrative shows?

13 A. Yes.

14 Q. Okay. And again, I'd like to go through each  
15 element of this demonstrative like we did with the mode  
16 register page.

17 On the left-hand corner of the demonstrative,  
18 there is a block representation of a memory controller.  
19 Can you explain what a memory controller does in a  
20 JEDEC style SDRAM memory system?

21 A. Yes, the memory controller would give to the  
22 memory the commands required, as well as the address  
23 required and control signals required, in order to get  
24 data to the DRAM, to be contained in the DRAM, as well  
25 as get data out of the DRAM, which then would go to and



1 the data bus, one that is labeled chip select1, and  
2 another that is labeled chip select2. Do you see that?

3 A. Yes.

4 Q. What does a chip -- chip select signals do in a  
5 JEDEC style SDRAM memory system?

6 A. The chip select actually selects which DRAMs in  
7 the system -- and in this case, as they go to all chips  
8 on the actual module -- which module you're going to do  
9 the operation on that is included in the command bus,  
10 and so if you select chip select1, you're going to do  
11 the operation read, write, et cetera, on module one.  
12 If you generate chip select2 -- and you would only  
13 select one or the other, not both, at a specific  
14 command -- if you select chip select2, then you would  
15 read and write to module two.

16 Q. Okay. Now, there are two modules in this  
17 system. What does this -- or in this demonstrative.  
18 What does this illustrate about a typical SDRAM memory  
19 system?

20 A. It shows that you have multiple modules in a  
21 typical system. You can have just one. You can have  
22 several. And based upon the architecture and the  
23 amount of connectors in the system would tell you how  
24 many modules you're able to plug in, again, each module  
25 being accessed independently. They are not accessed



1 together. They are only given the command -- even  
2 though they might all say the same command and address  
3 bus and all the same data bus, they are only active  
4 when the chip selects are given to those specific  
5 modules.

6 Q. And each module has a DRAM 1 and DRAM N. Do  
7 you have an understanding of what these components of  
8 each module are intended to illustrate?

9 A. This shows that you can have a number of DRAM  
10 chips, and typically, in a typical SDRAM system, based  
11 upon the organization of the DRAM, you would have from  
12 four to 18 chips on a specific module to get a specific  
13 bus width.

14 Q. Okay. And there is a block on each DRAM chip  
15 that is labeled mode register.

16 Do you see that?

17 A. Yes.

18 Q. What does this illustrate about a JEDEC style  
19 SDRAM memory system?

20 A. Each DRAM has its own individual mode register  
21 that needs to be programmed individually, and what

1 type.

2 Q. Okay. And the top hand portion of this  
3 demonstrative enlarges one of the DRAM chips on the  
4 module. Do you see that?

5 A. Yes.

6 Q. What does this illustration of a larger scale  
7 DRAM chip illustrate about a typical SDRAM memory  
8 system?

9 A. It's showing that the mode register affects  
10 really the SDRAM logic and how it's going to operate,  
11 specifically what the CAS latency will be and what the  
12 burst length is going to be.

13 Q. Okay. And is the mode register represented in  
14 this portion of the demonstrative?

15 A. Yes, it's represented by the block that  
16 contains the BL, BT and LM, with the numbers above it  
17 zero to 11, that represents the mode register.

18 Q. And what does BL stand for?

19 A. That is the burst length.

20 Q. And how about BT?

21 A. That is the burst type.

22 Q. And lastly, what does LM stand for?

23 A. That would be the CAS latency or latency mode.

24 Q. Is this demonstrative a fair representation of  
25 the use of a mode register in a JEDEC Release 4 style

1 SDRAM memory system?

2 A. Yes, I believe so.

3 MS. ZUK: Your Honor, I would like to now  
4 introduce this demonstrative -- offer this  
5 demonstrative into evidence, if that's possible.

6 JUDGE MCGUIRE: Is it RX-7, did you say? Or I  
7 don't think it's RX -- it's about RX-4 by now, isn't  
8 it?

9 MR. STONE: It's a DX. It's going to be a DX I  
10 think since it's a demonstrative.

11 JUDGE MCGUIRE: You're exactly right, Mr.  
12 Stone, DX.

13 MR. STONE: And I don't think demonstratives  
14 are admitted; they are just marked.

15 JUDGE MCGUIRE: That's right, they are just  
16 marked.

17 MS. ZUK: I would like to mark this as DX-4.

18 JUDGE MCGUIRE: All right, so marked.

19 (DX Exhibit Number 4 was marked for  
20 identification.)

21 BY MS. ZUK:

22 Q. I'd like to direct your attention now, Mr.  
23 Williams, to four documents, CX-255, CX-252A, CX-253  
24 and CX-254.

25 A. Okay.

1 Q. Do you have those in front of you?

2 A. Yes.

3 Q. Are you familiar with these exhibits?

4 A. Yes, I am.

5 Q. Can you tell me what CX-253 is?

6 A. Yes, CX-253 is a committee ballot of JC-42.3  
7 that is titled JC-42.3-92-83.

8 Q. Okay. And what subject is the ballot covering?

9 A. This is the proposed standard for by eight/by  
10 nine II DRAM package, the TSOP package.

11 Q. And is this an SDRAM ballot?

12 A. Yes.

1 Q. Okay. And now I'd like to direct your  
2 attention to CX-252A. Do you have that exhibit in  
3 front of you?

4 A. Yes, I do.

5 Q. Can you tell me what that exhibit is?

6 A. This is another JC-42.3 committee ballot,  
7 JC-42.3-92-85, which is the proposed standard for Sync  
8 DRAM mode register.

9 Q. And when was this ballot distributed to JC-42.3  
10 members?

11 A. This, again, was on June 11 of '92.

12 Q. Would you please explain how this ballot on a  
13 Sync DRAM mode register relates to the SDRAM mode  
14 register that we just looked at in Release 4 of  
15 Standard 21-C?

16 A. Sync DRAM is just another name for SDRAM. This  
17 is the same.

18 Q. Okay. And if you could turn to page 3 of  
19 CX-252A, it's entitled Mode Register.

20 A. Yes, I have that.

21 Q. Does this page of CX-252A indicate that members  
22 were being asked to vote on programmable CAS latency  
23 via a mode register in June 1992?

24 A. Yes, it does.

25 Q. Does this page also indicate that JC-42.3

1 members were being asked to vote on programmable burst  
2 length via a mode register in June 1992?

3 A. Yes, it does. They call it wrap length, but  
4 wrap length is the same as burst length.

5 Q. Okay. And if you could just flip back to page  
6 2 of CX-252A, in the middle of the page, it reads, "If  
7 anyone receiving this ballot is aware of patents  
8 involving this ballot, please alert the Committee  
9 accordingly during your voting response."

10 Do you see that?

11 A. Yes, I do.

12 Q. Do you have an understanding of what this  
13 statement required of members who received the ballot  
14 to do?

15 A. Yes, what this is stating is that if, up to

16 this point, if you knew that you had an IP, if you had dptt, f y  
bers w asked th me,X-252Ath via a mod,at d theP, ind the ballot  
9 been disclos being eAndert the befolotnow, stating the ballot

1 other companies had the IP, you still had the  
2 obligation to disclose?

3 THE WITNESS: Both.

4 JUDGE McGUIRE: All right, proceed, Ms. Zuk.

5 MS. ZUK: Okay.

6 BY MS. ZUK:

7 Q. Now, was it typical for ballots between late  
8 1991 through 1993 to include a statement of this kind  
9 that requires members to indicate whether there were  
10 patents involving a ballot?

11 A. Yes, it was standard practice that all ballots  
12 included that verbiage.

13 Q. And between late 1991 to 1993, was it typical  
14 for ballots to be distributed to all JC-42.3 members?

15 A. Yes, they were.

16 Q. And lastly, I would like to direct your  
17 attention to CX-255.

18 A. Okay.

19 Q. Are you familiar with this exhibit?

20 A. Yes.

21 Q. Can you tell me what this exhibit is?

22 A. This is another committee ballot for the JC-42  
23 committee, this one JC-42.3-92-86, which is the  
24 proposed standard for the DRAM function truth table.

25 Q. Okay. And when was this ballot distributed to

1 JC-42.3 members?

2 A. In June of '92, the same as the others.

3 Q. Now, you just described this as a truth table  
4 or a ballot involving a truth -- an SDRAM truth table.  
5 Can you briefly explain what an SDRAM truth table is?

6 A. Yes, if you go to page 3, it is a good  
7 description of what it is. What a truth table is is a  
8 combination of signals, and based upon the levels of  
9 those signals, a specific operation would occur, and  
10 the truth table outlines all the possible combinations  
11 of those signals and what associated operation would  
12 occur when that combination of signals was received by  
13 the DRAM.

14 Q. And actually, if I could direct your attention  
15 to page 3 that you just directed us to, the first line  
16 or the second line of the truth table reads, "Mode  
17 register set."

18 Do you see that?

19 A. Yes.

20 Q. Do you have an understanding of what "mode  
21 register set" means?

22 A. Yes, this means that you would have to have  
23 this specific -- this specific -- you would have to  
24 have this specific sequence of these signals, meaning  
25 that chip select, RAS, CAS and write-enable, were all



1 low in order to program the mode register.

2 Q. Now, as I understood your testimony on these  
3 ballots, and if I could paraphrase, there was a package  
4 ballot -- two package ballots on SDRAM?

5 A. That's correct.

6 Q. A mode register ballot --

7 A. That's correct.

8 Q. -- on SDRAM?

9 A. Yes.

10 Q. And a truth table ballot on SDRAM that were  
11 distributed to members of the JC-42.3 committee in  
12 June -- on June 11th, 1992?

13 A. That's correct.

14 Q. I'd like to move on to JX-13.

15 A. Okay.

16 Q. Do you have that document?

17 A. Yes, I do.

18 Q. Are you familiar with this document?

19 A. Yes, this is committee minutes of the JC-42.3  
20 committee from July of '93 in Denver, Colorado.

21 Q. And I see that your name is on the attendance  
22 roster of the July 21st, 1992 JC-42.3 --

23 MR. STONE: Your Honor, I think the witness  
24 probably misspoke when he identified it as 1993.

25 THE WITNESS: That's correct, it is '92. I had

1 a hard time reading that.

2 JUDGE McGUIRE: Thank you, Mr. Stone.

3 BY MS. ZUK:

4 Q. Did you attend the July 1992 JC-42.3 meeting?

5 A. Yes, I did.

6 Q. Okay. And just down the list on this -- on  
7 page 1 of JX-13 appears Rod Crisp from Rambus. Do you  
8 see that?

9 A. Yes, I do.

10 Q. Does that indicate that a Mr. Crisp attended  
11 the July 1992 JC-42.3 meeting on behalf of Rambus?

12 A. Yes, it does. It also indicates that they  
13 probably misspelled his name. I think his name was  
14 Richard, not Rod.

15 Q. And if you could turn to page 2 of JX-13, about  
16 halfway down the page, there is a Dave Mooring next to  
17 Rambus that appears on the attendance sheet on this  
18 page.

19 Do you see that?

20 A. Yes.

21 Q. Does this -- does this indicate that Mr.  
22 Mooring attended this meeting on behalf of Rambus?

23 A. Yes, it does.

24 Q. If you could turn next to page 9 of JX-13,  
25 which is JEDEC 14776.



1 reason for voting no.

2 Q. Do you have a recollection that Rambus  
3 disclosed a patent or patent application in connection  
4 with this SDRAM packaging ballot?

5 A. They did not.

6 Q. If you could turn to the next page, which is  
7 page 10 of JX-13, also labeled as JEDEC 14777.

8 A. Okay.

9 Q. And a little bit more than midway down the  
10 page, the Section 16.3, which appears to refer to the  
11 mode register ballot that we just looked at.

12 Do you see that?

13 A. Yes.

14 Q. Does this indicate that the mode register  
15 ballot for SDRAM was tallied at the JC-42.3 meeting on  
16 July 1992?

17 A. Yes, it does.

18 Q. Did anyone vote no on the SDRAM mode register  
19 ballot?

20 A. Yes, there were "no" votes.

21 Q. Who voted no on the SDRAM mode register ballot?

22 A. Compaq, Hitachi, IBM, Rambus and TI.

23 Q. Did the representative from Rambus indicate why  
24 he voted no on the SDRAM mode register ballot on July  
25 1992?

1           A. There would be comments, but from here, I'm not  
2 seeing the comment.

3           Q. If I could direct your attention to the --  
4 well, strike that, actually.

5                   Do you have a recollection that in connection  
6 with Rambus' "no" vote on this ballot whether Rambus  
7 also disclosed a patent or patent application in  
8 connection with the mode register ballot?

9           A. No, they didn't disclose any patents.

10          Q. Okay. And if you could turn to the next page,  
11 which is page 111 of JX-13, and it's also JEDEC 14778.

12          A. Okay.

13          Q. Section 16.4 appears to refer to the SDRAM  
14 truth table ballot that we just took a look at.

15          A. Yes.

16          Q. Does this indicate that the JC-42.3 committee  
17 tallied the votes on the SDRAM truth table ballot at  
18 this meeting?

19          A. Yes, it does.

20          Q. Did anyone vote no on the SDRAM truth table  
21 ballot during the July 1992 meeting?

22          A. Yes.

23          Q. Who voted no on the SDRAM truth table ballot?

24          A. Compaq, Hitachi, Rambus, Samsung and TI.

25          Q. And at the bottom of this page, it reads,

1 "Rambus: Mode register not readable; bad for testing."

2 Do you see that?

3 A. Yes, I do.

4 Q. Does this indicate that the representative of  
5 Rambus who voted no on this SDRAM truth table ballot  
6 provided a comment about why he voted no?

7 A. Yes, and these were his exact comments.

8 Q. Do you have a recollection that the  
9 representative of Rambus disclosed a patent or patent  
10 application in connection with the SDRAM truth table  
11 ballot?

12 A. They did not.

13 Q. Okay. Earlier you testified that Release 4,  
14 which contained the first publication of the SDRAM  
15 standard, was published in late 1993.

16 A. Correct.

17 Q. After the JEDEC -- after JEDEC published that  
18 standard, what work did it move on to next?

19 A. It took up several different options, mainly  
20 looking at the next standard, the next generation of  
21 memory.

22 Q. Now, earlier you testified that you were the  
23 official representative from Micron at JEDEC in --  
24 starting in 1991 to 1993.

25 A. Yes.

1 Q. Were you no longer the official representative  
2 of Micron after 1993?

3 A. That's correct. Sometime in '93, I -- Bob  
4 Fusco I think initially was made the official JEDEC  
5 rep, and then after him, it was Terry Walther.

6 Q. Are you familiar with burst EDO DRAM?

7 A. Yes, I am.

8 Q. What is burst EDO DRAM?

9 A. It's an asynchronous DRAM based upon a page  
10 mode DRAM that allows multiple data items to be able to  
11 be presented at the outputs when you toggle CAS,  
12 meaning that you don't have to give it a column address  
13 for every data item that comes out.

14 Q. Now, you mentioned page mode DRAM. Can you  
15 briefly describe what that means?

16 A. What page mode DRAM is is that the DRAM is  
17 architected into what's called pages of a specific page  
18 size, and if you continue to access the DRAM within the  
19 page, you're able to get data out faster than if you  
20 moved from page to page. So, page mode DRAM was the  
21 typical DRAM architecture at this specific point in  
22 time.

23 Q. Okay. Were you responsible for managing burst  
24 EDO DRAM products at Micron?

25 A. I was the application manager. I didn't manage

1 the products, but I managed a group of application  
2 engineers in the '91 to '94 time frame, '95 time frame.

3 Q. What were you trying to do at Micron with burst  
4 EDO DRAM?

5 A. It started with our meetings with some  
6 customers who wanted to get faster access out of the  
7 DRAM in order to meet the requirements of the processor  
8 as the processor speeds were increasing, and it was  
9 clear that past page mode DRAMs were not able to keep  
10 up, so with some meetings with customers, we came up  
11 with the idea to make burst EDO DRAM, and it allowed  
12 data to stream out of the device faster than it would  
13 with a page mode DRAM.

14 So, the goal was to get better speed out of the  
15 DRAM, get more data items out quicker than were -- at  
16 that time was available in page mode DRAMs.

17 Q. What are the names of some of the DRAM  
18 customers you met with about burst EDO DRAM?

19 A. It would have been almost all of the prevalent  
20 computer customers at that time. It would have been  
21 like Compaq, HP, Dell, IBM, DEC, most of them, Sun.

22 Q. And what would typically happen at these  
23 meetings that you had with customers about burst EDO  
24 DRAM?

25 A. I'd have a presentation that would explain the



1 differences between burst EDO and EDO, and then --  
2 DRAMs, and then going to how we believe its cost would  
3 compare to an EDO DRAM, and when we thought we would be  
4 able to bring it to market, and then try to see what  
5 their requirements were, just see if there was a match  
6 between what we thought we could do and what they were  
7 going to require in their next systems.

8 Q. Did the topic of intellectual property ever  
9 come up during these meetings that you had with  
10 customers on burst EDO DRAM?

11 A. Not specifically with customers; however, the  
12 customers were very concerned, like they always are, to  
13 ensure that you've got multiple sources and that  
14 they're not locked into a proprietary product where  
15 then you can charge whatever you want. They want to  
16 make sure that there's a plentiful supply and that  
17 you're able to -- they can get it from everybody.  
18 Keeping the cost low of the DRAM was the goal.

19 So, I was working mostly with a lot of the  
20 other memory manufacturers and chipset makers to ensure  
21 that there was broad support for the product, both with  
22 other memory manufacturers as well as chipset makers,  
23 and definitely with the memory manufacturers, there was  
24 some concern about intellectual property, and at that  
25 time, I let them know that, yeah, we have patents on

1 burst EDO -- we don't have patents, we were filing  
2 patents on burst EDO but assured them that they would  
3 have a free use of those patents if they decided to  
4 support it.

5 Q. And just so we get the time period that this is  
6 happening clear, when were you actively meeting with  
7 DRAM customers to talk about burst EDO?

8 A. This is in the '9 -- late '93, '94, early '95  
9 time frame.

10 Q. Okay. Now, you testified just a moment ago  
11 that after 1993, you were not an official JEDEC  
12 representative for Micron; however, did you attend any  
13 meetings of JC-42.3 or other committees after 1993?

14 A. After I was no longer the JEDEC rep, I attended  
15 a couple meetings to talk about burst EDO, at least one  
16 that I remember.

17 Q. Okay. I'd like to direct your attention to  
18 JX-23. Do you have that in front of you?

19 A. Yes, I do.

20 Q. Are you familiar with this exhibit?

21 A. Yes, I am.

22 Q. Can you explain what this exhibit is?

23 A. Yeah, these are meeting minutes of the JC-42.3  
24 committee that was held on January of '95 in San Jose.

25 Q. Okay. And I see that there are two Micron

1 individuals listed on the attendance roster at this  
2 meeting. I see that you're there and also an R. C. --  
3 I'm sorry, a Bob Fusco.

4 Do you see that?

5 A. Yes.

6 Q. Does this indicate that you attended the  
7 January 17th, 1995 JC-42.3 meeting?

8 A. Yes.

9 Q. Did Bob Fusco -- or Bob Fusco also attend the  
10 JC-42.3 meeting in January 1995?

11 A. Yes, he did.

12 Q. And just down the page, there appears a Craig  
13 Hampel next to Rambus. Do you see that?

14 A. Yes.

15 Q. Does this indicate that a representative from  
16 Rambus attended the January 1995 JC-42.3 meeting?

17 A. Yes, it does.

18 Q. Okay. If you could turn to page 68, which is  
19 also JEDEC 16293.

20 A. Okay.

21 Q. Are you familiar with this page of Exhibit 23?

22 A. Yes.

23 Q. Can you tell the Court what this page is?

24 A. Yes, this is a presentation that I put together  
25 for the -- for various reasons, but this was also shown

1 to the committee as a description of burst EDO  
2 operation.

3 Q. Okay. What, if anything, did you propose with  
4 respect to how CAS latency would be determined in burst  
5 EDO DRAM at this meeting?

6 A. Actually, that's described on the next page  
7 where CAS latency is fixed, not programmable.

8 Q. Okay. And what, if anything, did you propose  
9 with respect to the burst length and how that would be  
10 determined in burst EDO DRAM?

11 A. The burst was also fixed to a four-cycle burst.

12 Q. Okay. At the time of your presentation at the  
13 January 1995 JC-42.3 meeting, had you analyzed how the  
14 performance of a burst EDO part would compare with an  
15 SDRAM part?

16 A. I don't know if I made the comparison  
17 specifically prior to this meeting, but at some time,  
18 yes, I did do that comparison.

19 Q. And what did you do to analyze the performance  
20 of a burst EDO DRAM as compared to an SDRAM?

21 A. Took a look at their access cycles and compared  
22 that in a typical system to see what the comparative  
23 performance would be.

24 Q. Okay. And based on that and your analysis, how  
25 did you expect the performance of a burst EDO DRAM part

1 to compare with an SDRAM part?

2 A. At this point in time, at 66 megahertz, which  
3 was the prevalent data rate at that time, it would be  
4 equal or better than SDRAM based upon its lower  
5 latency.

6 Q. What was your understanding of the potential  
7 performance of a burst EDO DRAM?

8 A. At this time, as we were looking at coming to  
9 market with a part, SDRAM had moved or was in the  
10 process of moving from 66 megahertz up to 100  
11 megahertz, and the committee was undertaking work from  
12 66 megahertz to 100 megahertz -- actually it could have  
13 happened prior to this, but -- so, we knew we had -- if  
14 we were going to be competitive, we had to be able to  
15 support the data rate.

16 And we had looked at 75 megahertz, we were  
17 easily at 75 megahertz and could achieve that, and  
18 actually had the design engineer looking at the lab,  
19 and we had it cycling at 125 megahertz, and so that  
20 gave me the indication that we had for this part to at  
21 least go to 125 megahertz.

22 Q. And if I could introduce CX-2632, which should  
23 be in your set of documents.

24 A. Okay.

25 Q. Are you familiar with this document?

1 A. Yes, I am.

2 Q. What is this document?

3 A. This is a quarterly document that is -- was  
4 issued by Micron for design engineers where various  
5 articles of new technologies or tech -- how to use the  
6 technologies and devices would appear, and on this  
7 specific one, the front page was my article that I  
8 wrote for this specific Design Line on burst EDO.

9 Q. If you could turn to page 5 of CX-2632, and the  
10 sentence at the bottom left column of this page reads  
11 in part, "Burst EDO is currently being specified for 75  
12 megahertz operation. This specification will be  
13 available shortly. The cycle time of burst EDO is not  
14 an issue -- burst EDO is currently cycling at 125  
15 megahertz over temperature and voltage."

16 Do you see that?

17 A. Yes, I do.

18 Q. And was this consistent with your experience of  
19 how burst -- what the current cycling potential of  
20 burst EDO at the time this document was written was --  
21 was achieving?

22 A. Yes, it was. There were some naysayers of  
23 SDRAM components that said that burst EDO couldn't keep  
24 up with it, and this was showing that yeah, it did. In  
25 fact, we were cycling in the 125 megahertz not at room

1 temperature, but over voltage and temperature where  
2 various parameters would slow down, and so it was  
3 showing good head room.

4 Q. In general terms, can you explain what  
5 ultimately happened to burst EDO?

6 A. Synchronous DRAM gained sufficient momentum in  
7 the industry that burst EDO was not accepted even  
8 though there were many suppliers that had it on their  
9 parts, there were many chipset manufacturers that had  
10 support for it. It just did not emerge in the market  
11 as a mainstream part. Synchronous DRAM -- the momentum  
12 behind the Synchronous DRAM actually killed burst EDO.

13 Q. And based on your understanding and experience  
14 with burst EDO, did you have an understanding that if  
15 burst EDO were chosen at that time, improvements could  
16 have been made to burst EDO?

17 A. Yes, and in fact, even in this document, we  
18 thought that right around 120 -- 100 megahertz,  
19 somewhere in that area, it would need to have more work  
20 done on it to increase the performance beyond that,  
21 whether that was changing the I/O signaling levels or  
22 whatever, there would be more work that needed to be  
23 done, and actually I indicated that on page 5 of that  
24 same document. So, we knew that more work needed to be  
25 done on it. Where ultimately it could have gone would

1 just be based upon the work that we did.

2 Q. In the 1993 time frame, did you ever try to  
3 compare SDRAM to Rambus DRAM?

4 A. Yes, I did.



1 Q. Now, what were you trying to do on this page?

2 A. What I was trying to do is take a look at what  
3 Rambus was saying in their literature and in the  
4 industry as what they thought their advantages were  
5 over SDRAM and try to refute those advantages.

6 Q. Okay. And if you could look at the sixth  
7 bullet point on this page, it reads, "Uses both edges  
8 of the 250 megahertz clock."

9 Do you see that?

10 A. Yes.

11 Q. What did you mean when you included this bullet  
12 point on this page?

13 A. That the Rambus DRAM actually used two edges of  
14 the clock versus the single edge that was being used in  
15 the SDRAM.

16 Q. And how did you know that?

17 A. From the documentation that Rambus was  
18 providing in the industry.

19 Q. Did anyone at Rambus ever tell you that they  
20 had intellectual property on using both edges of the  
21 clock?

22 A. No.

23 Q. Did you ever show a representative from Rambus  
24 your presentation on sync -- Synchronous DRAMs versus  
25 Rambus DRAM?

1           A. No, I didn't.

1 Q. If you could turn to page 6 of Respondent's  
2 Exhibit 2250.

3 A. Okay.

4 Q. Now, was this page a page from the exhibit that  
5 we just looked at, which was Respondent's Exhibit 340?

6 A. Yes.

7 Q. Okay.

8 A. With the Rambus mark-ups.

9 Q. Now, what were you doing on this page of your  
10 presentation?

11 A. On the original presentation, what I was trying  
12 to show was the advantages of Sync DRAM versus Rambus,  
13 both from a royalty standpoint, from a standardization  
14 standpoint, and from a bus length standpoint.

15 Q. Okay. And underneath Sync DRAM, the first  
16 bullet point reads, "No royalties, industry standard  
17 part."

18 Do you see that?

19 A. Yes.

20 Q. Why did you include that in your original  
21 presentation?

22 A. Because at this time it was known that on the  
23 Rambus DRAM, there were royalties associated with it,  
24 and this was a big sticking point with all memory  
25 manufacturers to ensure that the DRAM is as cheap as

1 possible, and so what I was pointing out here is that  
2 with Sync DRAM, it's an industry standard, it's not a  
3 proprietary part and required no royalties.

4 Q. Now, there is an arrow that points up to this  
5 bullet point that you made, and it's at the bottom of  
6 the page, and it reads, "Motorola and other have SDRAM  
7 patents."

8 Do you see that?

9 A. Yes.

10 Q. Does this indicate that Mr. Crisp made a  
11 comment with respect to no royalty -- your no  
12 royalty -- no royalties point about Sync DRAM?

13 A. Yes, he was trying to indicate that he  
14 believed -- and I believe at this time at JEDEC, some  
15 information came forth that Motorola might have an  
16 SDRAM -- a patent on synchronous devices that might  
17 apply, and I think he was trying to point that out.

18 Q. Now, he -- Mr. Crisp also mentions "other have  
19 SDRAM patents."

20 Do you see that?

21 A. Yes.

22 Q. Did Mr. Crisp ever indicate who those other  
23 people -- other companies might be that had IP that  
24 contradicted your point that Sync DRAMs had no  
25 royalties?

1           A. No, I just took this comment as trying to state  
2 that, you know, there could be some other royalties  
3 associated with it based upon the work that was being  
4 done at JEDEC, and I believe we were then able to  
5 determine what he states here, that the Motorola having  
6 patents, they actually did not apply to Sync DRAM.

7           Q. I just need a moment to gather my thoughts.

8                   Okay, if you could turn to page 2 of  
9 Respondent's Exhibit 2250.

10          A. Okay.

11          Q. Now, this looks an awful lot like the page we  
12 just looked at in your presentation on Sync DRAM versus  
13 Rambus. Is this the page that -- a version of the page  
14 that we were just looking at?

15          A. Yes, it is, with the Rambus comments.

16          Q. Okay. And we looked at -- recently at bullet  
17 point six of your presentation, and -- which states,  
18 "Uses both edges of the 250 megahertz clock."

19                   Do you see that?

20          A. Yes.

21          Q. Did Mr. Crisp have anything to say about your  
22 statement on this page about Rambus?

23          A. Yes, it's down at the bottom. He's stated  
24 that, "Rambus has patented techniques for synthesizing  
25 up to 50% duty cycle on the chip," which I took to mean

1 that, okay, they have some sort of patented technique  
2 on RDRAM that has to do with synthesizing the duty  
3 cycle.

4 Q. Did you also take that to mean that Rambus had  
5 intellectual property over using both edges of the  
6 clock?

7 A. No, I did not. I would have assumed that if he  
8 meant that they had specific IP dealing with dual edge  
9 clock, he would have stated such.

10 Q. Okay. Do you have an understanding of what a  
11 duty cycle is?

12 A. Yeah, a duty cycle means that a certain portion  
13 of the time, the clock cycle is high, and the other  
14 portion of the time, the clock cycle is low. So, based  
15 upon that percentage between the two, that's your duty  
16 cycle.

17 Q. And what is a 50 percent duty cycle?

18 A. It means that it's pretty tightly controlled  
19 between the -- the high time and the low time is very  
20 closely matched to each other, being 50 percent high,  
21 50 percent low.

22 Q. Do you have an understanding of why it might be  
23 useful to achieve a 50 percent duty cycle?

24 A. Yes, and in fact, in my presentation, I talk  
25 about that's one of the biggest problems with the



1 JUDGE McGUIRE: Entered.

2 (CX Exhibit Number 254 was admitted into  
3 evidence.)

4 MS. ZUK: And then CX-252A.

5 MR. STONE: No objection.

6 JUDGE McGUIRE: Entered.

7 (CX Exhibit Number 252A was admitted into  
8 evidence.)

9 MS. ZUK: CX-255.

10 MR. STONE: No objection.

11 JUDGE McGUIRE: Entered.

12 (CX Exhibit Number 255 was admitted into  
13 evidence.)

14 MS. ZUK: CX-2612X 13 evidence.)

14 CCCCCC .,3Ebbbbbbbbbbbbbbbbbbbb0,(U90 Mc1UIRE: Entered. )T  
2 8 evidence.)

11 JUDGE M2GUIRE: Entered.



1 JUDGE McGUIRE: Entered.

2 (JX Exhibit Number 23 was admitted into  
3 evidence.)

4 JUDGE McGUIRE: All right, thank you, Ms. Zuk.

5 MR. STONE: What would you like -- would you  
6 like me to go for 15 or 20 minutes and then take the  
7 noon break, would that work?

8 JUDGE McGUIRE: You know, I think it would  
9 almost be better at this point if we just take off now  
10 at this point for lunch and come back unimpeded.

11 MR. STONE: Okay.

12 JUDGE McGUIRE: It's quarter to 12:00. Why  
13 don't we come back at 1:20, is that good for everybody?

14 MR. STONE: That's fine.

15 JUDGE McGUIRE: This hearing is recessed until  
16 1:20. Thank you.

17 (Whereupon, at 11:45 a.m., a lunch recess was  
18 taken.)

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AFTERNOON SESSION

(1:20 p.m.)

JUDGE MCGUIRE: This hearing is now in order.

At this time we will entertain the cross examination of the witness.

Mr. Stone?

MR. STONE: Thank you, Your Honor.

CROSS EXAMINATION

BY MR. STONE:

Q. Good afternoon, Mr. Williams.

A. Good afternoon.

Q. You told us a little earlier today that the marked-up copy of this presentation on Rambus versus SDRAM, you told us the marked-up copy, Exhibit RX-2250, was a marked-up version of RX-340.

Do you recall that?

A. Yes.

Q. Why do you think -- what made you come to the conclusion that RX-2250 was a marked-up version of RX-340?

A. Because they looked very similar.

Q. They're different, though, aren't they?

A. I'm not aware of that if they are.

Q. Well, I mean, didn't you -- you looked at these before you came here today to testify, right?

1 A. Yes.

2 Q. You worked on -- you have two of your lawyers  
3 here today?

4 A. Yes.

5 Q. You worked with them to get ready?

6 A. Yes.

7 Q. You knew you were going to be asked a question  
8 about these two documents, didn't you?

9 A. Yes.

10 Q. You talked with Ms. Zuk before you testified?

11 A. Yes.

12 Q. So, with all those people to help you, you tell  
13 us that 2250 is a marked-up version of 340, correct?  
14 That's what you told us?

15 A. Yes, and --

16 Q. Okay, look at page 12 of Exhibit 340.

17 A. 340, page 12. Okay.

18 Q. Okay, do you have page 12 of Exhibit 340?

19 A. Yes, I do.

20 Q. And what is the seventh bullet point down, what  
21 does it say?

22 A. On the left or on the right?

23 Q. On the right.

24 A. "Compensate for narrowed bus through --"

25 Q. No, the seventh.

1           A. "Not likely - requires royalties to Rambus,  
2           Incorporated from all IC manufacturers; JEDEC will not  
3           pass."

1 Q. I'll show you what the differences are.

2 A. Okay.

3 Q. We'll get there.

4 Turn, if you would, to -- in 2250, the  
5 marked-up version, go to page 9.

6 A. Okay.

7 Q. In the handwriting on the left-hand side it  
8 says, "It's October. Approval has been imminent all  
9 year." Correct?

10 A. Okay, there we go. Yeah, that's the Rambus  
11 notation.

12 Q. Yeah, the Rambus notation. "It's October."

13 A. That's right.

14 Q. Now, the exhibit you showed us that you said  
15 had been a marked-up version was dated November, wasn't  
16 it?

17 A. Correct.

18 Q. So, the marked-up version was earlier than the  
19 November one, right?

20 A. Correct.

21 Q. Okay. So, your testimony earlier today was  
22 incorrect. Am I correct?

23 A. It was incorrect that Exhibit 340 came later  
24 than the marked-up version; however, I had done earlier  
25 versions of the same work in 340.

1 Q. No, you gave this presentation a lot.

2 A. Yes.

3 Q. You gave it to customers.

4 A. Yes.

5 Q. You gave it to your sales force.

6 A. Yes.

7 Q. The effort was to give information to your  
8 sales force that they could use to sell SDRAM in  
9 competition with Rambus, correct?

10 A. Or at least know the differences between the  
11 two.

12 Q. And the reason you wanted them to know the  
13 differences was so they could sell SDRAM, right?

14 A. At that point in time, we were not making  
15 SDRAM, so I just wanted -- this was for a technical  
16 comparison. So, it was not to -- mainly to the sales  
17 force, more to the application unit is where I applied  
18 this.

19 Q. And you wanted to enable your sales force and  
20 your customers to make a decision as to which to choose  
21 ultimately when they were both in the market?

22 A. I would think so, yes.

23 Q. And your preference was that customers choose  
24 SDRAM, correct?

25 A. At that point in time, yes.

1 Q. And it's been true ever since that point in  
2 time that you wanted them to choose SDRAM over Rambus,  
3 correct?

4 A. Ultimately, whatever our customers wanted, we'd  
5 produce.

6 Q. But you never produced RDRAM, did you?

7 A. We didn't get to the full production stage, no.

8 Q. And Dell wanted you to produce RDRAM, didn't  
9 it?

10 A. If they wanted us to produce it, we would have  
11 done it.

12 Q. And you promised them that you would produce  
13 it, but you didn't, correct?

14 A. That I'm not aware of.

15 Q. Michael Dell wrote to Steve Appleton and said,  
16 we need you to hurry up and get us the RDRAM, and Steve  
17 Appleton said that he would, but you never produced it,  
18 did you?

19 MS. ZUK: Objection, calls for speculation.

20 JUDGE MCGUIRE: Counsel, if you are going to  
21 offer any objection, I want you to stand.

22 Now, what's your objection?

23 MS. ZUK: The respondent has not established  
24 any foundation to allow Brett Williams to talk about  
25 these issues.

1 JUDGE McGUIRE: Mr. Stone, response?

2 MR. STONE: Yes, he testified earlier that Dell  
3 was one of his customers, Your Honor. Michael Dell is  
4 the chairman and founder of Dell. He said he was aware  
5 of their needs and what they did to meet their needs.

6 JUDGE McGUIRE: But that doesn't go to speak to  
7 the point you just made that the chairman was -- in  
8 fact, had done what you had indicated. There's some  
9 causal connection there, but I don't see it, so  
10 sustained, and you can restate.

11 BY MR. STONE:

12 Q. Steve Appleton is -- holds a position at  
13 Micron, correct?

14 A. Correct.

15 Q. What's his position?

16 A. He is the chairman, CEO.

17 Q. And you know him?

18 A. Yes.

19 Q. And he gets involved with major customers,  
20 doesn't he?

21 A. Yes.

22 Q. And there has been a period of several years  
23 when the largest single customer for DRAMS manufactured  
24 by Micron was Dell, correct?

25 A. I believe that's so.



1 Q. And that's something that's talked about widely  
2 within the company.

3 A. I would think so.

4 Q. And there was a time when Dell was your  
5 customer, correct?

6 A. When you say my customer, do you mean --

7 Q. You had responsibilities for providing  
8 technical advice and engineering to Dell in connection  
9 with products that they were purchasing or thinking of  
10 purchasing.

11 A. Yes, that's true.

12 Q. Okay. And you know that from time to time  
13 Steve Appleton had communications with Michael Dell  
14 about products that Micron hoped to sell to Dell,  
15 correct?

16 A. Typically I'm not privy to those discussions.

17 Q. But you knew they occurred, didn't you?

18 MS. ZUK: Objection, lacks foundation.

19 JUDGE McGUIRE: Response?

20 MR. STONE: It's the only way I can find out  
21 whether he knew it or not is to ask him, Your Honor.  
22 It's proper cross examination.

23 JUDGE McGUIRE: All right, overruled.

24 THE WITNESS: Not necessarily. In fact, that  
25 specific letter you're referring to or the comment I

1 have never even heard of.

2 BY MR. STONE:

3 Q. Okay, but you have heard of some communications  
4 between Mr. Appleton and Mr. Dell?

5 A. I couldn't state exactly what those were, and  
6 it wouldn't be direct anyway.

7 Q. And you knew -- and you knew, didn't you, that  
8 Dell had placed an order with Micron for RDRAM?

9 A. No, I didn't know that.

10 Q. Did you know that Micron never manufactured and  
11 sold RDRAM?

12 A. Yes.

13 Q. Okay.

14 JUDGE MCGUIRE: Off the record a second.

15 (Discussion off the record.)

16 JUDGE MCGUIRE: On the record.

17 BY MR. STONE:

18 Q. Mr. Williams, let me show you what has  
19 previously been marked as RX-317.

20 Do you want a copy?

21 JUDGE MCGUIRE: No, I don't need it. I don't  
22 need it if it's going to be on the ELMO.

23 MR. STONE: Okay.

24 BY MR. STONE:

25 Q. Directing your attention to the first page of

1 RX-317, is this the cover of a presentation that you  
2 gave at a sales meeting in August of 1992?

3 A. Yes, it is.

4 Q. And in this document, turn, if you would, to  
5 page 12. Do you have page 12 in front of you?

6 A. Yes, I do.

7 Q. And does that have on it at bullet point seven  
8 the language that appears on RX-2250, the one with the  
9 handwritten notations?

10 A. I don't know if we're on the same page. I only  
11 see four bullet points here. Is it page 12 of 34 or --

12 Q. You know what, the way it's numbered for some  
13 reason, it's going to say page 8 of 34, but it's slide  
14 number 12.

15 A. Okay, all right.

16 Q. I can't --

17 A. That's what was up on the monitor, this --  
18 okay, yes.

19 Q. So, you have the slide number 12?

20 A. Yes.

21 Q. And if you look at the seventh bullet point,  
22 this has the identical language to the one that we  
23 looked at in 2250 with the handwritten notations, does  
24 it not?

25 A. Correct.

1 Q. Okay. So, based on the kind of comparison you  
2 did before you testified today, which is looking back  
3 at the language, doesn't it now appear that what was  
4 marked as 2250 is a marked-up version of some of the  
5 slides from what I've shown you as Exhibit RX-317?

6 A. On that specific slide, yes, but even then I  
7 made several revisions, so I couldn't even testify that  
8 they're exactly the mark-up of this, but a version of  
9 this, I could.

10 Q. Okay, so we're at least back in time, you would  
11 agree, that the handwritten notations were made prior  
12 to November of 1992?

13 A. Yes.

14 Q. Okay. And you were given this handwritten  
15 document at the December 1992 JEDEC meeting, weren't  
16 you?

17 A. I'm not sure which JEDEC meeting it was, but it  
18 was at a JEDEC meeting, yes.

19 Q. And are you clear in your recollection that you  
20 were given it by Mr. Crisp rather than by Mr. Mooring?

21 A. Yes.

22 Q. And do you recognize the handwriting on this  
23 document?

24 A. I do not recognize the handwriting on the  
25 document.

1 Q. Do you know whether it's Mr. Mooring's  
2 handwriting on Mr. Crisp's?

3 A. I do not know.

4 Q. So, when you talked earlier about it, "Crisp,  
5 Crisp, Crisp," in reference to the handwritten notes,  
6 you don't know that they're his or not?

7 A. I inferred they were his since he gave me the  
8 document.

9 Q. And you're sure you didn't get it or discuss it  
10 with Mr. Mooring?

11 A. Absolutely.

12 Q. Okay, but you remember him being at the meeting  
13 in December of 1992?

14 A. Ah, was it -- I remember him being at several  
15 meetings, yes.

16 Q. Because earlier today you were shown some  
17 minutes that had his name on it as an attendee. Do you  
18 recall that?

19 A. Yes, yes.

20 Q. And was one of those for December '92?

21 A. Yes.

22 Q. Okay. As of December of 1992, did you know  
23 that the design of RDRAM included variable latency?

24 A. No, I didn't.

25 Q. Did you know that it included programmable

1 burst length?

2 A. No, I did not.

3 Q. Well, when you wrote in your chart -- and we  
4 can look at any one of the versions. Let's take 340,  
5 the one you looked at -- is that handy?

6 A. Yes.

7 Q. Let's just look at 340, the one you looked at  
8 earlier today with Ms. Zuk. If you go to slide number  
9 11, and it says, "Requires 256-byte block," do you see  
10 that?

11 A. Yes.

12 Q. And then a couple further down, it talks about  
13 smaller blocks reduce data rate.

14 A. Yes.

15 Q. Does that indicate you s eateou c eateou c eooked

1 A. No, not data sheets, from their marketing data.

2 Q. Okay. And when you wrote -- and we can just  
3 stay on that slide 11 -- when you wrote that it uses  
4 both edges of the 250-megahertz clock, you understood  
5 that to be what's called dual edge clocking, correct?

6 A. I understood that they used two edges of the  
7 clock.

8 Q. Okay. And when you wrote "clock skew  
9 (edge-to-edge) - big problem," what did you mean?

10 A. That it was hard to control both edges of those  
11 clock, and that in a system design was a big problem.

12 Q. And how did Rambus control both edges of the  
13 clock?

14 A. I don't know specifically how they did that.

15 Q. Do you know today?

16 A. Not specifically, no.

17 Q. How does Micron control possible skew when they  
18 use two edges of the clock today?

19 A. I am not a designer, but I've got an idea of  
20 how they do it.

21 Q. PLL or DLL on the chip, correct?

22 A. That's how, yes, I believe we do it on the  
23 SDRAM.

24 Q. Look at the handwritten version of this page,  
25 if you would. That is RX-2250, page 2.

1 A. Okay.

2 Q. It says, looking at these same two bullet  
3 points, uses both edges of the clock and clock skew,  
4 there is a comment and an arrow drawn to each of those  
5 two bullet points, correct?

6 A. Yes.

7 Q. And the uses both edges of the 250-megahertz  
8 clock has a comment drawn to it which says, "Rambus has  
9 patented techniques for synthesizing up the 50% duty  
10 cycle on chip," correct?

11 A. Yes.

12 Q. Now, that's not drawn to the bullet point that  
13 talks about clock skew, is it?

14 A. No, it's not.

15 Q. It's not drawn to the bullet point that talks  
16 about the difficulty in finding a way to deal with the  
17 50 percent duty cycle of a full clock cycle, does it?

18 A. Correct.

19 Q. Okay. So, the patented techniques is drawn to  
20 the bullet point that talks about dual edge clocking.

21 A. It points to that bullet, that's correct.

22 Q. And your understanding at the time was such  
23 that you looked at that and you said, okay, I know they  
24 have a patented techniques comment that's drawn to the  
25 bullet point that says both edges of the clock, but my



1 understanding of that is that the patented techniques  
2 apply to something other than the use of both edges of  
3 the clock, correct?

4 A. I didn't really take an inference from that,  
5 just that whatever the patented technique was, it had  
6 to do with synthesizing the duty cycle.

7 Q. And the duty cycle has to do with addressing  
8 the problem of skew when you use both the rising and  
9 falling edges of the clock, correct?

10 A. Or skew between two clocks or skew on the clock  
11 itself.

12 Q. Okay. And skew is addressed in the very next  
13 bullet point, isn't it?

14 A. Yes.

15 Q. And this comment about patented techniques  
16 wasn't drawn to the clock skew point, was it?

17 A. It wasn't, but --

18 Q. Okay.

19 A. -- I didn't infer that much from whe e e e e e ky.

1 Q. And what's TTL?

2 A. TTL is an interface standard.

3 Q. Up above on the same page, you had written that  
4 the innovative packetized address/command, in the Hype  
5 column, you then said it's not a new idea, many buses  
6 use this, such as Multibus II, ethernet, TCP/IP, et  
7 cetera, correct?

8 A. Correct.

9 Q. And that made you think that Rambus couldn't  
10 have a patent on their innovative packetized  
11 address/command structure because it was not a new  
12 idea, right?

13 A. No. I was just detailing what Rambus was  
14 touting -- in fact, in this whole discussion, I didn't  
15 address patents whatsoever. It was never in my mind to  
16 try to figure out whether Rambus had patents on some of  
17 this or not. From their marketing data, I was  
18 detailing the Rambus marketing talking points and  
19 trying to refute those talking points.

20 Q. Well, if Rambus didn't have patents, why did  
21 you think that system manufacturers were going to have  
22 to pay them royalties?

23 A. I did not -- I know that Rambus' tech --  
24 Rambus' business plan was to patent a technology;  
25 however, I did not know on exactly what they had

1 patents on.

2 Q. Well, why did you say that royalties would be  
3 required to be paid by system manufacturers if you  
4 didn't think they had any patents?

5 A. I never said that I didn't think they had any  
6 patents.

7 Q. Okay, you did think they had patents --

8 A. It was known that they had patents. Upon what  
9 those patents were based, I did not know.

10 Q. Okay. So, in the time frame of  
11 August-September-October of 1992, you knew Rambus had  
12 patents or at least had applied for them, correct?

13 A. Or that that was their business model more  
14 than -- I did not know -- to correct myself, I did not  
15 know whether they had patents or applied for them. I  
16 knew it was their business model to patent their  
17 technology, and that's how they would gain their  
18 revenues.

19 Q. Isn't it a general practice of Micron to  
20 regularly search the patent office files to determine  
21 who has patents in the fields that you do business in?

22 A. I'm not aware of that.

23 Q. Had you ever been told by anybody when they  
24 first saw patents issued to Rambus?

25 A. I'm sorry, say that again.

1 Q. Had you ever been told by someone else at  
2 Micron when they first saw patents that had been issued  
3 to Rambus?

4 A. No.

5 Q. Does Kevin Ryan work for you? Did he at the  
6 time, '95-'96?

7 A. No, not in that time frame.

8 Q. When did he report to you?

9 A. Earlier than the '9 -- let's see, when did he  
10 join? Probably in '91-'93 time frame.

11 Q. And did you report to Mr. Cloud up until the  
12 time of his retirement?

13 A. Maybe not the total time before his retirement,  
14 but for most of the time before he retired I did, yes.

15 Q. Okay. Turn, if you would, to -- we're on  
16 Exhibit 2250, and turn to the third page of that  
17 document, which is slide number 12. In the upper  
18 left-hand corner, the handwritten notation says,  
19 "Rambus provides a 'cookbook' system solution."

20 Do you see that?

21 A. Yes.

22 Q. Did you at this time understand that it was  
23 part of Rambus' business plan not just to apply for  
24 patents, but also to provide a cookbook to its  
25 customers so that they would be able to manufacture the

1 product and make use of the Rambus technology?

2 A. I don't believe I knew that at this time.

3 Q. Okay. So, the first time you heard that was  
4 when you got this handwritten note?

5 A. Yes, and I didn't know exactly what that meant.

6 Q. Did you ask Mr. Crisp or Mr. Mooring what these  
7 notes meant?

8 A. No.

9 Q. After you got these notes and had a chance to  
10 look at them, did you pick up the phone and call them?

11 A. No.

12 Q. You had known Mr. Mooring from your days at  
13 Intel, right?

14 A. I did.

15 Q. And you had called on Mr. Crisp when he had  
16 been a customer, correct?

17 A. Correct.

18 Q. And was there any reason that you would have  
19 not called them if you had wanted to find out more  
20 information?

21 A. If I wanted to find out more information, yeah,  
22 I probably would have called them, but I didn't.

23 Q. Okay. Look at the -- we've been -- we've  
24 focused a lot or I drew your attention, at least, to  
25 the seventh bullet point on the right-hand side, and

1 the language in this particular version which says,  
2 "Requires royalties to Rambus from both standard, the  
3 IC and system manufacturers."

4 Do you see that language?

5 A. Yes.

6 Q. What's that mean, "from both standard, the IC"?

7 A. I think it is a typo. I think it should say,  
8 "both standard, IC and system manufacturers."

9 Q. Okay. So, the word "the" should just be taken  
10 out?

11 A. I believe so.

12 Q. And you can see one of the things that's  
13 written in hand is somebody wrote sort of lines around  
14 the letters "system manufacturers" and then brought it  
15 down to a comment which says, "Not true," correct?

16 A. Correct.

17 Q. And isn't it correct -- and you can look at all  
18 the versions you wrote of this document -- but isn't it  
19 correct that after you received these handwritten  
20 comments from either Mr. Crisp or Mr. Mooring where  
21 they said it's not true that royalties from system  
22 manufacturers would be required, you dropped that  
23 language from all your subsequent slides?

24 A. Based upon what I'm seeing here, it is not in  
25 the subsequent slides, so it looks like it was dropped.

1 Q. And the reason you dropped it was because of  
2 the information they provided you, correct?

3 A. I'm not sure if it was that information or  
4 whether I discussed it with people back at Micron to  
5 see or other people to determine whether or not system  
6 manufacturers had to pay. I'm not sure exactly where I  
7 got that information.

8 Q. Who else at Micron did you discuss the comments  
9 with that you received from Mr. Crisp or Mr. Mooring?

10 A. I can't remember specifically who I discussed  
11 them with.

12 Q. At that point in time, you reported to Mr.  
13 Cloud, correct?

14 A. Correct.

15 Q. And at that point in time, Mr. Ryan reported to  
16 you, correct?

17 A. Correct.

18 Q. And at that point in time, Mr. Walther was in a  
19 parallel position with you, also reporting to Mr.  
20 Cloud, didn't he?

21 A. Let's see, this was the '92 time frame?

22 Q. Yes, it is.

23 A. I believe at that point Mr. Walther was  
24 applications manager over in Europe.

25 Q. Okay. And then when he came back in '93, he

1 became the JEDEC rep and took your spot or at least  
2 shortly after Mr. Fusco.

3 A. Right.

4 Q. And Mr. Walther had been the JEDEC  
5 representative before you took over that position,  
6 correct?

7 A. Correct.

8 Q. And it says in the handwritten notes, still on  
9 this third page of Exhibit 2250, slide number 12, it  
10 says, -- you wrote under Hype, "Rambus will be a  
11 standard," and the handwritten note is, "Rambus is  
12 already a standard."

13 Do you see that?

14 A. Yes.

15 Q. Well, you knew that Rambus wasn't the JEDEC  
16 standard, correct?

17 A. Correct.

18 Q. And you knew the reference was to Rambus being  
19 a de facto standard, didn't you?

20 A. Which reference?

21 Q. Rambus' reference.

22 A. I didn't know to what he was actually  
23 referring, because -- no, I was stating that  
24 specifically Rambus wouldn't be a JEDEC standard, which  
25 in my mind means it's then a standard.



1           Q. It wouldn't be a JEDEC standard because they  
2 required the payment of royalties?

3           A. I don't know if I specifically had in mind why,  
4 but definitely it wasn't being pushed through JEDEC at  
5 that time.

6           Q. Well, but what you wrote on your slide, you  
7 have, "Rambus will be a standard," and then across from  
8 it, isn't that the reality that relates to Rambus would  
9 be a standard? Isn't your version of the reality where  
10 you wrote, "Not likely - requires royalties to Rambus"?

11          A. Right.

12          Q. So, your thinking when you wrote this document,  
13 at least what you told your sales force and customers  
14 was, Rambus won't be a standard because it requires  
15 royalties.

16          A. Correct.

17          Q. And is that what you thought at the time?

18          A. Yes.

19          Q. Now, it's okay to charge royalties if JEDEC  
20 puts patented technology into a standard, isn't it?

21          A. As long as it's minimal and it's fair and  
22 equitable.

23          Q. Well, the words that you use are reasonable and  
24 nondiscriminatory, right?

25          A. Those are some good words for it, yes.

1 Q. And that's when you write what's the letter  
2 that you talked about before, the assurance letter that  
3 you write to JEDEC, that requires that you use the  
4 language which says reasonable and nondiscriminatory.

5 A. Correct.

6 Q. And you have never been involved in  
7 negotiations to come to an understanding of what's  
8 reasonable or not, have you?

9 A. I have not.

10 Q. Okay. Turn, if you would, to the sixth page of  
11 Exhibit 2250, which is slide 18. That's the one that  
12 has the no royalties, industry standard part as the  
13 first bullet point on the left.

14 A. This is -- okay.

15 Q. Got it?

16 A. Yes.

17 Q. So, you wrote under Sync DRAM -- and Sync DRAM  
18 was what you used to refer to what most of the time  
19 during this trial we have been calling SDRAM. Those  
20 are the same thing, right?

21 A. Exactly.

22 Q. And the handwritten note that points to that  
23 bullet point says -- is that Infoquest?

24 A. It kind of looks like it, I'm not sure exactly.

25 Q. Or maybe it's Dataquest, one or the other?

1 A. I-N-something.

2 Q. Okay. It says, "Micron pays 10% in royalties  
3 on DRAMs today."

4 Do you see that?

5 A. Yes.

6 Q. Did you from your own knowledge when you were  
7 handed these -- this marked-up copy of some of your  
8 slides, did you from your own knowledge at that time  
9 know whether Micron was paying 10 percent royalties on  
10 DRAMs or not?

11 A. I did not know that, no.

12 Q. When you went back and talked with people at  
13 Micron about these handwritten notations, did you make  
14 any effort to confirm whether that information was  
15 correct or not?

16 A. Not about the amount of the royalties, but I  
17 did understand that, yes, based upon any DRAM we made,  
18 there were certain royalties that needed to be paid  
19 regardless of what DRAM it was, its fundamental DRAM  
20 patents to produce the DRAM.

21 Q. And did you come to some understanding through  
22 that conversation as to whether 10 percent royalties  
23 was more or less in the ballpark of what, in fact, was  
24 being paid?

25 A. I -- no, I didn't try to confirm the amount.

1 Q. On this same page, you were asked about it  
2 earlier by Ms. Zuk, down at the bottom, the handwritten  
3 notation that points back to this same bullet point.  
4 It says, "Motorola and others have SDRAM patents."

5 Do you see that?

6 A. Yes.

7 Q. And I -- as I recall your testimony when you  
8 were asked questions by Ms. Zuk, you answered that you  
9 looked at that Motorola patent and determined it did  
10 not apply?

11 A. No, I didn't specifically look at the patent.  
12 I -- in the course of the JEDEC committee, and I don't  
13 know who actually made the determination, it was  
14 determined that the Motorola patents did not apply to  
15 the SDRAM.

16 Q. Didn't apply or people thought they were not  
17 going to be valid?

18 A. I did not make a distinction between the two.

19 Q. Okay. So, in your mind, it could have been  
20 that somebody said that the Motorola DRAM patent didn't  
21 look to them like it would be valid?

22 A. It was that we didn't need to consider it any  
23 longer in the committee because it wouldn't have impact  
24 upon the standard.

25 Q. And the Motorola patent was brought up at a

1 JEDEC meeting the same time the possibility of Rambus  
2 patents were brought up, correct?

3 A. I'm not sure of the exact time they were  
4 brought up.

5 Q. Wasn't it brought up by the representatives  
6 from Siemens and IBM?

7 A. I can't remember specifically who did that.

8 Q. Do you remember who said we don't need to worry  
9 about the Motorola patent?

10 A. No. It was just a -- it was just that the  
11 committee didn't -- we weren't talking about it  
12 anymore.

13 Q. Do you know when that Motorola patent issued,  
14 more or less?

15 A. I don't.

16 Q. Would it be consistent with your recollection  
17 if that patent issued about December 31st of 1991?

18 A. I couldn't say.

19 Q. Let me ask you about this. I'm going to read  
20 to you from the summary of the invention of a Motorola  
21 patent with the patent number 5,077,693 that issued on  
22 December 31st of 1991, and here's the summary of the  
23 invention. It says:

24 "A particular --"

25 MS. ZUK: Objection, Your Honor. I think this

1 line of questioning lacks foundation. The witness  
2 already testified that he's not familiar with the  
3 Motorola patent.

4 MR. STONE: And I am going to ask him, Your  
5 Honor, whether as I represent this description -- and  
6 I'm happy to let counsel read it as well -- simply  
7 going to ask him whether it does not, in fact, describe  
8 an SDRAM. He's testified to a --

9 JUDGE McGUIRE: Overruled. You may ask the  
10 question.

11 BY MR. STONE:

12 Q. The summary of the invention from the patent I  
13 just described is as follows:

14 "A particular embodiment of the present  
15 invention consists of a DRAM having a clock input, a  
16 column enable and a row enable. In operation, the DRAM  
17 is accessed and row and column addresses are latched  
18 based on the clock input."

19 Those words, sir, all make sense to you?

20 A. Yes.

21 Q. And does that describe an SDRAM?

22 A. I couldn't say specifically whether it does or  
23 not.

24 Q. Okay. That's beyond your technical expertise?

25 A. Yes.

1 Q. So, earlier today when you showed us that  
2 demonstrative of what's an SDRAM, is that something  
3 within your technical expertise?

4 A. That's at a higher level, yes.

5 Q. That's at a higher level?

6 A. Yes.

7 Q. So, what I read you you think is more detailed  
8 than what you showed us?

9 A. Well, I can't determine how those lines  
10 interconnect or how they actually operate.

11 Q. Okay. Pull up, if you would, DX-4, which is  
12 the demonstrative you showed us earlier.

13 Yeah, we don't have that on our computer, Your  
14 Honor --

15 JUDGE MCGUIRE: That's all right, go ahead.

16 MR. STONE: -- perhaps complaint counsel want  
17 to bring it up, because --

18 JUDGE MCGUIRE: Oh, you don't have it for the  
19 witness. Is that correct?

20 MR. STONE: The witness has it.

21 JUDGE MCGUIRE: Go ahead and proceed.

22 THE WITNESS: I'm looking for it.

23 MR. STONE: Did you bring it up?

24 THE WITNESS: Oh, here it is.

25 MR. STONE: Thank you. Complaint counsel

1 brought it up for us, thank you. I appreciate your  
2 help.

3 BY MR. STONE:

4 Q. So, this is a description of an SDRAM at a  
5 level of technical detail that you do understand?

6 A. At a block diagram level, yes.

7 Q. I'm sorry?

8 A. Yes.

9 Q. Over on the left-hand side, you show something  
10 called the memory controller.

11 A. Yes.

12 Q. And then you show -- from that you show  
13 address/command bus?

14 A. Yes.

15 Q. Isn't that really two buses?

16 A. You have the address bus and then you have the  
17 command signals.

18 Q. So, those are two separate buses, because they  
19 have dedicated lines for address and dedicated lines  
20 for command, correct?

21 A. They do have dedicated lines, yes.

22 Q. And you would -- and you would agree with me  
23 that that really is two separate buses?

24 A. It could be two separate buses, but they always  
25 operate in concert, so...



1 Q. And do you know whether or not the SDRAM that  
2 you described on DX-4 does or does not infringe Rambus  
3 patents?

4 A. State that again, please.

5 Q. Do you know whether the SDRAM that you've  
6 depicted on DX-4 does or does not infringe any Rambus  
7 patents?

8 A. I do not know that.

9 Q. Do you know whether at any point in time when  
10 Rambus was attending JEDEC meetings it had any patents  
11 or patent applications with claims that were essential  
12 to the use of an SDRAM as described in DX-4?

13 A. No, I wouldn't know that.

14 Q. Let me take you back to Exhibit 2250, if we  
15 can, and we'll go to page 8, which is slide 13. Do you  
16 have that one in front of you?

17 A. Yes, I do.

18 Q. Look at the comment, the handwritten comment in  
19 the lower left corner, if you would. "DRAMs and RDRAMs  
20 are based on the same core -- both benefit from  
21 manufacturing economics -- I'm sorry, both benefit from  
22 manufacturing economies and both something improve with  
23 faster cores."

24 Do you see that?

25 A. Yes.

1 Q. Was it your understanding at the latter part of  
2 1992 when you received this document, Exhibit RX-2250,  
3 that the majority of the die for an RDRAM was identical  
4 to the majority of the die for an SDRAM in that they  
5 both had the same core?

6 A. No, that wasn't my understanding.

7 Q. So, did you disagree with the handwritten  
8 comment here?

9 A. I thought what he was trying to say with that  
10 handwritten comment was that they were about the same  
11 and they would shrink the same, and as I understand it,  
12 SDRAMs shrink better than RDRAMs.

13 Q. What did you understand the "based on the same  
14 core" to mean?

15 A. I had no idea specifically what he was  
16 referring to.

17 Q. And it's been your experience that there are  
18 economies of scale which are realized in the  
19 manufacture of integrated circuits, correct?

20 A. Correct.

21 Q. The higher the volume, generally the cheaper  
22 the cost of manufacture?

23 A. Correct.

24 Q. Turn, if you would, to the paper you wrote,  
25 CX-2636. I'm sorry, CX-2632.



1 Q. Mr. Rhoden worked for VLSI at one point in  
2 time, didn't he?

3 A. Yes.

4 Q. You went on a tour with Mr. Rhoden to potential  
5 customers in an effort to sell them burst EDO, didn't  
6 you?

7 A. Yes, I did.

8 Q. So, he was out there on a sales call with you  
9 trying to sell burst EDO?

10 A. I don't think it was a sales call, more than I  
11 was trying to promote the acceptance of it.

12 Q. You were trying to promote the acceptance; he  
13 went along with you.

14 A. I believe so, yes.

15 Q. He was well aware that you never went into full  
16 production of burst EDO, wasn't he?

17 A. I don't know if I could say that or not.

18 Q. In any event, it is true, isn't it, that the  
19 fact that burst EDO was standardized by JEDEC did not  
20 assure it any particular market share in the DRAM  
21 market?

22 A. Not for this specific product.

23 Q. Okay. Now, is that the product you were  
24 writing about in CX-2632?

25 A. Yes.

1           Q.  Okay.  You told us earlier that it had a --  
2   this burst EDO had a CAS latency of two.  Is that  
3   correct?

4           A.  Yes, yes.

5           Q.  Now, burst EDO was asynchronous, correct?

6           A.  That's correct.

1 based upon -- and where I got the two was from based  
2 upon the latency time and you map that into the clock  
3 cycle, but once you get the address there at a specific  
4 clock, you had a certain amount of latency, and that  
5 mapped into two 66-megahertz system clock cycles.

6 Q. And what it took to get the data there was two  
7 toggles, correct?

8 A. Two toggles of?

9 Q. You had two toggle signals before data came  
10 out. Am I right? I'm looking at the --

11 A. Of the system clock?

12 Q. No, of the asynchronous toggle.

13 A. Of which signal?

14 Q. Take a look at page 5 of 2632. If we look at  
15 that diagram, is the top one the external clock?

16 A. Yes, the top one -- let me --

17 Q. Okay, what's the next one?

18 A. That is the RAS signal.

19 Q. And what's the next one?

20 A. That is the CAS signal.

21 Q. And does it show toggles?

22 A. It shows toggles, but it's not that you get  
23 data out. You have to toggle the CAS twice to get data  
24 out. What it's showing is that I can toggle the CAS up  
25 to four times to get four data items out. You have to

1 toggle the CAS for each data item.

2 Q. And isn't there --

3 A. And from the first time you toggle at CAS, if  
4 you map that into the system clock, there is two clocks  
5 before that application is valid.

6 Q. And doesn't it take two toggles before you get  
7 the first piece of data out? Isn't that what we see on  
8 this diagram?

9 A. No.

10 Q. Don't we see -- on the CAS toggle line, don't  
11 we see every time it dips down, isn't that a toggle?

12 A. Yeah, when it -- when it goes low and it goes  
13 back high, that's a toggle.

14 Q. Don't we see it dip down twice before the first  
15 data bit comes out?

16 A. You do see it dip down twice, but I can toggle  
17 every -- from the first toggle, you've got an access  
18 time by the nomenclature TAA.

19 Q. Um-hum.

20 A. From the first toggle you have an access time  
21 of when the first data would be valid. From the second  
22 toggle is when you get your CAS access time. So --

23 Q. And isn't the period until you get your CAS  
24 access, isn't that what we call the CAS latency?

25 A. It would determine -- well, actually, you want

1 to -- what I was calling CAS latency was from the time  
2 you started -- you latched in the CAS address. So,  
3 from when you latch in the CAS address until the time  
4 you get valid data out on the bus, that's what in  
5 essence is determined as CAS latency.

6 Q. And on this diagram, isn't that two toggles?

7 A. If I latch the address on the first toggle and  
8 then I -- yes, I latch the address on the first toggle.  
9 The second toggle is when I start getting data out.

10 Q. Thank you.

11 Didn't you when you wrote this say that burst  
12 EDO will probably reach its limit somewhere around 100  
13 megahertz?

14 A. We knew it was going to be -- without some more  
15 development work, that with the current design, yeah,  
16 it would be around 100 megahertz. We had it cycling at  
17 125, so we knew that we could get there, and that was  
18 over temperature and voltage, not just at room  
19 temperature. So, we knew we were there -- we could  
20 achieve that.

21 Now, that was just a few parts, it wasn't the  
22 mass production, but yeah, we knew what we would have  
23 to do is do more development work. What that  
24 development work entails, I mean, could be lower  
25 voltages on the bus, I mean, who knows what it would



1 entail? I'm not a chip designer, so I couldn't give  
2 you all the points.

3 Q. And you were very strongly pushing the use of  
4 burst EDO, weren't you?

5 A. Yes, I was.

6 Q. And after that specification was issued for  
7 burst EDO, you put together a -- some materials for  
8 some of your sales force to use, correct?

9 A. Which specification?

10 Q. You wrote a memo to Mr. Lin, didn't you?

11 A. An email to Mr. Lin?

12 Q. Yeah, an email or a fax to Mr. Lin.

13 A. Yes.

14 Q. I'm looking for that. Give me one second.  
15 Let's bring up Exhibit RX-585, if we could.  
16 If I may approach, Your Honor?

17 JUDGE MCGUIRE: Please.

18 BY MR. STONE:

19 Q. I hand you, Mr. Williams, what we have marked  
20 as RX-585. Am I correct that this is a fax that you  
21 prepared and sent to Mr. Lin?

22 A. Yes.

23 Q. And you prepared it when? August 1st of 1995?

24 A. Yes.

25 Q. And was one of the first things you wanted to

1 communicate to him that you now had standardized burst  
2 EDO?

3 A. Yes.

4 Q. And you had been a big part of obtaining that  
5 standard, because you had worked out the remaining  
6 issues between Micron and Samsung yourself, correct?

7 A. Correct.

8 Q. And then did you tell him that one of the  
9 advantages of burst EDO was that everybody who was  
10 making it was going to design it to the Micron  
11 specification?

12 A. If it's in here, then yes, I said it.

13 Q. Well, I want you to see it. Don't take my word  
14 for it.

15 A. Okay, I'm trying to find it.

16 Q. Look at the very top of the second page. It  
17 goes, "Now, let's look at the SDRAM. Unlike BEDO where  
18 all suppliers are designing to the Micron  
19 specification --" do you see that?

20 A. Okay, yes.

21 Q. Okay. So, in August of 1995, your  
22 understanding was the great advantage -- one of the  
23 great advantages of burst EDO was everybody who made it  
24 would make it to the Micron specifications, correct?

25 A. Right, they were using Micron's data sheet as

1 the guide.

2 Q. Okay. And by contrast, SDRAM suppliers, each  
3 supplier had a different set of specifications that  
4 they were using, correct?

5 A. Even though the features were the same based  
6 upon the JEDEC standard, there were some nuances, like  
7 setup and hold weren't quite exactly the same, the  
8 access times weren't quite exactly the same, so  
9 there -- all that hadn't been standardized, the actual  
10 parameters.

11 Q. And you thought it was a real benefit to have  
12 everybody using all the same specifications as opposed  
13 to allowing variation, correct?

14 A. What I was stating is that an advantage is that  
15 everybody was using -- using Micron's specification,  
16 that's correct.

17 Q. Okay. Did you understand in August of 1995  
18 that one of the things that Rambus was pushing was that  
19 everybody would manufacture RDRAM to the Rambus  
20 specifications?

21 A. No, I wasn't aware of that.

22 Q. Okay. Were there other products out there that  
23 you were aware of other than burst EDO where you saw  
24 the benefit being achieved because everybody was  
25 manufacturing it to the specifications put together by

1 a single company?

1 patent was that didn't apply to the material being  
2 discussed, no need to disclose it, only if it could  
3 have applied.

4 Q. And by "could have applied," you meant was  
5 necessary in order to practice the standard?

6 A. No, the -- I meant that if there was a  
7 possibility that it could apply, then you need to --  
8 and that's why we -- why we disclosed it, because we  
9 didn't know whether it did or not, but it could have.  
10 So, we decided, okay, we better disclose.

11 Q. And the "apply" part of that means -- I just  
12 want to understand the words you're using -- okay, when  
13 you said if there was a possibility that it could  
14 apply, I understand the possibility part of that, and I  
15 want to ask you just about the "could apply."

16 "Could apply" means that the patent applied to  
17 the standard, correct?

18 A. Or that there was a possibility, there was a  
19 reasonable possibility that it could apply to the  
20 standard.

21 Q. And I want you just to set aside the  
22 possibility part for a second. I'm not taking it out  
23 of your answer.

24 A. Okay.

25 Q. You have said it to me. I just want to

1 understand when you said apply, you meant that  
2 manufacturing something to the standard would  
3 necessarily infringe the patent. That's what "apply"  
4 means?

5 A. Well, I don't know if it just has to do with  
6 manufacturing, but if it had to do with the standard,  
7 if it could have implication on the standard, then it  
8 needed to be disclosed.

9 Q. Okay. Let's look, if you can find it in your  
10 stack, at RX-356. Those are what you referred to  
11 earlier as draft minutes. Do you recall that?

12 A. That helps. Yes.

13 Q. Got them?

14 A. Yes.

15 Q. Okay. And remember I stood up and objected and  
16 I wanted --

17 A. Yes.

18 Q. Okay. Did you attend the meeting in Fort  
19 Lauderdale, Florida in December of 1992?

20 A. Yes.

21 Q. Okay. And were these draft minutes that came  
22 to you from JEDEC?

23 A. They came from the JEDEC secretary.

24 Q. Directly to you?

25 A. Yes.

1 Q. And you recall that?

2 A. Yeah.

3 Q. You're not just guessing at it?

4 A. No, I would have received the minutes.

5 Q. Okay, let's bring up RX-361. It's not going to  
6 be in your stack. You are going to have to look at  
7 the --

8 A. Okay.

9 Q. Do you see RX-361 on the screen?

10 A. Yes.

11 Q. Is that a memo to you from Mr. Fusco?

12 A. It is.

13 Q. Okay, dated December 16th of 1992?

14 A. Correct.

15 Q. And he says, "Attached are the minutes from the  
16 December --"

17 A. Right.

18 Q. " -- JEDEC meeting"?

19 A. Right.

20 Q. Is that the final minutes or the draft minutes  
21 or some other set of minutes?

22 A. This is Bob Fusco -- Bob Fusco was in the  
23 process of learning how to take over the responsibility  
24 of the JEDEC rep, and these were important items that  
25 he sent to me based upon what he gathered from the

1 JEDEC meeting.

2 Q. And when he says, "Attached are the minutes,"  
3 what's he referring to?

4 A. From this, I couldn't tell.

5 Q. If you go to the next page, you'll see it says,  
6 "Attachment"?

7 A. Um-hum.

8 Q. And if you look at the very bottom of that  
9 page, you'll see it has an MR number stamped on it?

10 A. Yes.

11 Q. Do you see that?

12 And it calls it MR-20427, and it also calls it  
13 M-167.002?

14 A. Yes.

15 Q. And then the -- what you told us earlier were  
16 the draft minutes, Exhibit RX-356, you will notice  
17 those are numbered also M-167.007 through something?

18 A. Um-hum, yes.

19 Q. And it appears from that -- it appears from  
20 that that RX-361 came right ahead of RX-356 with just  
21 about pages 3, 4, 5 and 6 of document 167 in between.  
22 Do you see that?

23 A. No, say that again.

24 Q. Okay. If you look at what I marked as  
25 RX-361 --



1 MS. ZUK: I will object to the lack of  
2 foundation.

3 MR. STONE: I am trying to lay the foundation,  
4 Your Honor, that the attachment to Exhibit 361 was --

5 JUDGE McGUIRE: On what foundation are you  
6 talking about it, Counselor, that you say that he is  
7 not already in the process of laying?

8 MS. ZUK: The witness has not testified that  
9 he's familiar with the numbering system that --

10 JUDGE McGUIRE: Overruled. I'll give him a  
11 chance to ask the question first.

12 BY MR. STONE:

13 Q. Mr. Williams --

14 JUDGE McGUIRE: Actually, why don't we just ask  
15 that question now, Mr. Stone.

16 MR. STONE: I will, that's what I'm going to  
17 ask.

18 JUDGE McGUIRE: And then you will decide what  
19 to do.

20 BY MR. STONE:

21 Q. I want you to look at the bottom of either one  
22 of the documents. Do you see where it has M000167.00  
23 and then a page number that runs consecutive?

24 A. Like the 02, yes.

25 Q. Yes. So, you have 02, and then on the draft

1 minutes that you were shown earlier by Ms. Zuk, it goes  
2 07 through 013?

3 A. Yes.

4 Q. Is it your -- do you have an understanding that  
5 the way Micron numbered the documents that they  
6 produced to us was each document was given a number,  
7 like 167, and each page was given a page number, like  
8 .001, 2, 3, 4 and so on?

9 A. No, I don't know specifically how they did  
10 that.

11 Q. Okay, then let me just ask it this way: Can  
12 you testify whether or not Exhibit RX-356 was sent to  
13 you attached to a memo from Mr. Fusco?

14 A. No, I can't.

15 Q. And do you know why if Exhibit 356 came to  
16 Micron from JEDEC it would be marked under the terms of  
17 the protective order as outside counsel only?

18 A. No, I wouldn't know why it is marked that.

19 Q. Do you know whether or not what was marked as  
20 Exhibit RX-356 was simply Mr. Fusco's notes of the  
21 meeting?

22 A. I know this wasn't the notes of the meeting  
23 from Fusco.

24 Q. You know that this is not Fusco's notes?

25 A. No, this is a typical draft minutes that we

1 would normally get from the JEDEC -- these were the  
2 typical draft minutes, typical state of the draft  
3 minutes that normally the members would get before the  
4 final ones were issued from the JEDEC office.

5 Q. Okay. And you were shown -- and I guess one  
6 reason, then, that draft minutes were circulated was so  
7 members could make corrections?

8 A. Corrections, additions, make sure everything's  
9 included, right.

10 Q. And you pointed us earlier or in response to  
11 questions by Ms. Zuk, you responded down here to a  
12 discussion in the draft minutes where there's a mention  
13 of patent applications, correct? Do you remember that?

14 A. Ah, yes, yes.

15 Q. It's on page 2 of Exhibit 356.

16 A. Right, yes.

17 Q. And it says, "Call to order - Jim Townsend,"  
18 and then it says, "Review of patent items - members are  
19 cautioned to disclose their relevant patent  
20 applications."

21 Do you see that?

22 A. Yes.

23 Q. That language is not in the final minutes, is  
24 it?

25 A. I believe not.

1 Q. Okay. So, that could mean that somebody called  
2 up the preparer of the minutes and said, that's  
3 erroneous, we need to change it, that needs to be  
4 deleted because it didn't happen that way? Any of  
5 those things could be an explanation for why it was  
6 taken out?

7 A. Or it could have been that the final minutes  
8 were just abbreviated.

9 Q. But the final minutes are pretty long, aren't  
10 they? We have them. It's --

11 A. Well, that's just because in the final minutes,  
12 you have all the attachments and presentations that  
13 were given.

14 Q. Well, let's look at JX-14. Those are the final  
15 minutes from the meeting, right?

16 A. Yes.

17 Q. Okay. And there's an item 5 on the final  
18 minutes which appears on page 3, and it says, "Patent  
19 Policies," correct?

20 A. Yes.

21 Q. And it has just as many lines in it as the  
22 Review of Patent items from page 2 of Exhibit RX-356,  
23 doesn't it?

24 A. Yes.

25 Q. So, nobody shortened it by taking information

1 out; they changed the information, didn't they?

2 A. I notice that they added things to it.

3 Q. Um-hum, they added things. They talked about  
4 that what he showed was a draft of proposed changes to  
5 the manual, correct?

6 A. Correct.

7 Q. Okay. Now, the draft language that he showed  
8 is in the document, Exhibit JX-14, at the page numbered  
9 15107. I can't tell you the direct pagination number,  
10 because I -- it's cut off on my copy.

11 A. JEDEC 15107?

12 Q. Yeah. Do you have 15107?

13 A. I'm getting there. Yes.

14 Q. And it says Appendix F.

15 A. Yes.

16 Q. Patent Policy Guidelines. This was not as of  
17 December of 1992 the part of any existing manual, was  
18 it?

19 A. I don't know if it was or not.

20 Q. Did you ever look at any of the JEDEC manuals?

21 A. Not specifically.

22 Q. Were you given one when you became a member?

23 A. I can't remember if I did or not. Terry might  
24 have given me one. I don't remember.

25 Q. Okay. And then what follows that page on page

1 15108 and 15109 and 15110, those three pages are the  
2 pages that you recall being put up as overhead slides.  
3 Is that right or not? If you recall.

4 A. Overhead slides for what?

5 Q. By Jim Townsend. Do you recall what he put up  
6 on the overheads?

7 A. He put up stuff on overheads multiple times.  
8 He would have -- these specific ones were on the  
9 overheads when we were discussing -- I don't know if it  
10 was specifically at this meeting, but when we were  
11 discussing modification to the standard, these were  
12 presented, yes.

13 Q. Okay. So, those went up as the drafts at this  
14 meeting. Do you recall if they ever went up at another  
15 meeting?

16 A. I don't recall specifically, but I do know that  
17 we did discuss it at multiple meetings.

18 Q. Okay. You discussed changing the manual,  
19 correct?

20 A. Correct, as well as, of course, the patent  
21 policy was discussed at each meeting.

22 Q. And JEDEC, am I correct that JEDEC was a  
23 function within the engineering department of EIA?

24 A. Yes.

25 Q. It did not have any separate standing as a

1 company or corporation or so on, it was just a  
2 function?

3 A. I don't know exactly how it was organized, but  
4 yeah, it was under the auspices of EIA.

5 Q. Okay. I want to -- did we -- JX-15, I'm going  
6 to bring up JX-15, because I don't think we have enough  
7 copies. We'll bring it up on the screen, and as you'll  
8 see, these are the minutes of the JC-42.3 meeting,  
9 Scottsdale, Arizona, March 3 and 4, 1993.

10 Do you see that?

11 A. Yep.

12 Q. And it shows Bob Fusco in attendance from  
13 Micron on the first page. Do you see that?

14 A. Yes.

15 Q. And I didn't see your name anywhere in there,  
16 and would that be consistent with your recollection  
17 that you did not attend?

18 A. Yes.

19 Q. Okay. So, this would be the meeting following  
20 the Fort Lauderdale meeting, correct?

21 A. Yes. I don't know if there was an interim  
22 meeting, because sometimes you do have interim  
23 meetings, but yeah, this would be the -- you will have  
24 it every quarter, and this would have been the meeting  
25 in the first quarter.

1 Q. Okay. So, the normally scheduled meetings  
2 would be one in December and one in March?

3 A. Maybe not specifically, but once a quarter,  
4 within those three months.

5 Q. Okay, okay. So, let me ask you to look at page  
6 5 of JX-15. Do we have that one up there?

7 A. Yes.

8 Q. And do you see where it says, "Micron for  
9 clarity, change items to all banks idle on the timing  
10 diagram," about two-thirds of the way down?

11 A. Yes.

12 Q. And then right above that it says, "Hitachi:  
13 Patent alert"?

14 A. Yes.

15 Q. Did anybody talk with you about these -- this  
16 meeting or those minutes and a Hitachi patent alert?

17 A. No.

18 Q. And then turn to the next page, which is page  
19 6. At the top it says, "MOSAID: Patent issue." Then  
20 it says, "The Committee was aware of the Hitachi  
21 patent. It was noted that Motorola has already noted  
22 that they have a patent."

23 Do you know if in this time frame that was a  
24 reference to the Motorola patent you a. riyiagscuss  
22 earlier



1 A. I don't know that.

2 Q. Okay. And then it says, "IBM noted that their  
3 view has been to ignore patent disclosure rule because  
4 their attorneys have advised them that if they do then  
5 a listing may be construed as complete."

6 Do you see that language?

7 A. Yes.

8 Q. Well, after the December 1992 meeting when you  
9 talked about amending the language, talked about patent  
10 applications, and Mr. Fusco went with you --

11 A. Yes.

12 Q. -- and he circulated -- you got from some  
13 source the draft minutes, and then you got the final  
14 minutes that included the proposed amendments, and you  
15 recall a discussion of patent applications at that  
16 meeting, did Mr. Fusco come back from this meeting in  
17 March in Scottsdale and tell you, you know, despite  
18 what we both heard together in December, IBM has just  
19 announced that they're not going to talk -- they're not  
20 going to disclose patents or applications. They're  
21 going to ignore it.

22 A. That isn't the information that I got. It was  
23 more that IBM had so many patents, they couldn't go  
24 research all the patents on every issue, but that they  
25 would comply as best they could. But they were

1 concerned that if they gave a list of patents, that it  
2 would be thought of as complete, and then they would be  
3 reprimanded for that.

4 Q. And you were still getting the minutes, weren't  
5 you?

6 A. Yes.

7 Q. And so when you read in the minutes that IBM  
8 noted that their view has been to ignore the patent  
9 disclosure rule, did you understand that to be  
10 consistent with what you had seen IBM do in the past?

11 A. It was explained to me that it wasn't that they  
12 were going to ignore the rule but that they couldn't  
13 give a full list of all their patents.

14 Q. And did you ever see the email or fax that they  
15 sent to Mr. Townsend explaining the advice they had  
16 received from their lawyers about ignoring the patent  
17 disclosure rule?

18 A. I can't remember if I saw that or not.

19 Q. Okay. You were shown some ballots earlier.

20 We are going to take one of these minutes

21 first. Let's take a look at JX-1M

8d did you ever see therlfl sti05ink -- MwheZuk e

1 correct?

2 A. Yes.

3 Q. And was this the first meeting that you can  
4 recall anyone from Rambus ever attending?

5 A. I can't remember which was the first meeting.

6 Q. Do you recall whether the first person from  
7 Rambus who ever attended was Mr. Garrett?

8 A. No, I can't.

9 Q. Does this show anybody from Rambus present as a  
10 member?

11 A. They're not listed -- Rambus isn't listed under  
12 the Members Present, but under the Others Present.

13 Q. And if you come as someone's guest, would you  
14 be listed as Others Present?

15 A. You could be either others or you could be an  
16 alternate, not be a regular member.

17 Q. So, you don't -- you don't know if in December  
18 of '91 Rambus was a member or not?

19 A. No, I don't.

20 Q. Okay. Now, was there a discussion of VPAK at  
21 this meeting?

22 A. I can't remember if it was specifically at this  
23 meeting. VPAK was discussed at several meetings.

24 Q. Who for Micron disclosed the VPAK patent?

25 A. I did.

1 Q. When did you disclose it?

2 A. At one of the early meetings. It might have  
3 been this meeting. It would be contained in the  
4 minutes when it was disclosed.

5 Q. Was there a patent tracking list that existed  
6 as of December of 1991?

7 A. I don't know if it was at that specific time,  
8 but it was either late '91 or early '92 when they  
9 started circulating a patent tracking list.

10 Q. Was it December of 1991 when there was a  
11 discussion that maybe that would be a good thing to  
12 start doing?

13 A. I can't remember specifically if it was at that  
14 specific meeting, but yes, it was discussed that that  
15 was something we needed to start doing.

16 Q. Okay. And then -- that's all my questions on  
17 that particular document at the moment.

18 If you would go to JX-13, which you were also  
19 shown earlier, and is this the July 21st meeting in  
20 1992?

21 A. Yes, it is.

22 Q. In Denver, Colorado?

23 A. Correct.

24 Q. And you were present at this one?

25 A. Yes.

1 Q. And you were asked about some ballots that  
2 occurred at this meeting by Ms. Zuk. Do you recall  
3 that?

4 A. Yes.

5 Q. And you were asked about some "no" votes?

6 A. Yes.

7 Q. Now, am I -- is it correct that the way the  
8 balloting works is you send your ballots in ahead of  
9 time, somebody tallies the ballots and reports on the  
10 results at the meeting?

11 A. Correct, the ballots are sent in to the JEDEC  
12 office. The secretary -- I can't remember his name --  
13 would tally the votes, and it would come back with the  
14 vote tallied as well as any comments that were on the  
15 ballots.

16 Q. And that's Ken McGhee, right?

17 A. Correct, that's him.

18 Q. So, you weren't the person who tallied the  
19 ballots?

20 A. No.

21 Q. And did you ever see the ballots Rambus filled  
22 out?

23 A. No.

24 Q. You told us earlier that the language in the  
25 minutes was exactly the words that Rambus had written

1 on their ballot. Do you recall that testimony?

2 A. Yes.

3 Q. But how do you know that?

4 A. Only based upon the practice. The practice was  
5 that whatever the comments needed -- that were on the  
6 ballot had to be discussed and resolved.

7 Q. Okay. And so it's consistent with your  
8 practice that whatever somebody wrote on the ballot,  
9 Ken McGhee would accurately transcribe that information  
10 into the minutes?

11 A. Correct.

12 Q. And you never had an occasion when he didn't  
13 get it right, correct?

14 A. He might have -- I'm not saying he was 100  
15 percent fallible, no, but typically he copied the  
16 minutes fairly accurate, especially the comments,  
17 because that's what had to be resolved in order to move  
18 the ballot along.

19 Q. And I think you meant, "I'm not saying he's 100  
20 percent infallible." Is that what you meant?

21 A. Yeah, right.

22 Q. In other words, he might not be right all of  
23 the time, but he was right almost 100 percent of the  
24 time?

25 A. Right.

1 Q. So, these ballots that are voted on at the  
2 meeting, are they kept by JEDEC so if we wanted to know  
3 how somebody voted later, we can go back and look at  
4 the ballots?

5 A. I believe so.

6 Q. So, you think JEDEC should have all the ballots  
7 that would show exactly what Rambus said?

8 A. Yes, I believe they kept them all.

9 Q. Was it your practice to write trip reports when  
10 you went to these meetings?

11 A. From time to time I would try to, yes.

12 Q. And you keep all your trip reports?

13 A. Yes.

14 Q. So, in the production of all the documents from  
15 Micron, we ought to be able to go find your trip  
16 reports?

17 A. If I wrote one, yeah, it would be there.

18 Q. Okay. And if it's not there, that would be  
19 inconsistent with your practice?

20 A. Or that I didn't write a trip report for that  
21 specific meeting because I got too busy afterwards.

22 Q. Okay.

23 A. But yes, that was the practice, trying to write  
24 them.

25 Q. And did you review any of your trip reports

1 before you came up here to testify this morning?

2 A. No.

3 Q. Has anybody shown you any of your trip reports  
4 with respect to any of your JEDEC meetings in  
5 connection with your depositions in this or any other  
6 case?

7 A. I can't remember any.

8 Q. Have you ever gone back to look and see if you  
9 still have them?

10 A. Yes, I have. I gathered all my documents from  
11 timing planners, et cetera, and gave all those  
12 documents to my lawyers.

13 Q. And did you see trip reports in there?

14 A. I can't remember if I saw any or not.

15 Q. Okay, let me show you Exhibit CX-40. I have a  
16 copy for you, and we can bring it up on the screen. Do  
17 you recognize this document?

18 A. Yeah, this is one of the JC-16 minutes.

19 Q. Okay. And it shows you in attendance, does it  
20 not?

21 A. Yes.

22 Q. And then if you would go to page 7 of the  
23 document, it says CX-0040-007 on it. Did you find  
24 that?

25 A. Yes.



1 Q. And then if you look at the right-hand side of  
2 the document, you'll see a sheet which is the first  
3 page of the patent tracking list, isn't it?

4 A. It discusses the -- yes, it's the first page of  
5 the patent tracking list.

6 Q. And wasn't it the practice that prior to a  
7 JEDEC meeting, Mr. Townsend would fax out to certain  
8 people this cover memo, along with the list of patents  
9 that had been disclosed to date?

10 A. Yes, anybody who was on the patent list, that  
11 had something on the patent tracking list was sent this  
12 memo.

13 Q. Okay. So, you were the person who got this  
14 memo on behalf of Micron the entire time that Mr.  
15 Townsend was sending it out. Isn't that right?

16 A. I don't know if it was the entire time, but at  
17 this specific time, yes, I received it.

18 Q. Okay. We will get to the last one at least I  
19 can find in the minutes --

20 A. Okay.

21 Q. -- and I think you'll see your name is still  
22 there, but let me ask it this way. Do you recall that  
23 what happened was after you stopped being a JEDEC  
24 official member, you would still get the patent  
25 tracking list, and you would pass it on to somebody

1 else at Micron?

2 A. I can't remember if I received it and passed it  
3 on or they received it.

4 Q. Okay. Did you ever see among a list of people  
5 to whom this patent tracking list was sent, did you  
6 ever see anybody at Rambus?

7 A. I can't remember all that it was sent to. I  
8 just wanted to determine -- I mainly looked for myself  
9 to see if we had something that we needed to take care  
10 of.

11 Q. Okay. And do you recall when you got the first  
12 patent tracking list sent to you in that fashion that  
13 you've just talked about?

14 A. I don't.

15 Q. Well, let me ask you to take a look at CX-336.

16 A. Thanks.

17 Q. This is an easier to read copy. This one's  
18 dated May 26th of 1992, correct?

19 A. Yes.

20 Q. And it shows you as the person at Micron who  
21 received it?

22 A. Yes.

23 Q. And do you remember that to be your fax number  
24 at the time?

25 A. I believe so.

1 Q. Okay. And then it says -- the text of this  
2 says, "Please refer to the existing rules of the EIA  
3 governing patentable matters, which follow."

4 Do you see that?

5 A. Yes.

6 Q. And then following that material is a list of  
7 matters that had been brought to the attention of the  
8 JEDEC memory committee.

9 Do you see that?

10 A. Yes.

11 Q. And the next page, Patent Tracking, Jim  
12 Townsend, Toshiba, was this one of the rules of EIA  
13 governing patentable matters?

14 A. I couldn't state whether it was EIA  
15 specifically, but it was definitely what was talked  
16 about as the responsibility of the members of the  
17 committee.

18 Q. Okay. And then if you turn to the third page  
19 of Exhibit 336, the one that's headed EIA Policy at the  
20 top and is pretty much a full page of text, is that a  
21 page of information that was part of Jim Townsend's  
22 slides that you recall him putting up at the meetings?

23 A. It looks like it is, yes.

24 Q. Okay. And that you understood to also be the  
25 part of the EIA rules governing patentable matters?

1           A. This actually came out of the Style Manual,  
2           yes, as well as the Manual for Committees.

3           Q. And if you look at the bottom, it has what came  
4           out of the EP-3-F Manual for Committee?

5           A. Yes.

6           Q. And so this has information both from the Style  
7           Manual and the Manual for Committee, right?

8           A. Yes.

9           Q. Turn, if you would, to the fourth page, and is  
10          page 4 together with page 5 the list of patents that  
11          had been disclosed to JEDEC as of that time?

12          A. Those that were under consideration and needed  
13          resolution.

14          Q. Did you ever see any patents taken off of the  
15          list?

16          A. I can't remember if they were.

17          Q. Okay. If you go down almost to the bottom of  
18          page 4, you'll see it says, "Moto."

19          A. Yes.

20          Q. That refers to Motorola?

21          A. Yes.

22          Q. And you'll see the patent number listed there?

23          A. Yes.

24          Q. And the patent I read you earlier was  
25          5,077,693, and is that the number we see there?

1 A. That's correct.

2 Q. Okay. And does the L next to Moto mean that  
3 Motorola had given a letter of assurance?

4 A. I can't remember what that actually refers to,  
5 but that might be it.

6 Q. Okay. And then if we go up above for Micron,  
7 we see two listings, a VPAK and a 3-port VRAM.

8 Do you see that?

9 A. Yes.

10 Q. Are you familiar with the 3-port VRAM  
11 reference?

12 A. Absolutely.

13 Q. Did Micron have a patent on that?

14 A. I believe so. I'm not really sure.

15 Q. Did you ever give that patent number to anybody  
16 at JEDEC so they could add it to the list?

17 A. Not to my knowledge.

18 Q. Okay. Did you ever disclose any patents to Mr.  
19 Townsend to include on this patent tracking list?

20 A. Yeah, the VPAK patent.

2 to add ymmelieTot number to a3the Vose0?caPt on that?

20 A. Yeah, the5ot nusng list?

3 17 patent.

4 10 kay.kay. Did you ever disclose anypatent.

1           A.  No.

2           Q.  I am going to show you another document,  
3  CX-342.  There you are, Mr. Williams.

4                    Do you recognize Exhibit 342 to be another copy  
5  of the patent tracking list, this time October of 1992?

6           A.  Yes.

7           Q.  Okay.  And my particular interest here is on  
8  one of the attachments, and if you could go all the way  
9  to the last page of the document -- someone wants to  
10 know the page number -- three, four, five, six --  
11 seven.  Eight, try eight.  There we go.  Maybe you can  
12 focus in on that.

13                   This is an article entitled Don't Lose your  
14 Patent Rights.  Do you see that?

15          A.  Yes.

16          Q.  And that -- I'm not going to -- you can take  
17 time to read it if you want.  I'm not going to rush you  
18 on it, but let me see if I can draw your attention to  
19 something.

20                   Part way down in the left-hand column in bold,  
21 it says, "Keep it under your hat."

22                   Do you see that?

23          A.  Yes.

1 before a patent application is filed, one is not  
2 entitled to the patent -- the invention is considered  
3 to be in the public domain."

4 Do you see that reference?

5 A. Yes.

6 Q. And then if you skip to the next paragraph, it  
7 says, "Moreover, premature disclosure can severely  
8 jeopardize non-U.S. rights. While the inventor may  
9 enjoy a one-year grace period in the United States,  
10 many countries, including Belgium, Greece, Great  
11 Britain, Spain and Taiwan, require absolute novelty.  
12 Any disclosure before the filing of a patent  
13 application will bar rights to a patent."

14 Do you see that?

15 A. Yes.

16 Q. Did this subject ever come up at a JEDEC  
17 meeting where they talked about what would happen if  
18 people disclosed patentable inventions before they had  
19 filed for a patent?

20 A. I can't remember specific discussion on it, no.

21 Q. Was it ever your understanding that you were  
22 obligated to disclose a patentable invention before you  
23 had filed your application?

24 A. I typically would file -- if we were going to  
25 disclose, I would want to file as soon as I possibly

1       could to protect it, yes.

2           Q.   And was it ever your understanding that the  
3   JEDEC practice or policy was to have somebody disclose  
4   a patentable invention before they had filed?

5           A.   It wasn't that specific.  It was -- the rules  
6   were more you need to file -- I mean, you need to  
7   disclose as soon as you could if you thought it was  
8   going to be applicable to the work that was being  
9   discussed.

10          Q.   After this article was circulated, did you ever  
11   recall Mr. Rhoden saying, you have to disclose your



1 ought to say, hey, I've got something I'm patenting  
2 here or there's something that you're talking about  
3 that I've got some IP on.

4 Q. Now, did anybody ever disclose a patentable  
5 invention before they filed?

6 A. I don't know if they did or not.

7 Q. Okay. At Micron, the practice is to do an  
8 invention disclosure when you have an invention that  
9 you think may be patentable, send it in to somebody in  
10 the organization who decides whether to file a patent,  
11 correct?

12 A. Correct.

13 Q. And you did invention disclosures on burst EDO,  
14 correct?

15 A. Yes.

16 Q. Okay. Let me just show you the last tracking  
17 list I was able to find. Let's pull RX-691, if we  
18 could. Just go forward a couple pages on that, because  
19 I don't seem to have the copy in the box. That's okay,  
20 I'll come back to it. I'll come back to it.

21 Let me show you a different one. Let me show  
22 you RX-559. You recognize this to be a patent tracking  
23 list, correct?

24 A. Yes, it is.

25 Q. And this one is dated May 10 of 1995?

1 A. Yes.

2 Q. Okay. And then turn, if you would, to the --  
3 let me count the pages. One, two, three, four -- the  
4 fifth page, and you'll see about a third of the way  
5 down there's a reference to Rambus sync clock with a  
6 patent number.

7 A. Yes.

8 Q. Okay. Then if you go back to the first page,  
9 even though there's now a Rambus patent listed on that  
10 list, there's no Rambus person and no reference to the  
11 Rambus company in the people to whom this list was  
12 sent, is there?

13 A. That's correct.

14 Q. Okay. And then for Micron on this particular  
15 document, RX-559, you have listed the same two patents  
16 we saw earlier, VPAK and 3-port VRAM, correct?

17 A. Yes, those are listed.

14

Q. C

1 Q. And you presented that on VPAK?

2 A. Yes.

3 Q. When did you do that?

4 A. I'm not sure exactly when. It would have been  
5 during my tenure there. I'm not sure exactly when that  
6 was.

7 Q. And were you aware that there was a list of  
8 patent assurance letters that was circulated within  
9 JEDEC?

10 A. I don't recall that.

11 Q. And did you ever look at any list to see if  
12 your assurance letter was listed there?

13 A. No.

14 Q. Okay. That's the only letter you ever  
15 provided?

16 A. Correct.

17 Q. You told us in your testimony earlier, if I  
18 heard you correctly, that when you were trying to  
19 interest manufacturers in burst EDO, you told them that  
20 if they started to manufacture burst EDO, it would be  
21 free.

22 A. That our IP on burst EDO would be free.

23 Q. Who at Micron was required to approve the  
24 offering of free licenses?

25 A. I'm not sure exactly who can approve that.

1           Q. Was that within your authority? Could you just  
2 offer it on your own?

3           A. I offered it on my own.

4           Q. You offered it on your own?

5           A. Yes.

6           Q. Without any approval from anybody?

7           A. Well, my manager knew what I was doing.

8           Q. And that was Mr. Cloud?

9           A. Yes.

10          Q. And you were asked about this at your  
11 deposition in this case, weren't you?

12          A. I don't recall the specific question.

13          Q. I sat it someplace here. I've got it.

14                 Well, you were deposed in this case by Ms.  
15 Jeffries who came out to Boise and took your  
16 deposition. Do you recall that?

17          A. Yes.

1 JUDGE MCGUIRE: Yes, please, thank you.

2 BY MR. STONE:

3 Q. Well, let me ask you to turn to page 28, Mr.  
4 Williams. Isn't it correct -- starting on line 8,  
5 weren't you asked the following question:

6 "QUESTION: Regarding burst EDO, were you ever  
7 involved in any discussions about whether Micron would  
8 seek royalties on its burst EDO patents?

9 "ANSWER: I can't remember any discussions to  
10 that effect, no."

11 And then weren't you asked:

12 "QUESTION: Have you ever heard about or become  
13 aware of discussions regarding whether Micron would  
14 charge royalties or seek royalties for its burst EDO  
15 patents?"

16 And after having the question read again,  
17 didn't you say, "No, I'm not aware of those  
18 discussions"?

19 A. And in this context, I thought she was talking  
20 about royalties or discussions taking place within  
21 Micron of whether or not there was a decision made to  
22 do royalties on burst EDO.

23 Q. Okay, well, turn to the next page.

24 A. Okay.

25 Q. Look at the top of page 29 beginning at line 3

1 through line 5. Were you asked the question:

2 "QUESTION: Are you aware of any decision by  
3 Micron not to assert its burst EDO patents in any way?

4 "ANSWER: I have not been privy to those  
5 decisions.

6 "QUESTION: Are you aware of whether any of  
7 Micron's burst EDO patents are part of any  
8 cross-license?

9 "ANSWER: I'm not aware of that."

10 But do you see the one that precedes it?

11 A. Yes.

12 Q. "QUESTION: Are you aware of any decision by  
13 Micron not to assert its burst EDO patents?"

14 A. Correct.

15 Q. Then the bottom of page 28, last line, "Are you  
16 aware of any decision by Micron not to seek royalties  
17 on its burst EDO patents?"

18 "ANSWER: I'm not aware of any of those  
19 discussions."

20 But your testimony today is that you had  
21 discussions about this with Mr. Cloud, c

6yuyou had

2 13w. Wgoing not to seek royal, justy is tntsordhetnotose

2 14garnhetsuppoassfrbotsee t whetmemory manufacturerl, ose

Waldorf, Marylandse?

1 charge.

2 Q. So, you had a discussion with Mr. Cloud that  
3 you were not going to charge royalties?

4 A. And I'm not sure exactly to what extent that  
5 discussion was, but there was an understanding that I  
6 could go ahead and do that.

7 Q. And you had discussions with manufacturers  
8 about that?

9 A. Various manufacturers, correct.

10 Q. And you didn't in your deposition in answer to  
11 the question I just read, you didn't talk about either  
12 your discussions with Mr. Cloud or your discussion with  
13 manufacturers, correct?

14 A. No, I did not.

15 Q. Okay. Now, you complied with what you  
16 understood to be the JEDEC patent policy while you were  
17 a member, didn't you?

18 A. Yes.

19 Q. And in connection with the burst EDO patents,  
20 you complied, didn't you?

21 A. I believe so.

22 Q. Okay. You don't think there's anything you did  
23 during your time at JEDEC or afterwards where the burst  
24 EDO patents were not handled and disclosed in  
25 accordance with JEDEC policy. Is that right?

1           A. Well, I think you need to understand that at  
2 the point that I was no longer the JEDEC  
3 representative, I was on to other things, and so I  
4 didn't concern myself that much with what needed to be  
5 done at JEDEC.

6           Q. Well, you came back to JEDEC meetings after you  
7 finished being an official representative, didn't you?

8           A. Yes, one or two to do a presentation.

9           Q. And at one of them you gave a fairly extensive  
10 presentation on burst EDO?

11          A. Correct.

12          Q. And at that time, you were aware that anybody  
13 who attended a JEDEC meeting, whether they were the  
14 official representative or not, had an obligation to  
15 disclose whatever it was they were required to  
16 disclose.

17          A. True.

18          Q. And you didn't feel at that time that you  
19 needed to disclose any of the patents or patent  
20 applications on burst EDO that were then pending, did  
21 you?

22          A. Actually, at that time, I didn't know what had  
23 been disclosed. I mean, this wasn't the first  
24 discussion on burst EDO, and I did not know exactly  
25 what had or had not been disclosed to the committee.



1 Q. That meeting was January of 1995, right?

2 A. That was one of them, yes.

3 Q. That was the one where you gave your big  
4 presentation?

5 A. I don't -- there was two, January and there was  
6 one later, and I can't remember which one I presented  
7 at and which one maybe Bob Fusco might have presented  
8 the information.

9 Q. Well, I think Ms. Zuk showed you the January  
10 1995 minutes of the meeting.

11 A. Right, I was present then.

12 Q. You were there in January '95?

13 A. Yes.

14 Q. You saw a presentation given by somebody from  
15 Micron?

16 A. Right, either myself or Bob.

17 Q. Okay. And then we looked just a moment ago, we  
18 looked at RX-559, remember, the May 10, 1995 patent  
19 tracking list?

20 A. Yes.

21 Q. And the one that was sent to you, Brett  
22 Williams?

23 A. And at that point in time, I don't know -- it  
24 was sent to my mail slot, but I'm not sure if I  
25 received this specifically and Bob picked it up or

1 whether I got it specifically.

2 Q. Well, it was sent to your fax number, right?

3 A. That's my -- our fax number is on it, but  
4 typically it's received in the mail.

5 Q. And it doesn't list any burst EDO patents, does  
6 it, from Micron?

7 A. No, it doesn't. No, it doesn't.

8 Q. Does it list burst EDO patents from anybody?

9 A. No.

10 Q. Are you sure?

11 A. Well, let me take a look.

12 Q. Why don't you take a look at the fourth page  
13 of -- the fifth page of it. Doesn't OKI list a burst  
14 DRAM -- something?

15 A. It is a burst DRAM, but I don't know if that's  
16 actually burst EDO.

17 Q. Okay. So, either you or Mr. Fusco got the  
18 patent tracking list in May of 1995, right?

19 A. Should have, yes.

20 Q. And both of you had been at a meeting in  
21 January of '95 where burst EDO was discussed, correct?

22 A. Correct.

23 Q. And both of you thought that the fact that in  
24 May of 1995, none of the Micron burst EDO patents or  
25 applications was on the list was okay, it was in

1 compliance with the rules, right?

2 A. State that again.

3 Q. Sure.

4 When the tracking list was received at Micron  
5 by either you or Mr. Fusco in May of '95, following the  
6 January of '95 meeting, either you or Mr. Fusco  
7 concluded that Micron had complied with the rules even  
8 though it hadn't disclosed any burst EDO patents or  
9 applications, correct?

10 A. I don't know if I could say that.

11 Q. Well, do you looking back today think you  
12 complied with the rules?

13 A. I think -- I know that there was a disclosure,  
14 and I don't know if those disclosures contained  
15 everything that needed to be disclosed or not.

16 Q. Well, you know there was a disclosure in April  
17 of '96.

18 A. Yes, I believe that's when it was.

19 Q. Um-hum, okay, but as of May of '95, was there  
20 any need to have disclosed any of the patents or  
21 applications as of that date as you understood the  
22 rules?

23 A. I'm not sure. I wasn't -- and maybe this was a  
24 mistake, but I wasn't that involved in what needed to  
25 be disclosed at that time. I wasn't regularly

1 attending the meetings. That was typically Bob or  
2 Terry Walther, and at that point in time, I did not  
3 actually discuss with them -- and maybe we should  
4 have -- of what actually had been disclosed and what  
5 hadn't.

6 Also, I am not sure at that specific time how  
7 many disclosures we had actually made -- how many  
8 patent applications or disclosures for applications had  
9 been made and where they were in the process.

10 Q. The -- well, as of this time, both Mr. Walther  
11 and Mr. Fusco knew you were applying for patents on  
12 burst EDO, correct?

13 A. I don't know if they did or not.

14 Q. Wasn't it well known within the company that  
15 you were seeking intellectual property on burst EDO?

16 A. I worked with two specific engineers and the  
17 legal department, and I don't know exactly what I had  
18 communicated to Mr. Walther and Mr. Fusco.

19 Q. Okay. And one of the patents, one of the burst  
20 EDO patents, has been asserted in litigation by Micron,  
21 hasn't it?

22 A. Not to my knowledge.

23 Q. Haven't they asserted the '376 patent against  
24 Mosel Vitalic?

25 A. I'm not aware of that.

1 Q. Nobody's told you that?

2 A. No.

3 Q. You're an inventor on the '376 patent, correct?

4 A. I'm not -- I don't track those that closely, so  
5 if I'm listed on it, I am. I'm not sure if -- what  
6 specifically those numbers refer to.

7 Q. If at a JEDEC meeting someone was asked about  
8 their intellectual property, they were asked do you  
9 have any or something like that and they refused to  
10 answer that question, was that something you would have  
11 considered to be a violation of the rules?

12 A. Yes, I would think that -- well, whether it's a  
13 violation of rules, we would ask them why they were not  
14 responding, and I think people would -- from the  
15 committee would dig into it to see if there were  
16 some -- something there that needed to be taken care  
17 of.

18 Q. Now, do you recall a meeting where Mr. Crisp  
19 was asked if he cared to comment, and he said no, he  
20 didn't want to comment?

21 A. I don't remember that specifically.

22 Q. And your understanding is if you -- if that  
23 event had occurred in your presence, that would have  
24 caused you to do more digging, right?

25 A. Maybe, maybe not. It depended on the

1 situation.

2 MR. STONE: Your Honor, were you going to take  
3 an afternoon break? Would now be convenient? I'm  
4 going to go to another demonstrative.

5 JUDGE MCGUIRE: It's up to the parties. I'm  
6 fine right now.

7 Counsel, any suggestions in that regard?

8 MR. OLIVER: I think a break would be fine,  
9 Your Honor.

10 JUDGE MCGUIRE: Let's go off the record. We'll  
11 break for ten minutes.

12 (A brief recess was taken.)

13 JUDGE MCGUIRE: On the record.

14 At this time, you may proceed with your cross  
15 examination, Mr. Stone.

16 MR. STONE: Thank you, Your Honor.

17 BY MR. STONE:

18 Q. Could we bring up the first page of the first  
19 EDO demonstrative?

20 What I would like to do if we could, Mr.  
21 Williams, is put up a time line of events that relate  
22 to the first EDO standardization at JEDEC, and did you  
23 have an opportunity -- I had provided a copy of this  
24 demonstrative to complaint counsel yesterday. Had you  
25 seen it before?

1 A. Just briefly, yes.

2 Q. Well, I am going to see if -- did you look at  
3 it and see anything that was wrong with it?

4 A. I didn't actually look at it in detail to  
5 determine if there was anything wrong.

6 Q. Let me -- I'll move as quickly as I can, but if  
7 you need me to slow down, you tell me, okay?

8 If we can bring up the reference to the JC-42.3  
9 meeting on September 13, 1994.

10 Is it consistent with your understanding, Mr.  
11 Williams, that the first JEDEC meeting at which burst  
12 EDO was discussed was September 13 of 1994?

13 A. I'm not sure if that's the exact first meeting,  
14 but it was I think being discussed in that time frame.

15 Q. Would you like me to show you the minutes from  
16 that meeting and you can confirm it?

17 A. I don't think from the minutes of the meeting  
18 it will say it's the first, but it will say that it's  
19 being discussed during the meeting.

20 Q. Okay. Well, during the application process,  
21 during the -- when you were prosecuting your patents in  
22 the patent office, one of the things you did is you  
23 disclosed to the patent office prior art, correct?

24 A. Yes.

25 Q. And one of the things you disclosed to them was

1 the JEDEC meetings that were prior art, correct?

2 A. I can't remember exactly what I disclosed to  
3 them.

4 Q. Okay, we will skip ahead for just a moment and  
5 see if we can clarify that point. Let's just bring  
6 up -- let me get the document number here. Let's bring  
7 up RX-730. We have a cover page of RX-730, which is a  
8 patent 5,526,320, on which you are a named inventor,  
9 correct?

10 A. Yes.

11 Q. And under the Other Publications portion -- go  
12 ahead and bring up that whole thing like you're doing.  
13 Under Other Publications, you'll see it says, "Samsung  
14 Electronics, Samsung Synchronous DRAM, March 1993,  
15 pages 1 to 16," and then it says, "OKI Electric  
16 Industries Company, Limited, Burst DRAM Function &  
17 Pinout, Second Presentation, Item 619, September 1994."

18 Do you see that?

19 A. Yes.

20 Q. And then if we go to the next column, pick up  
21 the top part there, and then you'll see that the first  
22 one is, "Toshiba Pipelined Burst DRAM, December 1994,  
23 JEDEC, JC-42.3, Hawaii."

24 Do you see that?

25 A. Yes.



1 Q. So, do those references indicate that at least  
2 for purposes of what you filed with the patent office,  
3 you thought one of the pieces of prior art was an OKI  
4 presentation in September of 1994 as shown on my  
5 demonstrative, if we can go back to it?

6 A. Yeah, I don't know if I gave this information  
7 or whether the patent counsel gathered that  
8 information.

9 Q. Okay, but somebody from Micron gathered it.

10 A. Somebody, yes.

11 Q. And it's in a patent that issued in your name,  
12 right?

13 A. As one of the inventors, yes.

14 Q. Right, okay.

15 And then if September '94 wasn't the first  
16 discussion, it was at least a discussion. Would you  
17 agree with that?

18 A. Yes.

19 Q. And then let's go to the next event, and was  
20 there another discussion in December of '94 which, as  
21 we saw on the patent we just looked at, was the one in  
22 Hawaii?

23 A. I'm sorry, the question again was?

24 Q. Was there another discussion of burst EDO --  
25 I'll just hand you the cover page of that patent if it

1 helps you to reference it.

2 Was there another discussion of burst EDO at a  
3 JEDEC meeting in December of 1994, and was that the  
4 Toshiba presentation?

5 A. It looks like that, yes.

6 Q. Okay. And then the next one that you're aware  
7 of and you attended is January of 1995, correct?

8 A. Yes.

9 Q. Okay. And there was a presentation given by  
10 either you or Mr. Fusco at that one?

11 A. Correct.

12 Q. And the minutes have a copy of that entire  
13 presentation attached to them, don't they?

14 A. Yes, it does.

15 Q. Okay. And then if we go to the next event,  
16 March 15th of '95, this is the meeting where JEDEC  
17 essentially approved the burst EDO standard as you  
18 wrote in your fax to Mr. Lin, correct?

19 MS. ZUK: Objection, the respondent's counsel  
20 has not established that Mr. Williams was present at  
21 this meeting.

22 JUDGE McGUIRE: Sustained.

23 BY MR. STONE:

24 Q. Okay, let me go back.

25 Let me show you -- if you'd pull it out, Mr.

1 Williams, Exhibit RX-585.

2 A. The fax communication?

3 Q. Yes.

4 A. Okay.

5 Q. Okay. This is a document you wrote to Mr. Lin,  
6 correct?

7 A. Yes.

8 Q. And you said in the first line, "I have  
9 included the minutes from the JEDEC meetings in March  
10 (Las Vegas) and May (New Orleans)," correct?

11 A. Yes.

12 Q. And you were referring to the meeting in March  
13 of 1995 and May of 1995, right?

14 A. Yes.

15 Q. Then you say, "The March meeting minutes show  
16 the vote, the following discussion to clear up some  
17 problems and how it passed unanimously as a standard,"  
18 correct?

19 A. Yes.

20 Q. So, it was your understanding when you prepared  
21 Exhibit 585 that the vote was taken at the March  
22 meeting in Las Vegas of 1995 and that it passed  
23 unanimously, correct?

24 A. Yes.

25 Q. Okay, let me go back to the demonstrative.

1           So, would you agree that the description on my  
2 demonstrative is correct, that JEDEC approved the  
3 Micron burst EDO proposal that had been made in January  
4 and then additional presentations were made at this  
5 meeting?

6           A. I'm sorry, state that again.

7           Q. Sure.

8           Look at the description on your screen.

9           A. Right.

10          Q. Just tell me if that description is an accurate  
11 summary of what occurred at the March 15, 1995 meeting.

12          A. I would tend to think it is, but I'd like to  
13 look at the specific meeting ballot to determine if it  
14 was the Micron burst EDO.

15          Q. Okay, I can at least show you the minutes from  
16 that meeting. I'll give you my set. Bring up JX-25,  
17 if you would.

18          A. (Document review.) So, your question again  
19 was, if you can state that?

20          Q. Was this the meeting at which the Micron burst  
21 EDO standard was passed?

22          A. And I guess my concern is with the Micron  
23 standard, and even in the fax I state that with  
24 reference to the March meeting that BEDO was voted on  
25 as a standard. Now, whose exact standard that is, I



1 confirm that was actually the burst EDO dual CAS  
2 operation, but there was some clarification that got --  
3 and I can't remember specifically if that was what it  
4 was.

5 Q. Okay. So, let me -- I'll correct the  
6 demonstrative to remove that specific reference, which

1           Okay, is it correct that the first patent  
2 application that you filed for burst EDO was filed  
3 December 23 of 1994?

4           A. I filed some applications in that time frame.  
5 I don't know if that's the first or if that's the exact  
6 date, but yes, in that time frame.

7           Q. Look at the cover sheet, if you would, on the  
8 patent that I showed you earlier. Does that show you  
9 when it was filed?

10          A. Yes, and it's listing Paul Zager as the primary  
11 inventor, so actually Paul could have been the one  
12 filing it and I was just added to it.

13          Q. As a co-inventor?

14          A. As a co-inventor.

15          Q. And what's the filing date on that one?

16          A. That is -- this one?

17          Q. The filing date, not the issue date.

18          A. December 23rd, 1994.

19          Q. Okay. So, the -- and is it consistent with  
20 your recollection that that is as early as any of the  
21 applications were filed by Micron employees on burst  
22 EDO?

23          A. I'm not sure when that -- they first got filed,  
24 but this states that it was filed on this date.

25          Q. Okay. And that patent issued with what number?

1 A. 5,526,320.

2 Q. Okay. And out of that -- and that original  
3 application number was the '761 application?

4 A. I'm sorry, state that again.

5 Q. The original application number there was the  
6 '761 application? Do you see the application number?

7 A. I'm looking for it. Oh, yes, 370,761.

8 Q. About 20 patents issued from that initial  
9 application. Is that right?

10 A. I'm not sure how many.

11 Q. Is that in the ballpark of what you recall?

12 A. I think so.

13 Q. And is it consistent with your recollection  
14 that the first patent application that anyone at Micron  
15 filed on burst EDO came after the September meeting of  
16 JEDEC in 1994 and after the December meeting of JEDEC  
17 in 1994?

18 A. According to these dates in the demonstrative,  
19 it was filed in December, which would be after those  
20 two meetings.

21 Q. And according to the citations to prior art in  
22 that document, the first page of the patent, there were  
23 some JEDEC meetings that occurred before that patent  
24 was filed, correct?

25 A. Correct.



1           Q. Now, there wasn't anything in your view -- you  
2 weren't violating any JEDEC policy by filing for a  
3 patent on something that had been discussed at earlier  
4 JEDEC meetings, were you?

5           A. I'm not sure if what the patent covered was  
6 actually discussed at JEDEC.

7           Q. Okay, but the fact that the general subject of  
8 burst EDO was talked about at a meeting didn't in your  
9 mind mean that you couldn't file for a patent, did it?

10          A. State that again, please.

11          Q. Sure, I'm sorry.

12                 Did you think you did anything improper in  
13 filing for this patent after there had been some  
14 discussion of burst EDO at a JEDEC meeting?

15          A. No, because there was many different types of  
16 operation of what was termed either burst EDO or  
17 pipelined nibble mode EDO, so no, I didn't think it was  
18 improper to file it.

19          Q. Okay. And you didn't think that -- JEDEC  
20 didn't have any rules that said you couldn't file a  
21 general subject matter that had been discussed at a  
22 JEDEC meeting before you filed, right?

23          A. I think -- I don't know if I gave it that much  
24 thought at this point in time since I wasn't part of  
25 JEDEC. I was just filing patents on things that we

1 thought we invented.

2 Q. And nobody ever told you in the course of  
3 applying for these patents, nobody at Micron ever told  
4 you that you were doing something improper, did they?

5 A. No, they didn't.

6 Q. Okay, let's look at the next patent, if we can.  
7 What I'm going to do is let's skip all the way ahead  
8 and fill out the demonstrative, okay, because I can put  
9 these patents in through a stipulation or in some other  
10 fashion if that speeds things up.

11 JUDGE MCGUIRE: That would be helpful.

12 MR. STONE: Otherwise, I will ask you to take  
13 judicial notice.

14 JUDGE MCGUIRE: All right.

15 BY MR. STONE:

16 Q. There's a large number of patents and  
17 applications listed on the bottom of this time line.  
18 Do you see that, Mr. Williams?

19 A. Yes.

20 Q. And is it consistent with your general  
21 recollection that that's about the number of patent  
22 applications that Micron employees filed on burst EDO?

23 A. I think that's pretty close.

24 Q. Okay. And is it consistent with your  
25 recollection that the first time anybody at Micron

1 notified JEDEC of any of these applications was in  
2 April of '96?

3 A. I know that there was a letter that was issued,  
4 and I'm not sure exactly of the -- of the exact date of  
5 that issuance.

6 Q. Well, let me show you that document. It's  
7 CX-364, and for some reason, Mr. Williams, there's some  
8 stuff attached to the back of this letter which may or  
9 may not go with it, but you can tell us, if you know.

10 Let's look at the first page of CX-364. Is  
11 this the letter you were thinking of?

12 A. Yes, this is the letter that Terry actually put  
13 together to issue to the JEDEC committee.

14 Q. And it references three patent applications,  
15 correct?

16 A. Yes.

17 Q. And it says, "In accordance with the policy, if  
18 the patent issues and the patented invention is  
19 required for use of the standard, Micron will license  
20 the patents under reasonable terms and conditions that  
21 are demonstrably free of any unfair discrimination."

22 Do you see that?

23 A. Yes.

24 Q. Do you know why in this letter it didn't refer  
25 to the offer you told us you made to everybody, which

1 was that manufacturers could have it for free?

2 A. I don't.

3 Q. Okay. And then it goes on to say, "I will  
4 provide the appropriate patent numbers if and when any  
5 of the pending applications issue."

6 Do you see that?

7 A. Yes.

8 Q. Now, go back to the time line, if we could. Do  
9 you know which of the applications shown on my time  
10 line that predate April 11 of '96, or the one that was  
11 filed on April 11 of '96, are the three referred to in  
12 this letter?

13 A. I don't.

14 Q. Don't know?

15 A. Nope.

16 Q. And do you know if the patent numbers were ever  
17 provided to JEDEC?

18 A. I don't.

19 Q. Okay. And so far as you know, even though the  
20 standard had been approved by JEDEC before April 11 of  
21 1996, as you told Mr. Lin in your August of '95 memo,  
22 waiting until April of '96 to disclose these  
23 applications was as far as you understand consistent  
24 with your understanding of the rules?

25 A. No, I wouldn't say that. I would say that I

1 was not aware that they hadn't been disclosed. Terry  
2 and I did not talk regarding these. I was off doing  
3 other things, and he was off doing his stuff, and maybe  
4 that was an error. I mean, maybe I should have been  
5 more diligent in informing him of patents that we had  
6 submitted application for.

7 Q. Well, in May of '95 when the -- when the patent  
8 tracking list was addressed to you and you could have  
9 looked at it and seen that there weren't any burst EDO  
10 patents on it, if you had seen it and looked at it,  
11 would that have caused you to think, oh, we should  
12 disclose now, or would you have thought you were okay  
13 because you had told the manufacturers about your  
14 patents?

15 A. Actually, I thought that in -- actually, I  
16 didn't even think about it, but I don't know if I got  
17 that or not. At that point in time, other people were  
18 taking care of JEDEC, and I didn't know if they had  
19 disclosed or not, nor did -- was I at that point  
20 concerning myself whether or not it got disclosed. I  
21 expected other people were taking care of it.

22 Q. And if somebody who was at JEDEC was sort of  
23 watching the Micron representatives to see what was  
24 expected of a JEDEC member, it's true, isn't it, that  
25 what they would have seen was Micron made a disclosure

1 of burst EDO patent applications after the standard was  
2 approved?

3 A. State that again.

4 Q. Certainly.

5 If another JEDEC member was sort of watching  
6 Micron and saying, well, I want to see how the other  
7 members behave so I can see what's expected of me, if  
8 they had been watching Micron, what they would have  
9 seen was a disclosure of applications made after the  
10 standard had been approved?

11 A. In this point, yeah, there was a disclosure of  
12 some of the -- and maybe it was all that apply, I'm not  
13 sure which actually applied to the standard, after the  
14ate that agrAtrh actuionsainly.

1 who was a JEDEC member -- and most of them were, right?

2 A. Yes.

3 Q. -- they would have seen that someone who had  
4 IP, like Micron did for burst EDO, might tell them  
5 about it in a meeting, but might not disclose it at  
6 JEDEC until after the standard was developed, correct?

7 A. You might get that inference, and it could be  
8 that why they weren't concerned about it is that burst  
9 EDO died, it didn't become the next memory part, or  
10 maybe they weren't concerned about it because I had  
11 already talked to them about that there wasn't going to  
12 be a -- a royalty associated with it. I'm not sure why  
13 they didn't bring it up.

14 Q. And the first of the Micron patents to issue  
15 was June of '96, correct, which is the date of the  
16 patent that I gave you earlier?

17 A. Yes, this one issued in June of '96.

18 Q. Okay. So, once the patent issued in June of  
19 '96, if somebody had gone back and looked at that  
20 patent, they would have seen -- by just looking at the  
21 patent, they would have seen, well, Micron cited as  
22 prior art early JEDEC meetings, and Micron applied for  
23 the patent in December of '94, after some of the early  
24 meetings and before -- right before the January '95  
25 presentation that you and Mr. Fusco attended, and the

1 patent issued in June of '96, and Micron made the  
2 disclosure to JEDEC in April of '96. That's the facts  
3 they would have seen.

4 A. Yes.

5 Q. And to your knowledge, nobody seeing those  
6 facts, no JEDEC member, came to Micron and said, you  
7 guys acted in a way inconsistent with the JEDEC policy,  
8 did they?

9 A. I'm not sure if anybody talked to Micron about  
10 that or not. Nobody talked to me about it.

11 Q. Okay. Nobody ever -- Mr. Walther never called  
12 you in and said, you know, I think between us or maybe  
13 it's all my fault, but it's your patents, Mr. Williams,  
14 and between us somehow, we didn't comply with the JEDEC  
15 policy. Nobody ever called you in and said anything  
16 like that?

17 A. He never stated that, no.

18 Q. Okay. And did you ever hear from anybody at  
19 JEDEC directly that they wanted to talk to you about  
20 it?

21 A. No.

22 Q. Okay. So, you've never been called on the  
23 carpet by anybody for anything to do with the burst EDO  
24 patent disclosures at JEDEC.

25 A. No, but maybe I should have been.



1 Q. And even today, after this presentation in this  
2 hearing, right up until today, nobody has ever said to  
3 you that your conduct was in violation of the JEDEC  
4 policies, have they?

5 A. Nobody's specifically said that, no.

6 Q. Okay.

7 A. But maybe that's because the standard was never  
8 adopted. It died shortly after in the middle of '95.  
9 I'm not sure why they didn't do that. Maybe it was  
10 irrelevant.

11 Q. But the standard was adopted, right?

12 A. It was adopted, but nobody ever made the part.

13 Q. One more topic. Maybe I should be -- maybe I  
14 should be more cautious and say let me switch topics as  
15 opposed to saying just one more.

16 Patents are very important to Micron, aren't  
17 they?

18 A. Yes.

19 Q. Last year, Micron was number three on the list  
20 of U.S. -- on the list of companies in the world in  
21 terms of the number of U.S. patents it was issued,  
22 correct?

23 A. I'm not sure. I haven't seen the specific  
24 statistics, but I know we issue a lot.

25 Q. And it's something that is talked about within

1 the company as it's important to do and we're proud of  
2 how well we've done in gathering intellectual property?

3 A. Yes.

4 Q. Okay. Are you aware that Micron signed a  
5 license agreement with Rambus to manufacture RDRAM?

6 A. I have heard of it.

7 Q. And you're aware that they never actually went  
8 to production with any RDRAM, correct?

9 A. Yes.

10 Q. When -- you did go to production with burst  
11 EDO, or no?

12 A. Not full production. We produced a few parts,  
13 but no, we never went to volume production.

14 Q. Did you produce those at a facility that also  
15 produces DRAM of other kinds?

16 A. I couldn't state specifically which fab they  
17 were produced in, whether it was a developmental fab or  
18 a full production. I don't know which fab it came out  
19 of.

20 Q. Were they produced at a fab that is devoted  
21 solely to burst EDO?

22 A. I couldn't even say that.

23 Q. Okay. Let me show you a document, RX-629, is d

1 Williams, did you know who Jeff Mailloux was in  
2 November of '95?

3 A. Yes.

4 Q. What was his position then?

5 A. I think at that time he was marketing manager.

6 Q. For DRAMs?

7 A. For -- I don't know if it was specifically all  
8 DRAMs -- all products or just DRAMs.

9 Q. And what position did Steve Casper have at the  
10 time?

11 A. I believe at that time he was a designer, may  
12 have even been a product engineer.

13 Q. What position did Gene Cloud have?

14 A. I think he was VP of marketing.

15 Q. And Ed Heitzeberg, what was his position?

16 A. I believe he was at this time vice president of  
17 QA.

18 Q. Now, I don't know whose name is next, and it  
19 had been at some point highlighted. Do you?

20 A. I can't read it.

21 Q. Okay, I can't either. In the left column, at  
22 this time, November of 1995, what was Tyler Lowrey's  
23 position?

24 A. I don't know if he was vice president of  
25 design. He was very high in the design organization or

1 in the process organization.

2 Q. And Kevin Ryan, what was his position?

3 A. At this time, he was in -- he might have still  
4 been in apps or strategic marketing.

5 Q. And when he was in apps, did he report to you?

6 A. Yes, and this is the time frame that I moved  
7 away from the main DRAM products and went into the  
8 motherboard arena and the startups, so --

9 Q. And in November of '95, were you still  
10 reporting to Gene Cloud?

11 A. I don't think so. I can't recall specifically  
12 when I made that transition.

13 Q. And Tom Trent, what was his position in  
14 November of '95?

15 A. He was involved in the design area somewhere.

16 Q. And Terry Walther, what was his position?

17 A. He was in applications and I believe at this  
18 time was a JEDEC rep.

19 Q. And do you recall whether this memorandum was  
20 shared with you?

21 A. No, it was not.

22 Q. And did anybody share with you in this time  
23 frame, November and December of '95, any abstracts or  
24 actual patents that had been issued to Rambus?

25 A. No.



1 SyncLink approach, even though their method came out of  
2 early RamLink work. Micron is particularly concerned  
3 to avoid the Rambus patents, though all of us share  
4 this concern."

5 Do you see that?

6 A. Yes.

7 Q. Did any -- either Mr. Walther or Mr. Ryan in  
8 the January of '96 time frame discuss with you  
9 whether -- what level of concern they or others at

1 A. I don't believe so.

2 Q. So, earlier today when you showed us that  
3 diagram of SDRAM, is that a product that you've ever  
4 been involved with?

5 A. Yes.

6 Q. And did you get involved with it when you came  
7 back?

8 A. No, we made motherboards and used -- that used  
9 SDRAM.

10 Q. When you were out at the startup company, you  
11 made the motherboards?

12 A. Right, as well as when we were doing Crucial,  
13 we sold SDRAM modules.

14 Q. Okay. But at that point in time, were you  
15 concerned then about the comparative benefits and  
16 performance of RDRAM and SDRAM?

17 A. No.

18 Q. Okay. So, is it a fair statement, then, or a  
19 correct statement, then, that as of November of '95 and  
20 January of '96, the extent to which Rambus had patents  
21 that covered SyncLink or other products was not  
22 something of concern to you in your job  
23 responsibilities at the time?

24 A. That's correct.

25 Q. Okay.

1 No further questions at this time, Your Honor.

2 JUDGE McGUIRE: Okay, thank you, Mr. Stone.

3 Does complaint counsel wish to proceed on to  
4 redirect?

5 MS. ZUK: Your Honor, may I have a few minutes  
6 to do a short --

7 JUDGE McGUIRE: Sure, let's go off the record,  
8 take a couple minutes.

9 (A brief recess was taken.)

10 JUDGE McGUIRE: Let's go back on the record,  
11 and I want to advise you, Counselor, that you are to  
12 confine the scope and your inquiries to that covered  
13 under the cross examination.

14 MS. ZUK: Okay.

15 JUDGE McGUIRE: Thank you. You may proceed.

16 REDIRECT EXAMINATION

17 BY MS. ZUK:

18 Q. Now, Mr. Williams, Mr. Stone showed you a lot  
19 of examples of patent tracking lists that you received  
20 from Mr. Townsend --

21 JUDGE McGUIRE: Ms. Zuk, I can't quite hear --  
22 you are going to have to pull that closer to you. I'm  
23 having trouble hearing you at this time. I don't  
24 know -- perhaps it's just gotten off base a little bit  
25 there. Do you want to try again?



1 MS. ZUK: How about now?

2 JUDGE McGUIRE: That's much better. Thank you.

3 BY MS. ZUK:

4 Q. Do you remember looking at those patent  
5 tracking lists?

6 A. Yes.

7 Q. I would like to draw your attention back to an  
8 exhibit we looked at earlier today. It's JX-13.

9 A. Okay.

10 Q. And you testified earlier that you attended  
11 this -- this meeting, but perhaps first I should ask,  
12 are you familiar with this document?

13 A. Yes.

14 Q. And can you please tell us what this document  
15 is again?

16 A. This is minutes of the JC-42.3 committee of  
17 July of '92 in Denver, Colorado.

18 Q. Now, earlier today you testified that you  
19 attended this meeting in July --

20 A. Yes.

21 Q. -- 1992, and we flipped the attendance roster,  
22 and we saw that the minutes indicated that Richard  
23 Crisp attended and Dave Mooring attended on behalf of  
24 Rambus at this meeting.

25 Do you see those references in the attendance



1 reads, "Please refer to the existing rules of the EIA  
2 governing patentable matters, which follow. Following  
3 that material is a list of matters which have been  
4 brought to the attention of the JEDEC Memory Committee.  
5 In some cases, a patent number is already identified.  
6 Please examine the list and research your company's  
7 position on patents held or applied for on the items  
8 next to your company name in the 'Holder' column, and  
9 reply with the patent number, application number, or  
10 letter indicating the intent of your company to patent  
11 or not patent the subject matter."

12 Do you see that?

13 A. Yes.

14 Q. Did Mr. -- or did Chairman Townsend go over  
15 this material in this slide during his patent  
16 presentations?

17 A. Yes, he went over it quite often, at every  
18 meeting.

19 Q. And when he used this particular slide in his  
20 presentation, do you have -- do you have any memory of  
21 what he would explain when he used this document?

22 A. I can't remember the exact words he would use,  
23 except I do know that he would always stress the  
24 necessary requirement of all the members to disclose  
25 patents or patent applications as early in the JEDEC

1 process as possible.

2 Q. Okay. Now, is this -- is this a page that  
3 you -- or I'll strike that.

4 Could you explain for the Court the  
5 relationship between this page and some of the exhibits  
6 that respondent's counsel showed you during his  
7 examination?

8 A. Which exhibits?

9 MR. STONE: Objection, Your Honor, vague with  
10 respect to exhibits I showed the witness during my  
11 examination. I think she needs to draw the witness'  
12 attention to some specific exhibit.

13 JUDGE McGUIRE: Yeah, Counselor, when you say  
14 "this page," it's not clear which page you're talking  
15 to, so please cite to the proper exhibit number and/or  
16 page.

17 MS. ZUK: Okay.

18 BY MS. ZUK:

19 Q. Well, the page I was directing your attention  
20 to was page 114 of JX-13.

21 A. Okay.

22 Q. And my question is directed at your explanation  
23 of the relationship between -- or if any, of this page  
24 and, for example, one of the patent tracking lists that  
25 Mr. Stone showed you earlier.

1 A. Can you refer me to a specific exhibit?

2 Q. I don't have the number in front of me, but it  
3 is Bates number TAEC 0032031, and the date of the  
4 document appears to be June 8, 1992.

5 A. I do have several here. I don't know which one  
6 you want me to refer to in comparison. I don't seem to  
7 find the Bates. I found a Kelly.

8 Q. Well, I can -- may I approach the witness  
9 and --

10 JUDGE MCGUIRE: Go ahead.

11 BY MS. ZUK:

12 Q. Here you go.

13 A. Great, thanks.

14 Q. Do you remember taking a look at that document?

15 A. Yes.

16 Q. And what is that document in front of you that  
17 respondent -- Mr. Stone used with you earlier today?

18 A. This is one of the patent tracking documents  
19 that was sent out prior to a meeting.

20 Q. And what is the date of that document?

21 A. This document is May 26th, '92.

22 Q. And Mr. Stone mentioned that Rambus wasn't one



1 clear now what you're talking about. What document  
2 number is this?

3 MS. ZUK: This is JX-28.

4 JUDGE McGUIRE: Twenty-eight, okay.

5 BY MS. ZUK:

6 Q. And if you could turn to page 12 of JX-28, are  
7 you familiar with this document, which is page 12 of  
8 JX-28?

9 A. I can't say specifically that I am, because in  
10 this time frame I was no longer the JEDEC rep, and even  
11 though my name is on it, I can't state that I actually  
12 received it. It could have been that it was just  
13 mailed, and even though my name is on it, Bob Fusco or  
14 Terry Walther or whoever the JEDEC rep was actually  
15 received it.

16 Q. Are you familiar with this kind of document?

17 A. This looks like the typical language that would  
18 be attached to the patent tracking document, yes, which  
19 would be mailed out prior or that would be also gone  
20 over in the JEDEC meetings.

21 Q. Okay. And if you could turn back to the first  
22 page of this exhibit, which is JX-28, now, the top of  
23 the page reads, "December 6th, 1995, JC-42.3 Committee  
24 on RAM Memories and Minutes of Meeting Number 77."

25 Do you see that?

1 A. Yes.

2 Q. Does this indicate that JX-28 is a set of  
3 minutes from the December 6th, 1995 JC-42.3 meeting?

4 A. Yes, it says that.

5 Q. Now, Mr. Stone walked you through a lot of  
6 burst EDO patents or you had a discussion about burst  
7 EDO patents, and he referred you to a document that  
8 showed an April 1996 letter from Terry Walther  
9 disclosing three patent applications on burst EDO.

10 Do you remember that?

11 A. Yes.

12 Q. Do you have an understanding of the  
13 circumstances surrounding the disclosure of three  
14 applications related to burst EDO in 1996?

15 A. I'm not sure exactly why they were disclosed,  
16 no, I don't know what precipitated that event.

17 Q. Well, in your discussion of the vaih A. st

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2 related to b reJEDEChat event.

24 10 Do you remember that?



1 but I remember saying that, yeah, I could have made a  
2 mistake by not telling Terry more directly instead of  
3 relying on him to know what was going on. Maybe I  
4 should have said, hey, look, we're filing IP here, and  
5 you need to disclose it. Maybe that was the mistake I  
6 made.

7 Q. Okay. Did you think that under the terms of  
8 the JEDEC patent policy, as you understood it between  
9 1991 and 1993, that perhaps you should have done  
10 something differently with respect to the patents and  
11 patent applications in 1996?

12 A. In retrospect, yeah, we should have done  
13 something different, I believe. I think we should have  
14 disclosed them earlier.

15 Q. Now, I want to get some more facts about the  
16 sequence of your involvement in burst EDO. As I  
17 understood it from your testimony earlier today, you  
18 were involved at some point at Micron in promoting  
19 burst EDO in the industry.

20 A. Yes.

21 Q. Would that be fair?

22 A. That's correct.

23 Q. And when did your activity surrounding the  
24 promotion of burst EDO begin at Micron?

25 A. Probably in the early '94 time frame.

1 Q. Okay. And did you have meetings in 1995 with  
2 DRAM customers and perhaps manufacturers about burst  
3 EDO?

4 A. I can't remember exactly when we had meetings,  
5 but in the '94-'95 time frame, I did have meetings with  
6 the manufacturers of DRAM to support burst EDO.

7 Q. And when would you say your activity in  
8 relation to promoting burst EDO in the industry  
9 stopped?

10 A. Either the -- probably be early '96, early to  
11 mid-'96.

12 Q. Okay. In late 1993 to 1994, to the best of  
13 your knowledge, did Micron ever intend to seek  
14 royalties on the burst EDO patents that list you as a  
15 co-inventor or inventor?

16 A. No, we did not.

17 Q. In the 1995 time frame, to the best of your  
18 knowledge, did Micron ever intend to seek royalties on  
19 the burst EDO patents that list you as a co-inventor or  
20 inventor?

21 A. No, they did not.

22 Q. And how about in early 1996?

23 A. No.

24 Q. Okay. Why not?

25 A. I think there are several reasons. First of

1 all, from my discussions with the manufacturers and  
2 chipset -- both the memory manufacturers and the  
3 chipset manufacturers, I'd already given them an  
4 assurance that they could use the patents, whatever  
5 those patents were, with regard to burst EDO without  
6 any royalties in order to garner their support for the  
7 standard and to produce it.

8 Then later, it was never produced by anybody  
9 else. Even though they had the capability on their  
10 die, they never did come to market with the product.  
11 So, it wasn't required.

12 Q. Now, focusing outside of DRAM manufacturers and  
13 your interaction with them, at any time up to April  
14 1996, were you aware of any intention within Micron to  
15 enforce burst EDO patents against companies practicing  
16 to the burst EDO standard?

17 A. Say that again. I'm sorry, I got daydreaming  
18 for a second.

19 Q. At any time up until April 1996, were you aware  
20 of any intention within Micron to enforce burst EDO  
21 patents against companies practicing to a burst EDO  
22 standard?

23 A. No.

24 Q. Do you have an understanding as to why?

25 A. Not specifically. I think in general it's

1     because the standard never did come to the market.  
2     Also, the -- we stated that we wouldn't prosecute any  
3     patents against anybody who used that standard.  Those  
4     are two thoughts that I have.

5           Q.  Would it be fair to say, then, that neither you  
6     or your company, to the best of your understanding,  
7     ever had any intention of enforcing burst EDO patents  
8     against companies that -- which might choose to  
9     practice to the burst EDO standard?

10           A.  Yes, I think that's a fair statement.

11           MS. ZUK:  No further questions.

12           JUDGE McGUIRE:  Thank you, Ms. Zuk.

13           Mr. Stone, any further recross?

14           MR. STONE:  Briefly, Your Honor.

15           JUDGE McGUIRE:  And again, you are under the  
16     same caution regarding the scope and inquiry.

17           MR. STONE:  Thank you.

1 A. Yes.

2 Q. Up came the patent tracking list, not a single  
3 Micron burst EDO patent was on that list that went up  
4 on the screen, was it?

5 A. That's correct.

6 Q. You knew in January of '95 that Mr. Walther,  
7 Mr. Fusco and yourself had not disclosed a single burst  
8 EDO patent to JEDEC, correct?

9 MS. ZUK: Objection, lacks foundation.

10 JUDGE McGUIRE: Overruled.

11 THE WITNESS: I did not know that they were  
12 disclosed or not.

13 BY MR. STONE:

14 Q. You knew when the patent tracking list came up  
15 on the screen and you had a chance to look at it that  
16 no Micron burst EDO patents were listed, were they?

17 A. They were not listed on the patent tracking  
18 list.

19 Q. And you knew from your years at JEDEC, as you  
20 tell us today you knew, that you should have disclosed  
21 patent applications, right?

22 A. Somebody should have disclosed.

23 Q. And you knew in January of '95 that nobody had,  
24 because they didn't come up on the list, right?

25 A. No, I don't think I could infer that they --

1 they hadn't been disclosed because they weren't on the  
2 list.

3 Q. Well, what does the list say at the very  
4 beginning? Doesn't it say this is a list of all the  
5 patents that have been disclosed to date?

6 A. I don't know if it has those exact words, but  
7 it says --

8 Q. Take a look at one of them.

9 A. Let me read it.

10 Q. It's right on the cover memo. What's it say in  
11 the first paragraph that Mr. Townsend wrote that you  
12 said came up at every one of the meetings?

13 A. "This is the list of matters which have been

1       sure they get on the list, because that's what I  
2       understand I should do. You didn't do that, did you?

3           A. No, I didn't.

4           Q. And you didn't nudge Mr. Fusco and say, hey,  
5       Bob, if you're the rep today and it's your  
6       responsibility maybe instead of mine, raise your hand,  
7       because I'm about to talk about burst EDO at this  
8       meeting, and I and some other guys at Micron have  
9       applied for a lot of patents on burst EDO. You didn't  
10      do that either, did you?

11          A. No, I didn't.

12          Q. So, if we were to look at your conduct in  
13      January of '95, we would see a man who knowing that the  
14      list didn't show any Micron burst EDO patents, didn't  
15      feel he should raise his hand and say anything about  
16      it. That's what we'd see if we looked at your conduct,  
17      wouldn't we?

18          A. I don't know if you could characterize it that  
19      way. I think you would -- you could characterize it  
20      that maybe I should have.

21          Q. Well, you didn't feel in January of '95 when  
22      you flew back to Boise, you didn't go back into Mr.

1 A. No, I didn't.

2 Q. You didn't go back to Boise and tell Mr.  
3 Walther or Mr. Fusco, you know, probably I should have  
4 disclosed them, because I saw they weren't on the list,  
5 probably I should have disclosed them then, but next  
6 meeting, you guys do it. You didn't do that either,  
7 did you?

8 A. No, I didn't.

9 Q. The first time you've ever said in public --  
10 the first time you've ever said, I should have  
11 disclosed those applications, was when you came here  
12 today and testified, right?

13 A. Yes.

14 Q. Okay. In your depositions in the Micron case  
15 against Rambus, you never said that.

16 A. I can't remember everything I said in the  
17 deposition, but you can probably show me.

18 Q. And in your deposition that Ms. Jeffries took  
19 of you in this case, you never said, I goofed, I should  
20 have disclosed them, did you?

21 A. I don't know if I was asked the specific  
22 question.

23 Q. The first time you've ever told a supervisor, a  
24 subordinate, a colleague at Micron that you now realize



1 required you to have disclosed patent applications that  
2 you didn't disclose, the first time you've ever come up  
3 with that is here today, right?

4 A. State the question again.

5 Q. The first time you've ever told any other  
6 Micron employee that you think back in January of '95  
7 maybe you should have acted differently, the first time  
8 you've ever said that to anybody at Micron, is today.

9 A. I don't know if I could characterize it that  
10 I've never said that anybody, that I goofed and should  
11 have disclosed earlier, was the first time today.

12 Q. Well, when did you realize that the patent  
13 tracking list that you saw in January '95 didn't have  
14 any burst EDO patents on it from Micron? Didn't you  
15 realize it that day?

16 A. I don't think I looked at it that day.

17 Q. Okay. And you didn't look at the ones that I  
18 showed you earlier that were faxed to the general fax  
19 number for your group either, right?

20 A. I looked at those prior to those meetings,  
21 yeah.

22 Q. Okay. So, the one I showed you for May of '95,  
23 you looked at that one after your January meeting?

24 A. I'm sorry, which one did you refer to?

25 Q. May of 1995. I showed you the patent tracking

1 list sent to your attention, May of '95. Did you look  
2 at that one to see if they had picked up the  
3 applications that related to the presentation you had  
4 given in January?

5 A. At that point in time, I didn't know where the  
6 patents actually were, whether I knew that I did a  
7 disclosure, but I didn't know where they were in the  
8 process.

9 Q. You don't mean to tell me, seriously, that you  
10 didn't sign the patent applications that went to the  
11 patent office?

12 A. Yes, I did.

13 Q. Okay. You signed them under oath with a notary  
14 before they went to the patent office, right?

15 A. Yes.

16 Q. Okay. And you signed those applications well  
17 before January of '95, didn't you?

18 A. I believe -- yes, I believe so.

19 Q. Okay. Ms. Zuk showed you JX-28. Do you still  
20 have it in front of you?

21 A. Which one was that?

22 Q. That was the minutes of the meeting in December  
23 of '95. Do you remember she showed you those?

24 A. Oh, I think this is one I don't have a copy of.  
25 Is this --

1 Q. Yeah, maybe she just brought it up on the  
2 screen.

3 Do you remember this was the meeting in  
4 December of '95, Fairmont Hotel, Dallas, Texas?

5 A. Right.

6 Q. And then she asked you to look at a couple of  
7 pages of the document?

8 A. Right.

9 Q. Take a look at page 20, if you would. We will  
10 just bring it up on the screen.

11 You'll see it says Toshiba in the bottom  
12 right-hand corner.

13 A. Yes.

14 Q. And that was the company that Jim Townsend  
15 worked for?

16 A. Yes.

17 Q. And do you see that it tells you how to find  
18 patents by going to this worldwide web address?

19 A. Yes.

20 Q. And do you see what is listed on this slide as  
21 the source of the information for how to get patents?

22 A. Yes.

23 Q. What's it say?

24 A. It says, "R. Crisp, email, 5/23."

25 Q. And do you understand that R. Crisp to be a

1 reference to Richard Crisp?

2 A. I would think so.

3 MS. ZUK: Objection, lacks foundation.

4 JUDGE McGUIRE: I think at this point that's  
5 overruled.

6 BY MR. STONE:

7 Q. And did you answer? I'm sorry.

8 A. Yeah, I believe it does.

9 Q. Okay. This intent not to seek royalties for  
10 any of the burst EDO patents, you testified to that  
11 earlier, okay? Do you remember?

12 A. Yes.

13 Q. You would agree, wouldn't you, that it's not  
14 within your authority to make a decision on behalf of  
15 Micron as to whether they are going to seek royalties  
16 or not seek royalties for any particular patent?

17 A. In general, that's true.

18 Q. And one of the burst EDO patents that I put up  
19 on my demonstrative /oi' Th--r? llt'srity get of tup

1           If we could bring it up on the screen, it is  
2     RX-861.

3           Now, if we take a look at this patent, you'll  
4     see the title of it is Distributed Write Data Drivers  
5     for Burst Access Memories. Do you see that?

6           A. Yes.

7           Q. Just bring it up the way you had it before.

8           Do you see that it was filed January 30 of  
9     1995?

10          A. Yes.

11          Q. And it was a continuation-in-part of -- a  
12     continuation-in-part of one that was filed back on  
13     December 23rd of '94 that we talked about earlier? Do  
14     you see that under Related Patent Data?

15          A. Yes.

16          Q. And this is a patent that relates to burst EDO,  
17     isn't it?

18          A. I'm not sure without reading it.

19          Q. Well, if you look under the Other Publications,  
20     do you see in the prior art it lists the Samsung  
21     Synchronous DRAM presentation from March of '93, the  
22     OKI presentation from September of '94, the Toshiba  
23     presentation from December of '94, down at the bottom,  
24     and then it -- do you see that?

25          A. Yes, I see those.

1 Q. If this is a patent that relates to burst EDO,  
2 is this one that you're testifying today Micron has no  
3 intention to enforce or seek royalties for?

4 A. I can't state that, because I had no  
5 involvement with this patent.

6 Q. Well, do you know which of the patents that I  
7 showed you earlier on my chronology are ones that you  
8 think you can testify today Micron has no intention of  
9 seeking to enforce or to seek royalties for?

10 MS. ZUK: Objection, mischaracterizes his  
11 testimony.

12 JUDGE MCGUIRE: I'm sorry, I can't hear you,  
13 Ms. Zuk.

14 MS. ZUK: Objection, I believe respondent's  
15 counsel is mischaracterizing Mr. Williams' earlier  
16 testimony.

17 MR. STONE: Let me rephrase, Your Honor.

18 JUDGE MCGUIRE: All right, go ahead.

19 BY MR. STONE:

20 Q. Mr. Williams, did you testify earlier today  
21 that Micron has no intention of seeking at this point  
22 in time to enforce certain of the burst EDO patents?

23 A. Yes.

24 Q. Okay. And which of the patents -- do you know  
25 which patents that applies to?

1 A. I don't.

2 Q. You don't know?

3 A. No.

4 Q. Who at Micron told you that a decision had been  
5 made not to enforce certain of the burst EDO patents?

6 A. Nobody at Micron told me.

7 Q. Okay. So, that's just -- do you have any basis  
8 for that understanding other than that's what you think  
9 you should do?

10 A. Correct. At that point in time when I was  
11 trying to get people to support the standard, other  
12 memory manufacturers to support the standard, in the  
13 late '94 time frame or '94 time frame, the work that we  
14 had done on burst EDO up to that time would not apply  
15 to whatever they were going to use in the standard.

16 Q. So, the fact that the patent I just showed you  
17 on the screen has been asserted -- I represent to you,  
18 it's been asserted in a lawsuit in Delaware by Micron  
19 against Mosel Vitalic -- did I say that correctly?

20 A. Vitalic.

21 Q. -- Mosel Vitalic, that's not inconsistent or is  
22 it inconsistent with your understanding of what you  
23 were authorized to say?

24 A. I am not aware of whether or not we've -- we  
25 have actually asserted a patent, a burst EDO patent

1 against them, nor whether this applies to burst EDO.

2 Q. And how many of the manufacturers that you met  
3 with and discussed burst EDO with participate in  
4 cross-license agreements with Micron?

5 A. I'm not sure how many.

6 Q. When you met with them and said not to worry,  
7 it would be free, did you tell them that it would be  
8 free because it would be part of an existing  
9 cross-license?

10 A. No.

11 Q. Did you tell them it would be part of a patent  
12 pool?

13 A. No.

14 Q. Did you have an understanding that it was part  
15 of a cross-license or a patent pool?

16 A. No.

17 Q. Who would know that at Micron?

18 A. I'm not sure exactly who that would be.

19 Q. Do you know if Mr. Cloud would know that?

20 A. I don't know.

21 Q. Okay. And is it your understanding that in  
22 order to give or spend money on behalf of Micron above  
23 a certain amount, you have to be at a certain level  
24 within the company?

25 A. Yes. rii 24RecTj, Ise?



1 Q. And do you have a certain level of authority  
2 that you can spend on your own?

3 A. I did at that time.

4 Q. Okay. And did that authority allow you to give  
5 away for free patents?

6 A. Probably not.

7 Q. Okay.

8 Thank you, no further questions, Your Honor.

9 JUDGE McGUIRE: Okay, thank you very much,  
10 Counsel.

11 MR. STONE: Could I move in some exhibits, Your  
12 Honor?

13 JUDGE McGUIRE: Oh, yes, let's please do that.

14 MR. STONE: And the ones that I believe I used  
15 that I haven't moved in are the following: CX-40 --

16 JUDGE McGUIRE: Do you want to take them as we  
17 did, one at a time, or just have them all moved in and  
18 then we can ascertain whether there's any opposition?

19 MR. STONE: Could I suggest maybe this is a --  
20 why don't I move in the ones that I'd like to move in,  
21 and then if they want to advise us of objections even  
22 in the morning or in the afternoon tomorrow, whenever  
23 we start up, we can do it that way, or what's easiest?

24 JUDGE McGUIRE: I would like them to do it now.  
25 Let's do it as we did earlier today and just do it one

1 at a time, one at a time, and then counsel can advise  
2 whether there's any objection to each individual  
3 exhibit.

4 All right, go ahead, Mr. Stone.

5 MR. STONE: CX-40.

6 JUDGE McGUIRE: Any objection?

7 MS. ZUK: There is no objection.

8 MR. STONE: CX-336 --

9 JUDGE McGUIRE: Hold it, one at a time.  
10 Entered.

11 (CX Exhibit Number 40 was admitted into  
12 evidence.)

13 MR. STONE: CX-336.

14 MS. ZUK: No objection.

15 JUDGE McGUIRE: Entered.

16 (CX Exhibit Number 336 was admitted into  
17 evidence.)

18 MR. STONE: CX 342.

19 MS. ZUK: No objection.

20 JUDGE McGUIRE: Entered.

21 (CX Exhibit Number 342 was admitted into  
22 evidence.)

23 MR. STONE: CX-364.

24 MS. ZUK: No objection.

25 JUDGE McGUIRE: Entered.

1 (CX Exhibit Number 364 was admitted into  
2 evidence.)

3 MR. STONE: CX-2632.

4 MS. ZUK: No objection.

5 JUDGE McGUIRE: Entered.

6 (CX Exhibit Number 2632 was admitted into  
7 evidence.)

8 MR. STONE: RX-559.

9 MS. ZUK: I'd like to ask what that -- what --  
10 which respondent's exhibit that is.

11 MR. STONE: Yeah, why don't we bring them up.  
12 That was one of the patent tracking lists.

13 MS. ZUK: No objection.

14 JUDGE McGUIRE: Entered.

15 (RX Exhibit Number 559 was admitted into  
16 evidence.)

17 MR. STONE: RX-629.

18 MS. ZUK: If it would be possible to take a  
19 look at that.

20 MS. ZUK: No objection.

21 JUDGE McGUIRE: Entered.

22 (RX Exhibit Number 629 was admitted into  
23 evidence.)

24 MR. STONE: RX-663.

25 MS. ZUK: No objection.

1 JUDGE McGUIRE: Entered.  
2 (RX Exhibit Number 663 was admitted into  
3 evidence.)  
4 MR. STONE: RX-361.  
5 MS. ZUK: No objection.  
6 JUDGE McGUIRE: Entered.  
7 (RX Exhibit Number 361 was admitted into  
8 evidence.)  
9 MR. STONE: RX-356.  
10 MS. ZUK: No objection.  
11 JUDGE McGUIRE: Entered.  
12 (RX Exhibit Number 356 was admitted into  
13 evidence.)  
14 MR. STONE: RX-585.  
15 MS. ZUK: No objection.  
16 JUDGE McGUIRE: Entered.  
17 (RX Exhibit Number 585 was admitted into  
18 evidence.)  
19 MR. STONE: RX-340.  
20 MS. ZUK: No objection.  
21 MR. STONE: This is really complaint counsel's,  
22 but I have no objection to moving it in.  
23 MS. ZUK: No objection.  
24 JUDGE McGUIRE: Entered.  
25 (RX Exhibit Number 340 was admitted into

1 evidence.)

2 MR. STONE: RX-317.

1 schedule and have been trying to work to loosen it  
2 somewhat. We have tentatively planned to leave this  
3 coming Friday free, as one of our alternate Fridays  
4 free, and I hope that shortly we will be able to give  
5 you more information about the changes in our schedule.

6 JUDGE McGUIRE: Okay, all right, very good.

7 Anything you want to add to that, Mr. Stone?

8 MR. STONE: I would just say that we have asked  
9 complaint counsel not to leave this Friday dark if we  
10 can avoid it at the moment, because we're concerned --  
11 they gave us a new time estimate of how long it's going  
12 to take, and we're concerned about that, and we're  
13 really --

14 JUDGE McGUIRE: Well, let's leave that open for  
15 the next day or so and see how it looks, and we will be  
16 happy to take that up again should it become an issue.

17 MR. STONE: We appreciate it.

18 JUDGE McGUIRE: Hopefully the two sides can  
19 determine for themselves what's going to be in their  
20 best interests.

21 MR. STONE: Thank you, Your Honor.

22 JUDGE McGUIRE: Otherwise, we will see you on  
23 Tuesday at 1:00 p.m. We are adjourned. Thank you.

24 (Whereupon, at 4:30 p.m., the hearing was  
25 adjourned.)

## 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: MAY 5, 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: 5/6/03

13

14

15

16 SUSANNE BERGLING, RMR

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

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